

Application: 24-03-
(U 39 E)

Exhibit No.: _____

Date: January 31, 2025

Witness(es): Barry J. Bentley
James L. Higham, Jr.
Joseph P. Kennedy, III
Ronald E. Kennedy
Michael Medeiros, Jr.
Jennifer E. Nelson
Divya Raman
Peter F. Smith
Susan F. Tierney

PACIFIC GAS AND ELECTRIC COMPANY

**APPLICATION FOR APPROVAL UNDER
PUBLIC UTILITIES CODE SECTION 851 TO
LEASE ENTITLEMENTS TO TRANSMISSION PROJECTS TO
CITIZENS ENERGY CORPORATION**

AMENDMENT TO PREPARED DIRECT TESTIMONY

(REDLINE VERSION)



PACIFIC GAS AND ELECTRIC COMPANY
APPLICATION FOR APPROVAL UNDER PUBLIC UTILITIES CODE
SECTION 851 TO LEASE ENTITLEMENTS TO TRANSMISSION
PROJECTS TO CITIZENS ENERGY CORPORATION
AMENDMENT TO PREPARED DIRECT TESTIMONY

TABLE OF CONTENTS

Chapter	Title	Witness
1	OVERVIEW AND POLICY [AMENDED TESTIMONY]	Barry J. Bentley
2	THE INVESTMENT PROGRAM [AMENDED TESTIMONY]	Michael Medeiros, Jr.
3	INVESTMENT PROGRAM RATE IMPLICATIONS [AMENDED TESTIMONY]	Divya Raman
4	TAX [AMENDED TESTIMONY]	James L. Higham, Jr.
5	CITIZENS ENERGY – INTRODUCTION AND PARTICIPATION IN INVESTMENT PROGRAM [AMENDED TESTIMONY]	Peter F. Smith (Consultant)
6	CITIZENS ENERGY – ECONOMIC BENEFITS [AMENDED TESTIMONY]	Ronald E. Kennedy (Consultant)
Attachment 1	PG&E REPRESENTATIVE RATE MODEL WITH THE BASE CASE CAPITAL COST ASSUMPTIONS	
Attachment 2	CITIZENS CAPPED RATE	
Attachment 3	PG&E REPRESENTATIVE RATE MODEL, ASSUMING RETURN ON EQUITY INCREASES 2 PERCENT IN YEAR 5	
7	CITIZENS ENERGY – CHARITABLE CONTRIBUTIONS [AMENDED TESTIMONY]	Joseph P. Kennedy III (Consultant)
8	CITIZENS ENERGY – PUBLIC INTEREST ANALYSIS [NEW TESTIMONY]	Susan F. Tierney (Consultant)

PACIFIC GAS AND ELECTRIC COMPANY
APPLICATION FOR APPROVAL UNDER PUBLIC UTILITIES CODE
SECTION 851 TO LEASE ENTITLEMENTS TO TRANSMISSION
PROJECTS TO CITIZENS ENERGY CORPORATION
AMENDMENT TO PREPARED DIRECT TESTIMONY

TABLE OF CONTENTS
(CONTINUED)

Chapter	Title	Witness
Attachment SFT-1	MAPS OF CALIFORNIA: DISADVANTAGED COMMUNITIES, LOW- INCOME COMMUNITIES, ELECTRIC AREAS OF AFFORDABILITY CONCERN, PG&E SERVICE TERRITORY, CALIFORNIA ELECTRIC CLIMATE ZONES, COUNTIES WITH A MAJORITY OF HISPANIC RESIDENTS COMPOSITE MAP	
Attachment SFT-2	CV OF SUSAN F. TIERNEY	
9	REASONABLE MEANS OF RAISING CAPITAL [NEW TESTIMONY]	Jennifer E. Nelson (Expert)
Appendix A	STATEMENTS OF QUALIFICATIONS [AMENDED TESTIMONY]	Barry J. Bentley James L. Higham, Jr. Ronald E. Kennedy Joseph P. Kennedy, III Michael Medeiros, Jr. Jennifer E. Nelson Divya Raman Peter F. Smith Susan F. Tierney

PACIFIC GAS AND ELECTRIC COMPANY

AMENDED CHAPTER 1

OVERVIEW AND POLICY

PACIFIC GAS AND ELECTRIC COMPANY
AMENDED CHAPTER 1
OVERVIEW AND POLICY

TABLE OF CONTENTS

A. Introduction.....	1-1
B. Overview of the Investment Program	1-4
C. Purpose of the Investment Program	1-5
D. Benefits of the Investment Program	1-6
1. The Investment Program Will Allow Citizens to Provide More than \$450 Million in Expected Direct Bill-Paying Assistance for PG&E Customers in Need	1-7
2. The Additional Capital Provided Through the Investment Program Will Support Needed Infrastructure Investment and Promote PG&E's Financial Health	1-9
3. Customers Will Benefit From Rate Certainty and Rate Stability.....	1-13
4. Customers Will Benefit From the Remaining Useful Life of Projects Subject to Entitlements Leases	1-14
5. The Investment Program Will Advance Diverse Interests in Transmission Development.....	1-14
E. Protections Against Adverse Impacts	1-15
1. Customers Will Continue Receiving Electric Service at Fair and Reasonable Rates	1-15
2. Electric Service to the Public Will Not Be Negatively Impacted.....	1-16
F. Brief Overview of the Tax Implications of the Investment Program	1-17
G. Conclusion.....	1-17

PACIFIC GAS AND ELECTRIC COMPANY
AMENDED CHAPTER 1
OVERVIEW AND POLICY

A. Introduction

The ~~application~~Amended Application requests California Public Utilities Commission (Commission) approval under Section 851 of the California Public Utilities Code (Pub. Util. Code) for Pacific Gas and Electric Company (PG&E) to lease Entitlements¹ to certain PG&E transmission projects to a wholly owned subsidiary of Citizens Energy Corporation subject to the terms and conditions of the Investment Program created by the Development, Coordination, and Option Agreement (DCOA) attached to the Amended Application as Attachment 1- and as described in the Amended Application. PG&E and Citizens Energy Corporation ~~(together with its wholly owned subsidiary Citizens Pacific Transmission LLC, “Citizens”²)~~³ executed the DCOA on February 20, 2024 and amended and restated it on January 29, 2025.

We chose to partner with Citizens in the Investment Program because of Citizens’ mission and track record as a well-established and unique charitable organization in the energy industry. Citizens has a long history of using

¹ Entitlements are defined in Appendix A to the California Independent System Operator Corporation (CAISO) Tariff as “The right of a Participating [Transmission Owner] obtained through contract or other means to use another entity’s transmission facilities for the transmission of Energy.” CAISO Fifth Replacement FERC Electronic Tariff, Appendix A, Entitlements.

~~² The DCOA is an agreement between PG&E and Citizens Energy Corporation. Citizens Pacific Transmission LLC is an indirect wholly owned subsidiary of Citizens Energy Corporation and is the entity that Citizens Energy Corporation expects to enter into leases with PG&E pursuant to the DCOA. The DCOA permits Citizens Energy Corporation to select a wholly owned subsidiary other than Citizens Pacific Transmission LLC to enter into leases with PG&E.~~

³ The DCOA is an agreement between PG&E and Citizens Energy Corporation. Citizens Pacific Transmission LLC is an indirect wholly owned subsidiary of Citizens Energy Corporation and is the entity that Citizens Energy Corporation expects to enter into leases with PG&E pursuant to the DCOA. The DCOA permits Citizens Energy Corporation to select a wholly owned subsidiary other than Citizens Pacific Transmission LLC to enter into leases with PG&E. This testimony refers to Citizens Energy Corporation and its subsidiary Citizens Pacific Transmission LLC, or other wholly owned subsidiary that Citizens selects to enter into an Entitlements Lease, collectively as “Citizens.”

1 investments in the energy sector to fund its charitable mission, which is to help
2 low-income families and disadvantaged communities with basic needs, including
3 assistance with utility bills.

4 Under the Investment Program, subject to Commission approval, PG&E
5 may offer Citizens up to five separate options to lease Entitlements to PG&E
6 high-voltage transmission projects ~~that~~ which will be ~~identified in~~ submitted to
7 the Commission and stakeholders for review prior to execution of the relevant
8 lease and will meet specified eligibility requirements, ~~for~~ for a total Citizens
9 investment of up to \$1.0 billion.

10 The testimony submitted with ~~this~~ the Amended Application demonstrates
11 that leasing Entitlements to Citizens pursuant to the Investment Program is in
12 the public interest and benefits customers because it: (1) will allow PG&E to
13 efficiently access up to \$1.0 billion in capital ~~and accelerate~~ for required electric
14 infrastructure investments necessary to meet California's decarbonization goals,
15 while increasing capacity, reliability, asset health, and the interconnection of
16 generation (including renewable generation) and load on the PG&E system;
17 (2) will bring substantial benefits through an more than \$450 million of estimated
18 contributions from Citizens to direct bill-paying assistance for PG&E customers
19 in need, including those in disadvantaged communities ~~and low-income families~~
20 ~~in PG&E's service territory~~; and (3) will benefit customers through rate stability
21 and rate certainty.

22 The Investment Program is ~~closely~~ modeled on two transactions between
23 San Diego Gas & Electric Company (SDG&E) and Citizens that the Commission
24 authorized in Decision (D.) 11-05-048 (Sunrise Section 851 Decision) and
25 D.19-03-024 (Sycamore Section 851 Decision).⁴ Those decisions approved
26 leases—substantially similar to the leases contemplated here—under which
27 subsidiaries of Citizens leased Entitlements in two SDG&E transmission lines:
28 the Sunrise Powerlink Transmission Project (Sunrise Project) and the
29 Sycamore ~~Penasquitos~~ Transmission Project (Sycamore Project), respectively.
30 The lease arrangements the Commission approved in the Sunrise Section 851
31 Decision and the Sycamore Section 851 Decision have yielded significant low-

4 D.11-05-048 (Sunrise Section 851 Decision), 2011 Cal. ~~Pub. Util. Code~~ PUC Lexis 302
(Cal. ~~Pub. Util. Code~~ P.U.C. 2011); D.19-03-024 (Sycamore Section 851 Decision), 2019
~~WL 1571659~~ (Cal. ~~Pub. Util. Code~~ PUC Lexis 154 (Cal. P.U.C. 2019)).

1 income energy assistance investments by Citizens in disadvantaged
2 communities and low-income families in Imperial County and San Diego
3 County, respectively, in accordance with its agreements with SDG&E. The
4 Investment Program between PG&E and Citizens will yield significantly greater
5 support for ~~disadvantaged communities and low-income~~ families in need in
6 PG&E's service area, including those in disadvantaged communities, and also
7 incorporates enhanced ratepayer protections.

8 The Amended Application is supported by the following prepared testimony
9 from PG&E and Citizens witnesses:

- 10 • Amended Chapter 1: Overview and Policy. Amended Testimony of Barry J.
11 Bentley, Senior Vice President – Electric Engineering at PG&E; describes
12 the purpose of the Investment Program and its benefits.
- 13 • Amended Chapter 2: The Investment Program. Amended Testimony of
14 Michael Medeiros, ~~Senior Director—Electric Technology and Information~~
15 ~~Strategy~~ Vice President – South Bay Delivery at PG&E; describes the key
16 details of the Investment Program.
- 17 • Amended Chapter 3: Investment Program Rate Implications. Amended
18 Testimony of Divya Raman, Manager – Economic Analysis at PG&E; describes
19 the rate implications of the Investment Program.
- 20 • Amended Chapter 4: Tax. Amended Testimony of James Higham Jr.,
21 Senior Manager – Tax at PG&E; describes special tax implications due to
22 the classification of Entitlements Leases as Internal Revenue Code (IRC)
23 § 467 leases.
- 24 • Amended Chapter 5: Citizens ~~Energy~~— Introduction and Participation in
25 Investment Program. Amended Testimony of Peter F. Smith, Chief
26 Executive Officer of Citizens; describes Citizens and its ~~charitable-direct~~
27 bill-paying assistance commitments under the Investment Program.
- 28 • Amended Chapter 6: Citizens ~~Energy—Economic Benefits.~~— Citizens Rate
29 Model. Amended Testimony of Ronald E. Kennedy, ~~Director~~ Vice President
30 of Transmission Strategy Practice at MCR Performance Solutions, on behalf
31 of Citizens; describes the Citizens rate model and the economic impact of
32 the Investment Program on ratepayers.

- Amended Chapter 7: Citizens – Citizens’ Charitable Giving. Amended Testimony of Joseph P. Kennedy III, President of Citizens; describes Citizens’ charitable giving.⁵
- Chapter 8: Citizens – Public Interest Analysis. Testimony of Susan F. Tierney, Senior Advisor at the Analysis Group, on behalf of Citizens; describes why the Investment Program is not adverse—and is in fact beneficial—to the public interest.
- Chapter 9: Utility Financing Principles. Testimony of Jennifer E. Nelson, Assistant Vice President at Concentric Energy Advisors, on behalf of PG&E; describes the capital needs of electric utilities and the benefits of diverse funding sources such as the Investment Program.

B. Overview of the Investment Program

PG&E and Citizens executed the DCOA on February 20, 2024 and amended and restated it on January 29, 2025. Under the DCOA, PG&E may offer Citizens up to five separate options to lease Entitlements to PG&E high-voltage transmission projects that ~~will be identified in the relevant lease and will~~ meet specified eligibility requirements. The projects that will be subject to Entitlements Leases must be fully permitted and operational at lease execution and are projects PG&E plans to put into service regardless of whether the Investment Program is implemented. If PG&E and Citizens (collectively, the Parties) close on a given option, the Parties will enter into a 30-year “Entitlements Lease” for the applicable group of projects. A Form of Entitlements Lease is Exhibit A to the DCOA (Entitlements Lease).⁶

Citizens’ leasehold percentage interest in the Entitlements to any given project will be capped at 49.9 percent. The Investment Program involves *only* the lease of Entitlements to Citizens. PG&E will retain full ownership of the projects subject to any Entitlements Lease and will remain responsible for the development, design, permitting, engineering, procurement, construction, operation, and maintenance of the projects. The relevant transmission projects will be under the operational control of ~~the~~ CAISO (or its successor) for the 30-

⁵ The original version of this testimony was provided in August 2024 as “supplemental” testimony with the permission of the assigned Administrative Law Judge

⁶ Unless otherwise specified, all references to the DCOA and the Entitlements Lease refer to the amended and restated versions of those documents.

1 year term of the applicable Entitlements Lease. At the end of each lease, the
2 Entitlements to the subject transmission projects will revert to PG&E free and
3 clear of any liens or encumbrances.

4 Under the DCOA, the aggregate value of the Entitlements that may be
5 leased to Citizens pursuant to the Investment Program is capped at \$1.0 billion.
6 The Parties expect this amount to be allocated roughly into five separate
7 Entitlements Leases averaging \$200 million each. The DCOA, however,
8 provides flexibility to adjust the dollar value of each Entitlements Lease, subject
9 to the total investment cap of \$1.0 billion and the 49.9 percent Citizens'
10 leasehold interest limit noted above.

11 Each Citizens investment under an Entitlements Lease will take the form of
12 a lump sum prepaid rent payment by Citizens to PG&E (Prepaid Rent) that will
13 confer on Citizens a leasehold percentage interest in the Entitlements to a
14 specified group of PG&E transmission projects for the duration of the 30-year
15 Entitlements Lease. The applicable Entitlements Lease will govern the rights
16 and obligations of Citizens and PG&E during the 30-year term and among other
17 things will obligate Citizens to commit a substantial and escalating portion of its
18 net after-tax profits attributable to the leased Entitlements to fund
19 ~~energy-related charitable~~ direct bill-paying assistance programs for
20 ~~disadvantaged communities and low-income families in the~~ PG&E service
21 ~~area~~ customers in need.

22 PG&E witness Michael Medeiros discusses the details of the Investment
23 Program in Amended Chapter 2.

24 C. Purpose of the Investment Program

25 The purpose of the Investment Program is to provide PG&E with an
26 additional source of capital while providing important customer rate protections
27 and promoting significant ~~charitable contributions~~ direct bill-paying assistance to
28 ~~support disadvantaged communities and low-income~~ families in need in PG&E's
29 service territory. including those in disadvantaged communities. By providing
30 PG&E with up to \$1.0 billion in capital, the Investment Program will enable
31 PG&E to ~~accelerate~~ timely undertake needed infrastructure investments. PG&E
32 has been actively pursuing multiple avenues to ~~increase electric system safety,~~
33 ~~capacity, reliability, asset health, and interconnections that further support~~
34 ~~California's decarbonization goals. The Investment Program also will allow~~

disadvantaged communities and low-income families in PG&E's service territory to more fully participate in and benefit raise capital, including the issuance of new equity and loans from the ~~clean energy transition in California, thanks to Citizens' contractual commitment to use a~~ United States Department of Energy (DOE). Given the need for substantial ~~and escalating portion of its net after-tax profits to fund energy-related charitable programs in~~ infrastructure investment, which will benefit all customers. PG&E's ~~service area~~ E is not limiting itself to one source of capital. Instead, PG&E has pursued multiple approaches for raising capital, including the Investment Program with Citizens proposed in the Amended Application.

While the Investment Program is an efficient means of raising capital, it also does much more. The Investment Program directly addresses energy affordability concerns for PG&E customers in need as a result of Citizens' contractual commitment to use a substantial and escalating portion of its net after-tax profits for direct bill-paying assistance.

The Investment Program expands upon Citizens' prior transmission--related transactions in California and ~~would~~will allow Citizens to acquire leasehold interests in Entitlements to multiple transmission projects under multiple leases. This multi--project, multi--lease approach will allow for a larger total investment by Citizens in a manner that promotes both cost and timing efficiencies within parameters that are acceptable to PG&E, Citizens, and Citizens' lenders, while preserving important and previously accepted customer protections.

D. Benefits of the Investment Program

The Investment Program is ~~closely~~ modeled on prior transactions between Citizens and SDG&E that the Commission approved, determining the transactions were not adverse to the public interest and in fact benefited the public interest.⁷ The Investment Program incorporates the key elements of earlier Citizens/SDG&E transactions and includes additional customer and community benefits. The Investment Program will provide significant benefits

⁷ See D.19-03-024 at 2, 18, 20, 25 (Sycamore Section 851 Decision), 2019 WL 1571659 (Cal. Pub. Util. Code); PUC Lexis 154, at *1, *9, *11, *13; 2, *25, *29, *35-36 (Cal. P.U.C. 2019); D.11-05-048 at 1-2, 22-26 (Sunrise Section 851 Decision), 2011 Cal. Pub. Util. Code PUC Lexis 302 (Cal. Pub. Util. Code), at *1-2, *32-38; (Cal. P.U.C. 2011).

by: (1) providing an more than \$450 million in expected direct bill-paying assistance to PG&E customers in need; (2) providing additional capital that will support needed infrastructure investment and promote PG&E's financial health; (3) providing rate certainty and rate stability; (4) ensuring customers benefit from the remaining useful life of projects after expiration of the applicable Entitlements Lease; and (5) advancing diverse interests in transmission development.

1. Benefits for the Public

1. A key aspect of the The Investment Program is Citizens' contractual commitment Will Allow Citizens to contribute a significant portion of its net after-tax profits from its leased Entitlements to Provide More than \$450 Million in Expected Direct Bill-Paying Assistance for PG&E Customers in Need

Following conversations with stakeholders that stressed the importance of ensuring affordable access to electricity for residential customers in California, Citizens decided to commit 100 percent of the charitable contributions associated with the Investment Program to programs that provide direct bill-paying assistance to disadvantaged communities and low-income families in PG&E's service territory PG&E customers in need. In

Citizens' previous transmission investments in the CAISO area, Citizens committed to dedicate 50 percent of its net after-tax profits to support energy-related charitable programs or entities assisting disadvantaged communities and low-income families in the project area. Under the Investment Program in this case, Citizens has contractually committed to dedicate escalating percentages of its net after-tax profits to energy-related charitable direct bill-paying assistance programs and entities that support disadvantaged communities and low-income families in the PG&E service area customers in need based on the following schedule:

- 1) 50 percent of the net after-tax profits from the first \$200 million invested;
- 2) 60 percent of the net after-tax profits from the next \$200 million invested;
- 3) 70 percent of the net after-tax profits from the next \$200 million invested;

- 1 4) 80 percent of the net after-tax profits from the next \$200 million
2 invested; and
3 5) 90 percent of the net after-tax profits from the final \$200 million
4 invested.

5 As Citizens witness Peter F. Smith explains in his amended testimony
6 (Amended Chapter 5), Citizens currently estimates that if the full \$1.0 billion
7 investment is realized under the Investment Program, over the terms of the
8 contemplated Entitlements Leases (a total span of approximately 35 years),
9 Citizens will contribute more than ~~\$400 million to charitable programs that~~
10 ~~enable disadvantaged communities and low-income families in PG&E's~~
11 ~~service area to more fully participate in California's clean energy~~
12 ~~initiatives.~~ 450 million to direct bill-paying assistance to PG&E customers in
13 need.

14 In its prior transactions with SDG&E, Citizens committed to contribute
15 50 percent of its net after-tax profits to disadvantaged communities and
16 low-income families. As Mr. Smith ~~explains~~ and Citizens' President Joseph
17 P. Kennedy III (Amended Chapter 7) explain in ~~his~~ their amended testimony,
18 the Citizens charitable contributions from those previous transactions are
19 providing significant benefits to the public through funding for rooftop and
20 community solar projects in Imperial County and funding for electric vehicles
21 and other forms of emissions-free transportation service in San Diego
22 County.

23 In approving Citizens' transactions with SDG&E, the Commission found
24 that Citizens' charitable commitments provide "a significant public benefit"⁸
25 that "not only benefits disadvantaged and low-income communities ... but
26 also supports the state's implementation of [Senate Bill ('SB')] 350."⁹ As the
27 Commission explained in approving Citizens' investment in the Sycamore
28 Project, Citizens' contributions will support key goals of SB 350, which
29 "promotes clean energy programs ... to achieve goals for greenhouse-gas

8 D.11-05-048 at 12 (Sunrise Section 851 Decision), 2011 Cal. ~~Pub. Util. Code~~ PUC Lexis 302-~~(Cal. Pub. Util. Code),~~ at *18-19. (Cal. P.U.C. 2011).

9 D.19-03-024 at 18 (Sycamore Section 851 Decision), 2019 ~~WL 1571659~~ (Cal. Pub. Util. Code), PUC Lexis 154, at *~~10-25-26~~ (Cal. P.U.C. 2019).

reduction and encourages more access of these programs for low-income and disadvantaged communities.”¹⁰

Here, the size and structure of the Investment Program will allow Citizens to commit to far greater levels of charitable assistance to ~~disadvantaged communities and low-income~~support families in need, both in terms of the percentage of net after-tax profits committed and the overall amount that will be contributed. Citizens is also providing greater specificity about its charitable giving plans by committing to dedicate all its charitable contributions associated with the Investment Program to direct bill-paying assistance. As such, the Investment Program will provide significant public benefits.

~~2.~~ Benefits for Customers

~~The Investment Program will provide significant benefits to customers by: (1) providing additional capital that will support PG&E’s infrastructure needs and promote PG&E’s financial health, (2) providing rate certainty and rate stability, (3) ensuring customers benefit from the remaining useful life of projects after expiration of the applicable Entitlements Lease, and (4) advancing diverse interests in transmission development.~~

~~a.2.~~ The Additional Capital Provided Through the Investment Program Will Support ~~PG&E’s~~Needed Infrastructure ~~Needs~~Investment and Promote PG&E’s Financial Health

As PG&E’s expert witness Jennifer E. Nelson (Amended Chapter 9) explains, all utilities require substantial amounts of capital to safely and reliably meet their obligation to serve customers. California’s decarbonization and risk reduction goals in particular require significant capital investment. ~~For example, support for electric vehicles,~~ Achieving California’s goal of carbon neutrality by 2045¹¹ will require significant electrification of buildings, and interconnection and vehicles, along with substantial additions of new renewable and utility-scale and distributed clean energy storage facilitiesresources. These projects will require meaningful

¹⁰ ~~Id.~~ D.19-03-024 at 18 (Sycamore Section 851 Decision), 2019 Cal. PUC Lexis 154, at *26 (Cal. P.U.C. 2019).

¹¹ See Assembly Bill No. 1279, ch. 337 (Cal. 2022).

1 investments to increase the capacity of the transmission and distribution
2 system, ~~along with~~ in certain areas of the grid, in addition to ongoing
3 investments to ensure the continued safety, reliability, and health of the
4 existing electricity delivery system.¹² In its 2023-2024 transmission plan,
5 CAISO explained that the “need for additional generation of electricity over
6 the next 10 years has escalated rapidly in California as it continues
7 transitioning to the carbon-free electrical grid required by the state’s clean-
8 energy policies,” which in turn is “driving a dramatically accelerated pace for
9 new transmission development in current and future planning cycles.”¹³
10 Governor Gavin Newsom’s October 2024 Executive Order on electricity
11 affordability similarly highlighted investments in “the critical work of
12 upgrading and expanding the aging electric transmission and distribution
13 infrastructure that makes up our electric grid to meet future demand,” as well
14 as “historic investments that are critical to reduce wildfire risk and improve
15 the safety and reliability of the electric grid.”¹⁴

16 PG&E also anticipates significant load growth in its service territory that
17 will necessitate further infrastructure investments. In the greater Bay Area,
18 for instance, PG&E expects load to grow 30 percent by 2034 and 50 percent
19 by 2039.¹⁵ In light of this historic need for infrastructure investment, PG&E
20 Corporation recently announced that its five-year capital investment plan for
21 2024 through 2028 has increased to \$63 billion.¹⁶ Under the Investment

¹² See, e.g., Edison Int’l, *Countdown to 2045: Realizing California’s Pathway to Net Zero* (Sept. 2023), https://newsroom.edison.com/gallery/get_file/?file_id=6508e6633d63325f2e763f1b&ir=1.

¹³ CAISO, *2023-2024 Transmission Plan* at 1 (May 23, 2024), <https://www.caiso.com/documents/decisionon2023-2024transmissionplan-memo-may2024.pdf>.

¹⁴ Cal. Exec. Dep’t, Executive Order N-5-24 (Oct. 30, 2024).

¹⁵ PG&E, *PG&E’s 2024 Request Window Proposals: CAISO 2024-2025 Transmission Planning Process* at 2 (Sept. 24, 2024).

¹⁶ PG&E Corp., *PG&E Corp. Reports Strong Third-Quarter Results; Strengthens 2024 Guidance; Initiates 2025 Guidance; Grows 5-Year Capital Plan* (Nov. 7, 2024), <https://investor.pgecorp.com/news-events/press-releases/press-release-details/2024/PGE-Corporation-Reports-Strong-Third-Quarter-Results-Strengthens-2024-Guidance-Initiates-2025-Guidance-Grows-5-Year-Capital-Plan/>; see also Prepared Testimony of Jennifer E. Nelson (Chapter 9), Section III (“[Regulatory Research Associates] reports \$38.4 billion in planned capital expenditures for PG&E Corp. from 2025 – 2027, which is the third largest of the 45 utilities covered in the report and more than 6% of the \$620 billion total.”).

1 Program, Citizens will provide PG&E with up to \$1.0 billion that will enable
2 PG&E to ~~accelerate~~undertake these important investments. ~~These~~Capital
3 investments to support the construction of needed and essential
4 infrastructure will ~~benefit~~ensure that PG&E is able to continue providing safe
5 and reliable electric service to its customers, ~~and~~. Additionally, as the
6 Commission found in the Sunrise Section 851 Decision,¹⁷ energy
7 infrastructure development will benefit the public by improving employment
8 opportunities and the tax base in the PG&E electric service territory.

9 ~~Additionally~~,

10 PG&E will use the proceeds from the Entitlements Leases as a source
11 of funding for PG&E's utility capital expenditure program, including
12 investments in electric transmission and distribution system safety and
13 reliability upgrades, risk mitigation, and investments in electrification and
14 related efforts to combat climate change. The investments funded by the
15 proceeds of the Investment Program will go through the required regulatory
16 processes and approvals, including any such processes needed to
17 determine need and prudence. Stakeholders will have the opportunity to
18 participate in any such proceedings.

19 ~~In addition~~, PG&E is pursuing a variety of avenues to fund the significant
20 transmission and distribution system infrastructure investments that will be
21 needed in the coming years, including transactions with partners like
22 Citizens. As PG&E's expert witness Jennifer E. Nelson (Amended Chapter
23 9) explains in greater detail, the Investment Program is a reasonable and
24 prudent option for raising capital that will benefit customers by improving
25 PG&E's financial strength and flexibility, which ultimately is to the benefit of
26 customers.

27 The Commission has also recognized that customers have a general
28 interest in PG&E's return to financial health and an investment-grade issuer

¹⁷ D.11-05-048 at 13 (Sunrise Section 851 Decision), 2011 Cal. ~~Pub. Util. Code~~PUC Lexis
302, at *19 (Cal. ~~Pub. Util. Code~~, at *19 P.U.C. 2011).

1 credit rating.¹⁸~~The Investment Program will~~ An investment-grade rating
2 ultimately reduces customer costs by allowing PG&E to obtain lower cost
3 credit and financing for projects needed to serve customers.¹⁹ Ms. Nelson
4 explains that PG&E generates less cash flow internally for its capital
5 investment and requires more external financial capital to fund its capital
6 investment plan than other electric utilities do, which magnifies the need for
7 PG&E to maintain flexible access to multiple sources of capital. Although
8 debt and equity are the primary sources of external capital for utilities,
9 alternative capital sources like the Investment Program can allow PG&E to
10 raise capital without adversely impacting PG&E's financial profile and credit
11 metrics. In doing so, the Investment Program promotes PG&E's financial
12 health to the benefit of customers.²⁰~~The Investment Program also will~~

¹⁸ See, e.g., D.03-12-035, Appendix C, Statement of Intent (5) (*In Re Pac. Gas & Elec. Co.*), 230 P.U.R.4th 101, 2002 Cal. Pub. Util. Code Lexis 1051 (Cal. Pub. Util. Code), at *144 (“It is in the public interest to restore PG&E to financial health and to maintain and improve PG&E’s financial health in the future to ensure that PG&E is able to provide safe and reliable electric and gas service to its customers at just and reasonable rates.”); D.04-03-009 at 25 (*In re Pac. Gas & Elec. Co.*), 2004 Cal. Pub. Util. Code Lexis 72 (Cal. Pub. Util. Code), at *43 (“The record demonstrates that creditworthiness was important to obtaining low cost credit and financing of major projects that would benefit ratepayers.”); D.19-10-056 at 39 (*Order Instituting Rulemaking to Consider Authorization of a Non-Bypassable Charge to Support California’s Wildfire Fund*), 2019 Cal. Pub. Util. Code Lexis 673 (Cal. Pub. Util. Code), at *46 (“[A]ll else being equal, the prevention of credit rating downgrades for electrical corporations reduces ratepayer costs.”).

¹⁹ See, e.g., D.03-12-035, Appendix C, Statement of Intent (5) (*In re Pac. Gas & Elec. Co.*), 230 P.U.R.4th 101, 2002 Cal. PUC Lexis 1051, at *144 (Cal. P.U.C. 2003) (“It is in the public interest to restore PG&E to financial health and to maintain and improve PG&E’s financial health in the future to ensure that PG&E is able to provide safe and reliable electric and gas service to its customers at just and reasonable rates.”); D.04-03-009 at 25 (*In re Pac. Gas & Elec. Co.*), 2004 Cal. PUC Lexis 72, at *43 (Cal. P.U.C. 2004) (“The record demonstrates that creditworthiness was important to obtaining low cost credit and financing of major projects that would benefit ratepayers.”); D.19-10-056 at 39 (*Order Instituting Rulemaking to Consider Authorization of a Non-Bypassable Charge to Support California’s Wildfire Fund*), 2019 Cal. PUC Lexis 673, at *46 (Cal. P.U.C. 2019) (“[A]ll else being equal, the prevention of credit rating downgrades for electrical corporations reduces ratepayer costs.”).

²⁰ ~~The Investment Program would complement PG&E’s other efforts to raise capital in a way that improves the company’s financial health, including the proposal to transfer substantially all of PG&E’s non-nuclear generation assets to a new subsidiary and to sell minority equity interests in such subsidiary to one or more third-party investors. See Application of Pac. Gas & Elec. Co. (U 39-E) & Pac. Generation LLC for Approval to Transfer Certain Generation Assets, A.22-09-018 (Cal. Pub. Util. Code filed Sept. 28, 2022).~~

1 diversify PG&E's capital sources, providing financial flexibility that is critical
2 to PG&E's ability to meet its obligation to serve customers safely and
3 reliably.²¹ Having diverse funding sources mitigates risk and lowers the
4 overall cost of funds, thereby benefitting PG&E customers and protecting
5 them from higher capital costs.

6 **b.3.Customers Will Benefit From Rate Certainty and Rate Stability**

7 Citizens' capital cost recovery (i.e., the recovery of the Prepaid Rent
8 paid to PG&E at the outset of an Entitlements Lease and financing costs,
9 capped at one percent of Prepaid Rent) will be the largest component of the
10 rate Citizens will charge CAISO customers. As PG&E witnesses Michael
11 Medeiros (Amended Chapter 2) and Divya Raman (Amended Chapter 3)
12 and, Citizens' expert witness Ronald E. Kennedy (Amended Chapter 6),
13 and PG&E expert witness Jennifer E. Nelson (Chapter 9) discuss in their
14 respective testimony, the capital component of Citizens' rate for each
15 Entitlements Lease will be capped and locked-in for the full 30-year term of
16 that Entitlements Lease, absent a change in law. Customers will benefit
17 from Citizens securing 100 percent of its required financing at the outset and
18 locking in capital cost recovery over the 30-year Entitlements Lease term.
19 Additionally, Citizens' annual capital cost revenue requirements will be
20 levelized (i.e., equal) over the 30-year lease periods, providing further rate
21 certainty and stability.

22 These features of the Investment Program are modeled on the approach
23 Citizens used in its prior transactions with SDG&E. In approving Citizens'
24 investment in the Sycamore Project, the Commission found that "Citizens'
25 fixed capital costs provide rate stability to ratepayers. They also protect
26 ratepayers from changes in money costs caused by fluctuations in the
27 market. Furthermore, the rate stability and protection from market

²¹ PG&E has recently issued equity and worked to secure funding from the DOE to finance infrastructure investment. However, these financing transactions alone are not sufficient to meet all of PG&E's infrastructure investment needs. The Investment Program provides another means to raise needed capital in a reasonable and prudent manner.

fluctuations provide tangible benefits to ratepayers.”²² The same benefits are present here.

4.4. Customers Will Benefit From the Remaining Useful Life of Projects Subject to Entitlements Leases

By the expiration of an Entitlements Lease, the capital costs for the portions of the projects that were subject to Citizens’ leasehold interest will have been fully depreciated. Since the leased Entitlements to the projects revert to PG&E at the expiration of an Entitlements Lease, customers will receive the benefit for the remaining useful life of those facilities without being charged for their capital costs for such period. As the Commission found in the Sycamore Section 851 Decision,²³ customers’ ability to continue using the relevant transmission projects for their remaining useful lives after they are fully depreciated is a net benefit to customers.

4.5. The Investment Program Will Advance Diverse Interests in Transmission Development

Citizens is ~~not a public utility that has an obligation to serve and thus is~~ significantly different from a traditional utility. As the Commission recognized when approving Citizens’ investment in the Sunrise Project, “having Citizens’ as a new, non-utility participant” in transmission development in California “is a positive element” of the Investment Program.²⁴ As with the Sunrise Project, authorizing leases of Entitlements pursuant to the Investment Program would lead to “the presence of another firm with a significant interest in transmission investment” in PG&E’s electric service territory, which “increases the potential for such development, and ... would make it more likely than not that Citizens will become and remain a viable competitor in transmission development” beyond its current interests in the state.²⁵

²² D.19-03-024 at 16 (Sycamore Section 851 Decision), 2019 [WL 1571659](#) (Cal. ~~Pub. Util. Code~~), [PUC Lexis 154](#), at *[8-22](#) (Cal. P.U.C. 2019).

²³ D.19-03-024 at 19-20 (Sycamore Section 851 Decision), 2019 [WL 1571659](#) (Cal. ~~Pub. Util. Code~~), [PUC Lexis 154](#), at *[10-27-29](#) (Cal. P.U.C. 2019).

²⁴ D.11-05-048 at 14 (Sunrise Section 851 Decision), 2011 Cal. ~~Pub. Util. Code~~ [PUC Lexis 302](#), at *[21](#) (Cal. ~~Pub. Util. Code~~), at *[21](#) [P.U.C. 2011](#)).

²⁵ *Id.*

1 E. Protections Against Adverse Impacts

2 The Investment Program includes important ratepayer protections that are
3 modeled and expand on the ratepayer protections in the prior Citizens/SDG&E
4 transactions. The Investment Program also includes provisions to ensure
5 electric service to the public will not be negatively impacted.

6 1. Customers Will Continue Receiving Electric Service at Fair and 7 Reasonable Rates

8 Like SDG&E in the prior Citizens transactions, PG&E was concerned
9 about the rates Citizens could obtain at the Federal Energy Regulatory
10 Commission (FERC) in connection with its participation in the Investment
11 Program. The DCOA and Entitlements Lease thus include the same
12 important ratepayer protections the Commission approved in the Sunrise
13 and Sycamore Section 851 Decisions and additional protections. These
14 protections are summarized below and are discussed in greater detail in the
15 amended testimony of PG&E witnesses Michael Medeiros (Amended
16 Chapter 2) and Divya Raman (Amended Chapter 3) and Citizens' expert
17 witness Ronald E. Kennedy (Amended Chapter 6).

18 Consistent with the Citizens/SDG&E transactions, PG&E and Citizens
19 have agreed to cap the capital cost component of Citizens' FERC rate at an
20 approximation of the rate PG&E could charge at the time of execution of an
21 Entitlements Lease for the portion of the transmission projects subject to
22 ~~Citizens~~Citizens' leasehold interests (i.e., if PG&E held 100 percent of the
23 Entitlements). The Parties will use the "Representative Rate Model" in the
24 Entitlements Lease to generate the approximate PG&E rate at the time the
25 applicable Entitlements Lease is executed. This structure is closely
26 modeled on the Citizens/SDG&E transactions, which included similar
27 models that the Commission reviewed and approved.²⁶

28 Additionally, the Investment Program is structured to prevent double
29 recovery of any project-related costs. More specifically, the transaction
30 documents include express provisions: (1) requiring that an amount equal

26 See D.19-03-024 at 12-14 (Sycamore Section 851 Decision), 2019 WL 1571659
(~~Cal. Pub. Util. Code~~), PUC Lexis 154, at *6-7; 17-20 (Cal. P.U.C. 2019); D.11-05-048 at
19-22 (Sunrise Section 851 Decision), 2011 Cal. ~~Pub. Util. Code~~PUC Lexis 302 (~~Cal.~~
~~Pub. Util. Code~~), *28-32, (Cal. P.U.C. 2011).

to or greater than the expected Citizens leasehold percentage interest of the capital costs of each project must not already be included in PG&E's existing FERC transmission rates for purposes of cost recovery; (2) requiring that PG&E exclude from its transmission rates for cost recovery an amount of dollars equivalent to the total Prepaid Rent received from Citizens; and (3) providing for PG&E to allocate to Citizens a proportionate share of expense costs for the projects subject to an Entitlements Lease and requiring that PG&E exclude from its transmission rates for cost recovery any such amount allocated to Citizens. These principles are consistent with the Citizens/SDG&E transactions, which the Commission found to adequately protect against double recovery.²⁷ Here, as an added protection, PG&E and Citizens expressly incorporated these protections into the DCOA.²⁸

The Investment Program also provides additional customer protection compared to the prior Commission-approved transactions between SDG&E and Citizens.²⁹ Namely, the DCOA and Entitlements Lease expressly require that Citizens be responsible for the Citizens-specific incremental costs associated with its involvement in the Investment Program and ~~will~~ not recover these costs in customer rates. Citizens is able to offer this additional protection here because of the size and multi-year structure of the Investment Program.

As a final protection, the Entitlements Lease expressly confirms that so long as PG&E is part of CAISO or a successor system operator, PG&E shall not be responsible to guarantee or financially support Citizens' cost recovery.

2. Electric Service to the Public Will Not Be Negatively Impacted

Under the Entitlements Leases, PG&E will retain responsibility for the operations and maintenance of the projects. Additionally, Citizens will be required to transfer operational control of the leased Entitlements to CAISO

²⁷ See D.11-05-048 at 19 (Sunrise Section 851 Decision), 2011 Cal. [Pub. Util. Code](#) [PUC Lexis 302](#) ([Cal. Pub. Util. Code](#)), at *28-29, ([Cal. P.U.C. 2011](#)).

²⁸ DCOA §§ 3.4(a)(i), 4.6.

²⁹ See D.19-03-024 at 13-14 (Sycamore Section 851 Decision), 2019 [WL 1571659](#) ([Cal. Pub. Util. Code](#)), [PUC Lexis 154](#), at *6-7, 18-20 ([Cal. P.U.C. 2019](#)).

(or, if applicable at the time, a successor system operator). This transfer will ensure that the portion of the projects subject to the Entitlements Lease will be made available to customers on a comparable, non-discriminatory basis. In its decisions approving the Citizens/SDG&E transactions, the Commission found these requirements protect electric service to the public from being negatively affected.³⁰

F. Brief Overview of the Tax Implications of the Investment Program

Consistent with the prior Citizens/SDG&E transactions, PG&E and Citizens agreed to structure the Entitlements Leases as IRC § 467 leases to obtain the increased certainty about tax treatment that both Parties desire and to spread the income and expense items for tax purposes over the life of the applicable Entitlements Leases in accordance with IRC § ~~467~~ 467 and the Treasury regulations thereunder. In Amended Chapter 4, PG&E witness James Higham, Jr. discusses the tax treatment of the Prepaid Rent that PG&E will receive from Citizens pursuant to an Entitlements Lease as an IRC § 467 lease, the treatment of deferred taxes and property taxes, and why PG&E ratepayers will not be harmed from a tax perspective by the contemplated Entitlements Leases.

G. Conclusion

~~For the foregoing reasons,~~ PG&E respectfully requests the Commission authorize PG&E under Section 851 to lease Entitlements to certain high-voltage PG&E transmission projects to Citizens subject to the terms and conditions of the Investment Program created by the DCOA and as described in the Amended Application and grant such other relief as is requested in the Amended Application. The Investment Program will provide needed capital for PG&E infrastructure to meet ~~its reliability and~~ California's clean energy goals ~~while ensuring and provide~~ customers ~~continue to receive~~ with safe and reliable electric service at fair and reasonable rates, ~~and the~~. The Investment Program will ~~provide substantial benefits to disadvantaged communities and low-income~~ also directly address urgent energy affordability concerns for families in need in the PG&E service area.

³⁰ See D.19-03-024 at 10-11 (Sycamore Section 851 Decision), 2019 WL 1571659 (Cal. Pub. Util. Code), PUC Lexis 154, at *~~5-6~~; 13-15 (Cal. P.U.C. 2019); D.11-05-048 at 22 (Sunrise Section 851 Decision), 2011 Cal. Pub. Util. Code PUC Lexis 302 (Cal. Pub. Util. Code), at *33; (Cal. P.U.C. 2011).

PACIFIC GAS AND ELECTRIC COMPANY

AMENDED CHAPTER 2

THE INVESTMENT PROGRAM

PACIFIC GAS AND ELECTRIC COMPANY
AMENDED CHAPTER 2
THE INVESTMENT PROGRAM

TABLE OF CONTENTS

A. Introduction.....	2-1
B. Description of Investment Program	2-3
1. General Description	2-3
2. Multi-Project Approach and Project Selection	2-5
a. Multi-Project Approach	2-5
b. Project Identification	2-6
c. Project Eligibility Criteria	2-8
d. Master Project List and Projects Targeted for Option Period 1 Investment Tranche and Initial Entitlements Lease	2-9
3. Transaction Mechanics	2-13
a. The Development, Coordination, and Option Agreement	2-14
b. Option Mechanics – Option Period 1	2-14
c. Option Mechanics – Option Periods 2 Through 5	2-15
d. Flexibility Provided Under the DCOA.....	2-17
e. Prepaid Rent.....	2-19
4. Important Features of the Investment Program.....	2-19
a. Citizens’ Contributions to Direct Bill-Paying Assistance Programs	2-20
b. Benefits and Protections.....	2-22
c. PG&E Does Not Guarantee Citizens’ Cost Recovery	2-25
d. Operations and Maintenance Responsibility and Allocation of Expense Costs	2-26
e. Capital Improvements.....	2-27
f. Transfer of Operational Control of Leased Entitlements	2-27
g. The Entitlements Leases Are Structured Pursuant to Internal Revenue Code § 467	2-28

PACIFIC GAS AND ELECTRIC COMPANY
AMENDED CHAPTER 2
THE INVESTMENT PROGRAM

TABLE OF CONTENTS
(CONTINUED)

h. PG&E's Right of First Refusal.....	2-29
i. Status of Projects at the End of the Applicable Entitlements Lease.....	2-29
C. Necessary Regulatory Filings.....	2-29
1. FERC Filings.....	2-29
2. Proposed Commission Review and Oversight Process	2-31
D. Public Interest Basis for Commission Approval	2-33
E. Commission Precedent Supports the Investment Program	2-33

PACIFIC GAS AND ELECTRIC COMPANY
AMENDED CHAPTER 2
THE INVESTMENT PROGRAM

A. Introduction

Pacific Gas and Electric Company (PG&E) respectfully requests that the California Public Utilities Commission (CPUC or Commission) authorize PG&E to lease Entitlements (as defined below) to certain PG&E transmission projects to a wholly owned subsidiary of Citizens Energy Corporation subject to the terms and conditions of the investment program (Investment Program) created by the Development, Coordination, and Option Agreement (DCOA~~),~~ and as described in the Amended Application. The DCOA is attached to the Amended Application as Attachment 1. PG&E and Citizens Energy Corporation ~~(together with its wholly owned subsidiary Citizens Pacific Transmission LLC, "Citizens")~~ executed the DCOA on February 20, 2024.¹ and amended it on January 29, 2025.²

The DCOA provides for a multi-year, multi-project Investment Program that will assist PG&E in meeting its current and future capital needs to accelerate electric infrastructure investments necessary to meet California's decarbonization goals, while increasing capacity, reliability, asset health, and the interconnection of generation (including renewable generation) and load on the PG&E system.³ In so doing, the Investment Program provides substantial

¹ ~~The DCOA is an agreement between PG&E and Citizens Energy Corporation. Citizens Pacific Transmission LLC is an indirect wholly owned subsidiary of Citizens Energy Corporation and is the entity that Citizens Energy Corporation expects to enter into leases with PG&E pursuant to the DCOA. The DCOA permits Citizens Energy Corporation to select a wholly owned subsidiary other than Citizens Pacific Transmission LLC to enter into leases with PG&E.~~

² The DCOA is an agreement between PG&E and Citizens Energy Corporation. Citizens Pacific Transmission LLC is an indirect wholly owned subsidiary of Citizens Energy Corporation and is the entity that Citizens Energy Corporation expects to enter into leases with PG&E pursuant to the DCOA. The DCOA permits Citizens Energy Corporation to select a wholly owned subsidiary other than Citizens Pacific Transmission LLC to enter into leases with PG&E. This testimony refers to Citizens Energy Corporation and its subsidiary Citizens Pacific Transmission LLC, or other wholly owned subsidiary that Citizens selects to enter into an Entitlements Lease, collectively as "Citizens."

³ See Amended Application, Attachment 1, DCOA, Recitals ~~("(DCOA)").~~ Unless otherwise specified, all references to the DCOA and the Entitlements Lease refer to the amended and restated versions of those documents.

customer and public benefits. Certain key features of the Investment Program provide additional customer and public benefits, including rate stability and certainty and significant more than \$450 million in estimated charitable contributions by Citizens to energy-related direct bill-paying assistance programs that advance the Commission's goals and support disadvantaged communities and low-income families in PG&E's service territory. E customers in need consistent with Commission policy and the express directives of Governor Gavin Newsom.⁴ The Investment Program also includes important ratepayer protections that provide for continuing electric service at fair and reasonable rates.

PG&E's Investment Program is closely modeled on prior transactions between Citizens and San Diego Gas & Electric Company (SDG&E) that the Commission approved, finding the transactions were not adverse to the public interest and, in fact, benefitted the public interest.⁵ PG&E's Investment Program builds on and expands upon Citizens' prior transactions. The customer protection mechanisms and overall regulatory treatments in PG&E's Investment Program are largely carried over from the Citizens/SDG&E transactions. PG&E's Investment Program, however, includes substantial added customer protections and benefits: (1) Citizens has agreed to forgo recovery from customers of its (and its affiliates') upfront and ongoing incremental costs over the entire life of the applicable lease(s);⁶ and (2) Citizens has agreed to significantly increase (as compared to earlier transactions) the share of its net after-tax profits committed to charitable assistance programs.⁷ The Investment Program thus incorporates the essential and familiar elements of the two prior, Commission-approved Citizens/SDG&E transactions but with improved administrative efficiencies and greatly enhanced customer and public benefits.

⁴ Cal. Exec. Dep't, Executive Order N-5-24 (Oct. 30, 2024).

⁵ D.11-05-048 at 1, 21-23, 25-26 (Sunrise Section 851 Decision), 2011 Cal. PUC Lexis 302 (Cal. P.U.C.), at *1, *32-34, *38; (Cal. P.U.C. 2011); D.19-03-024 at 2, 18, 20, 25 (Sycamore Section 851 Decision), 2019 WL 1571659 (Cal. P.U.C.), PUC Lexis 154, at *1, *9, *11, *13-2, *25, *29, *35-36 (Cal. P.U.C. 2019).

⁶ See DCOA § 4.5; DCOA, Exh. A § 4.3.2 ("(Entitlements Lease)").

⁷ See DCOA § 4.4; Entitlements Lease § 5.3.1.

1 My amended testimony describes the Investment Program, explains the
2 regulatory filings needed to allow the Investment Program to proceed, and briefly
3 discusses the public interest basis and precedent supporting Commission
4 approval of the Investment Program under Section 851 of the California Public
5 Utilities Code.

6 **B. Description of Investment Program**

7 This section of my amended testimony provides a general description of the
8 Investment Program, explains how projects will be selected for inclusion,
9 discusses the mechanics of entering into a lease, and highlights important
10 features of the Investment Program.

11 **1. General Description**

12 Under the DCOA, PG&E will have the opportunity to offer Citizens up to
13 five separate options to lease Entitlements to PG&E transmission projects
14 that ~~will be identified in the relevant lease and will~~ meet specified eligibility
15 requirements. Entitlements are defined in Appendix A to the California
16 Independent System Operator Corporation (CAISO) Tariff as “[t]he right of a
17 Participating [Transmission Owner] obtained through contract or other
18 means to use another entity’s transmission facilities for the transmission of
19 Energy.”⁸ To be clear, Citizens will not be leasing the physical projects, only
20 Entitlements to—or more simply, rights to use—the projects. As discussed
21 below, the projects that will be subject to the Entitlements Leases must be
22 fully permitted and operational at lease execution and are projects PG&E
23 plans to put into service regardless of whether the Investment Program is
24 implemented.

25 If PG&E and Citizens (collectively, the “Parties”) close on a given option,
26 the Parties will enter into a 30-year “Entitlements Lease” with respect to the

8 CAISO Fifth Replacement FERC Electronic Tariff, Appendix A, Entitlements. Citizens’ prior transactions with SDG&E were characterized as leases of “transfer capability,” but like here, they were leases of Entitlements to the applicable projects. See, e.g., *Citizens Sycamore-Penasquitos Transmission LLC*, Docket No. ER18-1442-000, Transmission Owner Tariff and Transmission Revenue Requirement Filing at 2 (FERC filed Apr. 25, 2018); *Citizens Sunrise Transmission LLC*, Docket No. ER12-686-000, Transmission Owner Tariff and Transmission Revenue Requirement Filing at 8-9 (FERC filed Dec. 23, 2011).

1 applicable group of projects.⁹ A Form of Entitlements Lease is Exhibit A to
2 the DCOA (“Entitlements Lease”).

3 Citizens’ leasehold percentage interest in the Entitlements to any given
4 project will be capped at 49.9 percent.¹⁰ The Investment Program involves
5 *only* the lease of Entitlements to Citizens. PG&E will retain full ownership of
6 the projects subject to any Entitlements Lease¹¹ and will remain responsible
7 for the development, design, permitting, engineering, procurement,
8 construction, operation, and maintenance of the projects.¹² The relevant
9 transmission projects will be under the operational control of the CAISO (or
10 its successor) for the 30-year term of the applicable Entitlements Lease.¹³
11 At the end of an Entitlements Lease, the relevant Entitlements will revert
12 back to PG&E free and clear of any liens or encumbrances.

13 Under the DCOA, the aggregate value of the Entitlements that may be
14 leased to Citizens pursuant to the Investment Program is capped at
15 \$1.0 billion.¹⁴ The Parties expect this amount to be allocated roughly into
16 five separate Entitlements Leases averaging \$200 million each.¹⁵ The
17 DCOA, however, provides flexibility to adjust the dollar value of each
18 Entitlements Lease (as discussed below),¹⁶ subject to the total investment
19 cap of \$1.0 billion and the 49.9 percent Citizens leasehold interest limit
20 noted above.

21 Each Citizens investment under an Entitlements Lease will take the form
22 of a lump sum prepaid rent payment by Citizens to PG&E (“Prepaid Rent”)
23 that will confer on Citizens a leasehold percentage interest in the

⁹ See DCOA §§ 4.1, 4.2(a),

¹⁰ *Id.* § 1.1 (definition of Citizens Percentage Interest); *Id.* §§ 3.4(d), 4.2(d); Entitlements Lease § 1.1 (definition of Citizens Percentage Interest).

¹¹ DCOA § 4.1.

¹² *Id.* Recitals; *Id.* §§ 3.1, 6.4; Entitlements Lease, Recital D; *Id.* § 3.2.

¹³ See Entitlements Lease § 1.1 (definition of Citizens Entitlements); *Id.* § 5.3.3.

¹⁴ DCOA, Recitals; *Id.* §§ 2.1(iii), 4.2(d).

¹⁵ See *Id.* § 3.4(b)-(c).

¹⁶ This flexibility is important so that PG&E is able to tailor the Investment Program to meet its operational and customer needs and account for financing and market considerations applicable to Citizens and PG&E, as they may evolve over the term of the DCOA.

Entitlements to a specified group of PG&E transmission projects for the duration of the 30-year Entitlements Lease.¹⁷ The applicable Entitlements Lease will govern the rights and obligations of Citizens and PG&E during the 30-year term and among other things will obligate Citizens to commit a substantial and escalating portion of its net after-tax profits attributable to the leased Entitlements to fund ~~energy-related charitable~~ direct bill-paying assistance programs ~~for that support PG&E customers in need, including those in~~ disadvantaged communities ~~and low-income families in the PG&E service area.~~¹⁸

2. Multi-Project Approach and Project Selection

This section explains why the Parties adopted a multi-project approach for the Investment Program and how PG&E will identify the projects that may be subject to an option and Entitlements Lease, including the eligibility criteria that each project must meet to be included in the Investment Program. ~~This section also provides a list of projects that are currently targeted for inclusion in the first option period.~~

a. Multi-Project Approach

Unlike the prior Citizens/SDG&E transactions that involved a smaller one-time Citizens investment in a single new transmission project, the PG&E Investment Program is structured to accommodate the reality that there is no single planned high-voltage PG&E transmission project expected to enter commercial operation in the near-term that would allow Citizens to invest anywhere near the desired amount of capital without acquiring a leasehold interest exceeding 49.9 percent.

Accordingly, the PG&E Investment Program expands upon the established Citizens/SDG&E model to reflect PG&E's currently expected transmission development ~~pipeline~~ projects and allow for a larger total investment by Citizens. In expanding upon the model, the ~~Parties~~ parties worked hard to promote both cost and timing efficiencies within parameters acceptable to PG&E, Citizens, and Citizens' lenders, while

¹⁷ See DCOA § 4.2(c), (d); Entitlements Lease § 4.1.1.

¹⁸ See DCOA § 4.4; Entitlements Lease § 5.3.1.

1 being careful to preserve important and previously approved customer
2 protections.

3 Because of the efficiencies resulting from the size and structure of
4 the Investment Program, PG&E and Citizens are able to provide
5 customers with the following additional protections and benefits.
6 Citizens has agreed to (1) forgo recovery from customers of all its (and
7 its affiliates') upfront and ongoing incremental costs, including financing
8 costs in excess of one percent, for the duration of the applicable
9 Entitlements Leases,¹⁹ and (2) contribute escalating percentages
10 (i.e., 50 percent up to 90 percent) of its net after-tax profits from its
11 participation in the Investment Program to ~~energy-related charitable~~
12 ~~causes~~direct bill-paying assistance programs in PG&E's service
13 territory.²⁰

14 In sum, the Investment Program's multi-project, multi-lease
15 approach builds upon an established model to allow PG&E to efficiently
16 and predictably access up to \$1.0 billion in capital to expedite the
17 development of needed electric infrastructure in PG&E's service territory
18 while benefiting customers and the community. Assuming timely receipt
19 of all necessary regulatory approvals, execution of the first Entitlements
20 Lease is anticipated in early ~~2025, 2026,~~²¹ in accordance with the first
21 option period mechanics discussed below.

22 **b. Project Identification**

23 The Investment Program is structured so that over the term of the
24 DCOA, PG&E may offer Citizens up to five options to enter into
25 Entitlements Leases, each pertaining to an identified list of high-voltage
26 transmission projects that PG&E provides to Citizens in advance.²² For
27 each option, the applicable projects will be set forth on a "Project List"
28 (as defined in the DCOA) that will identify each project and include

¹⁹ See DCOA § 4.5; Entitlements Lease § 4.3.2.

²⁰ See DCOA § 4.4; Entitlements Lease § 5.3.1.

²¹ As explained more below (see Transaction Mechanics), execution of the first Entitlements Lease is expected to occur approximately three months following receipt of all required regulatory approvals.

²² DCOA § 3.4(a)-(c).

1 PG&E's estimated costs to develop, design, permit, engineer, procure,
2 and/or construct each such project.²³ It also will include the estimated
3 Citizens' leasehold percentage interest in the Entitlements to each such
4 project and the project rent due based on a projected total Prepaid Rent
5 amount of \$200 million for the applicable Entitlements Lease (or such
6 other amount as the Parties may determine in accordance with the
7 terms of the DCOA).²⁴

8 The DCOA refers to the projects included in a given Project List
9 collectively as that option period's "Investment Tranche."²⁵ Projects
10 included in an Investment Tranche must meet the criteria described
11 below (and set out in the DCOA) to be eligible for inclusion by PG&E on
12 a Project List.²⁶

13 Prior to Citizens' exercise of a given option and up to the execution
14 of the applicable Entitlements Lease, PG&E will have the ability to make
15 certain modifications to the Project List for that option period, subject to
16 certain limitations and provided that any such modification does not
17 result in Citizens acquiring a leasehold interest greater than
18 49.9 percent in any individual project.²⁷

19 As explained in more detail in the Amended Application and in
20 Section B.2.d below, Attachment 2 to the Amended Application sets
21 forth a master list of projects that PG&E expects to draw from to develop
22 each Project List and Exhibit B to the DCOA provides a list of projects
23 that PG&E expects may be included on the final Project List for the first
24 option period. For Option Periods 2 through 5, PG&E is proposing an
25 expedited Tier 3 Advice Letter process through which the Commission
26 and stakeholders will be able to review the projects to be included in
27 each Entitlements Lease prior to lease execution.

23 *Id.* § 3.4(a)-(c), Exh. B.

24 *Id.* § 3.4(b)-(c), Exh. B.

25 *Id.* § 1.1 (definition of Investment Tranche).

26 See *Id.* § 3.4(a).

27 *Id.* § 3.4(d).

1 **c. Project Eligibility Criteria**

2 The DCOA sets forth specific criteria that must be satisfied for each
3 transmission project that PG&E includes on a Project List submitted to
4 Citizens (and to which PG&E subsequently leases Entitlements to
5 Citizens). Specifically, at the time PG&E submits a Project List to
6 Citizens: (1) an amount equal to or greater than the expected Citizens
7 leasehold percentage interest of the capital costs of the proposed
8 project must not already be included in PG&E's existing Federal Energy
9 Regulatory Commission (FERC) transmission rates for purposes of cost
10 recovery;²⁸ (2) the proposed project must be expected to be eligible for
11 cost recovery directly from CAISO through the CAISO High-Voltage
12 Transmission Access Charge (TAC), which is a FERC-regulated
13 transmission rate; (3) the proposed project must be expected to operate
14 at 200 kilovolts (kV) or above;²⁹ and (4) the proposed project must have
15 received all regulatory approvals and permits necessary at that time,
16 including, to the extent applicable, having undergone review under the
17 California Environmental Quality Act.³⁰ Additionally, all projects that will
18 be subject to an Entitlements Lease must achieve commercial operation
19 before the start of the relevant lease³¹ and therefore all are projects that
20 PG&E plans to put into service in the near-term regardless of whether
21 the Investment Program is implemented.

22 Under the DCOA, transmission projects that may be subject to
23 Entitlements Leases include electric transmission facilities, upgrades,
24 rebuids, and expansions that meet the specified criteria.³² PG&E
25 retains the responsibility for obtaining the regulatory approvals

²⁸ For instance, if the expected Citizens leasehold percentage interest is 45% of a given project's capital costs, PG&E must have included no more than 55% of that project's capital costs in its existing FERC transmission rates for purposes of cost recovery.

²⁹ The Parties interpret this criterion as also being satisfied where a proposed project is necessary for or otherwise supports the operation of equipment operating or expected to operate at ~~200kV~~ 200 kV or above.

³⁰ ~~Id.~~ DCOA § 3.4(a).

³¹ Id. § 4.3(a)(iii), (b)(iv).

³² ~~Id.~~ § 1.1 (definition of Project). For purposes of the DCOA, the portion of an individual PG&E planning order that will be recovered through the CAISO High-Voltage TAC constitutes a "Project."

1 necessary for PG&E to develop, design, engineer, procure, construct,
2 commission, own, operate, maintain, and finance the projects that will
3 be subject to the Entitlements Leases.³³

4 These criteria place important and clear guardrails on the types of
5 projects that will be eligible to be included in the Investment Program.
6 The criteria are intended to (1) ~~provide stakeholders with comfort and~~
7 ~~insight regarding the projects that may be subject to an Entitlements~~
8 ~~Lease;~~ (2) protect against double recovery of capital costs (especially
9 when read in conjunction with other provisions in the DCOA);
10 (3) ensure that Citizens will be able to recover its costs through the
11 CAISO High-Voltage TAC; and (4) minimize the risk of delays or
12 changes to the Project List that could be caused by including projects
13 that may be unable to obtain all necessary regulatory approvals and
14 permits on a timely basis.

15 **d. ~~Details of~~ Master Project List and Projects Targeted for Option**
16 **Period 1 Investment Tranche and Initial Entitlements Lease**

17 To provide detail regarding the specific projects that may be subject
18 to an Entitlements Lease, Attachment 2 to the Amended Application sets
19 forth a master list of projects that PG&E expects to draw from to develop
20 each Project List (Master Project List). The Master Project List provides
21 the universe of projects PG&E currently expects to draw from for each of
22 Option Periods 1 through 5.

23 Exhibit B to the DCOA sets forth a list of projects that ~~as of the~~
24 ~~execution date of the DCOA,~~ PG&E expects ~~to include~~ may be included
25 on the final Project List for the first option period ~~(as of January 29,~~
26 2025, the execution date of the amended and restated DCOA (Exhibit B
27 is referred to in the Amended Application as the “Proposed Project List
28 for Option Period 1”; the final projects are referred to as the “Option
29 Period 1 Investment Tranche” under the DCOA).

30 ~~The projects included in Exhibit B to the DCOA are as follows:~~

33 ~~Id.~~ § 1.1 (definition of Required PG&E Regulatory Approvals); ~~Id.~~ § 5.1.1.

TABLE 2-4
PROPOSED 1 OF THE MASTER PROJECT LIST FOR OPTION PERIOD 1

Line No.	Project Name	Description	Permit Status	Estimated Project Cost
1	Rio Oso: Install 230kV Modular Protection, Automation, and Control ("MPAC") Building	As part of a total rebuild of the 230kV Rio Oso substation in Sutter County, PG&E is installing an MPAC building to resolve current configuration issues, address reliability and capacity concerns, and alleviate high voltage issues at the substation.	Complete (Local or ministerial permit(s) only; no CPUC permit required)	\$26,007,302.20
2	Rio Oso: Install 230kV Breaker and a Half / Gas-Insulated Substation ("BAAH/GIS")	As part of a total rebuild of the 230kV Rio Oso substation in Sutter County, PG&E is installing a BAAH/GIS to resolve current configuration issues, address reliability and capacity concerns, and alleviate high voltage issues at the substation.	Complete (Local or ministerial permit(s) only; no CPUC permit required)	\$100,002,565.00
3	Gates: 500kV Transmission Line	This project supports transmission line work necessary to interconnect two, third-party owned/operated Static Synchronous Compensator (STATCOM) units in Fresno County resulting from a CAISO-approved FERC Order No. 1000 solicitation. The overall project provides voltage support to the CAISO system.	Complete (Local or ministerial permit(s) only; no CPUC permit required)	\$29,458,986.90

**TABLE 2-1
PROPOSED PROJECT LIST FOR OPTION PERIOD 1
(CONTINUED)**

Line No.	Project Name	Description	Permit Status	Estimated Project Cost
4	Gates: 500kV Dynamic Voltage Support	This project supports Gates substation upgrades necessary to interconnect two, third-party owned/operated STATCOM units in Fresno County resulting from a CAISO-approved FERC Order No. 1000 solicitation. The overall project provides voltage support to the CAISO system.	Complete (Local or ministerial permit(s) only; no CPUC permit required)	\$38,281,171.10
5	Monta Vista: Install 230kV MPAC Buildings and Other Upgrades	To improve reliability, PG&E will install several upgrades at the Monta Vista substation in Santa Clara County to (1) modify the existing 230kV bus to provide sectionalizing; (2) insert two new 230kV sectionalizing bus breakers to convert the two existing 230kV buses into four separate buses; (3) replace the existing 230kV control house with two new 230kV MPAC buildings; and (4) upgrade relays in the 230kV yard.	Complete (Local or ministerial permit(s) only; no CPUC permit required)	\$24,742,308.90
6	Table Mountain: Modify 500kV Series Capacitors 1&2	PG&E will modify existing capacitors at the 500kV Table Mountain Substation in Butte County to support the installation of two, third-party owned/operated STATCOM units resulting from CAISO-approved FERC Order No. 1000 solicitation. The overall project provides voltage support to the CAISO system.	Complete (Local or ministerial permit(s) only; no CPUC permit required)	\$56,930,705.20

Table 2-1

provides additional details about the projects included in the Proposed

Project List For Option Period 1

(continued).

Line No.	Project Name	Description	Permit Status	Estimated Project Cost
7	Arco 230kV Control Building Network Upgrade	PG&E will install a new control building at the 230kV Arco substation in Kern County to support the interconnection of numerous generation projects with a total capacity of approximately 1,700 megawatts (MW).	Complete (Local or ministerial permit(s) only; no CPUC permit required)	\$14,438,115.20
8	Tesla 500kV: Replace Circuit Breaker 542 and Circuit Breaker 642	PG&E will replace two circuit breakers at the 500kV Tesla substation in Alameda County to support the interconnection of at least two electric generation interconnection projects with a total capacity of approximately 800 MW.	Complete (Local or ministerial permit(s) only; no CPUC permit required)	\$9,906,525.60
9	Q1277 Tesla Substation Reliability Network Upgrade	PG&E will install reliability network upgrades at the 500kV Tesla substation in Alameda County to support the interconnection of electric generation with a total capacity of approximately 20 MW.	Complete (Local or ministerial permit(s) only; no CPUC permit required)	\$6,198,760.60

As shown in Exhibit B to the DCOA, the estimated total project rent due from Citizens in connection with a lease of approximately 45.3 percent of the Entitlements to such projects is approximately \$138.6 million. This amount is less than the expected average \$200 million Prepaid Rent amount (per Entitlements Lease) discussed elsewhere. However, in accordance with the DCOA's provisions regarding permitted changes to a Project List,³⁴ and depending on the timing of regulatory approvals and closing on the first option and initial

³⁴ Id., § 3.4(d).

1 Entitlements Lease, PG&E may modify this Project List, for example, to
2 increase the number of projects (and, indirectly, the estimated total
3 project rent due) and/or account for changes based on the actual timing
4 of regulatory approvals required for the Investment Program.³⁵

5 If the Commission approves the Amended Application prior to
6 December 31, 2025, the first Entitlements Lease will include only
7 projects on the Proposed Project List for Option Period 1. If regulatory
8 approval extends beyond 2025, it may be necessary for PG&E to revise
9 the Project List for the first option period to reflect intervening changes in
10 the progress of transmission projects under development and PG&E's
11 needs. Therefore, if Commission approval is not obtained until after
12 2025, the first Entitlements Lease may include other projects identified
13 in Table 2 of the Master Project List.

14 PG&E expects that most—if not all—of the projects that will be
15 subject to the second through fifth Entitlements Leases will come from
16 the Master Project List. However, given uncertainties about
17 transmission development and regulatory approvals, PG&E may
18 determine that it is prudent to include on a Project List for a future option
19 period certain projects not included on the Master Project List. Such
20 projects must meet the project eligibility criteria specified in the DCOA
21 and will be identified in the Tier 3 Advice Letters for Option Periods 2
22 through 5 submitted to the Commission.³⁶

23 3. Transaction Mechanics

24 This section discusses the key features of the DCOA, the mechanics of
25 the option windows, the flexibility provided under the DCOA, and the

³⁵ ~~The Project List on Exhibit B to the DCOA differs from the list provided to FERC with PG&E's twenty first Transmission Owner Tariff rate filing in that Exhibit B does not include any projects that will operate below 200kV. See *Pac. Gas & Elec. Co.*, Docket No. ER24-96-000, Pacific Gas and Electric Company Transmission Owner Rate Filing, Exhibit No. PGE-0011 at 7-8 (filed Oct. 13, 2023). At the time the FERC filings were submitted, the Parties were still negotiating project eligibility criteria. The Parties subsequently determined that all projects to be included in the Investment Program must be eligible for cost recovery through the CAISO High Voltage TAC and therefore, must operate at 200kV or above.~~

³⁶ See DCOA § 3.4.

1 Prepaid Rent that will be due from Citizens upon execution of an
2 Entitlements Lease.

3 **a. The Development, Coordination, and Option Agreement**

4 The DCOA governs the overarching relationship between Citizens
5 and PG&E and provides the agreed-upon framework for the Investment
6 Program. It sets forth the mechanisms and parameters pursuant to
7 which PG&E will identify eligible projects, provide Citizens with the
8 option to lease Entitlements to such projects, and determine
9 the percentage interest that Citizens may lease in Entitlements to each
10 such project and the dollar value of such interests for each option
11 period.

12 The DCOA is a multi-year agreement that pursuant to its terms will
13 expire no later than December 31, 2030 (unless extended by mutual
14 agreement).³⁷ The aggregate investment contemplated by the DCOA's
15 multi-year Investment Program is capped at \$1.0 billion.³⁸ This amount
16 is expected to be allocated into five options that PG&E may provide and
17 Citizens may exercise, resulting in the execution of up to five separate
18 Entitlements Leases averaging approximately \$200 million each (in
19 terms of total Prepaid Rent due under each Entitlements Lease).³⁹

20 **b. Option Mechanics – Option Period 1**

21 The first option period ~~the~~ (Option Period 1~~”) will~~) will not close until the
22 Parties have received all required regulatory approvals—including this
23 Commission's approval—to lease Entitlements to Citizens pursuant to
24 the Investment Program, including any approvals needed to enter into
25 an Entitlements Lease for the projects comprising the first Investment
26 Tranche, and each such project has achieved ~~the~~its “Commercial
27 Operation Date,” as defined in the DCOA.⁴⁰ PG&E will provide Citizens
28 with approximately three months' notice of when it expects the Parties to

37 [DCOA](#)~~Id.~~ § 2.1.

38 ~~Id.~~ Recitals; ~~Id.~~ §§ 2.1(iii), 4.2(d).

39 See ~~Id.~~ § 3.4(b)-(c).

40 See ~~Id.~~ §§ 4.2(b)(i), 4.3(a).

1 be ready to close on the Option Period 1 Investment Tranche.⁴¹
2 Citizens will use this estimated timeline to secure financing
3 commitments sufficient to fund the payment of the Prepaid Rent
4 required for the closing of Option Period 1 and due upon execution of
5 the related Entitlements Lease. Upon notification from PG&E that all
6 conditions precedent have been achieved for the Option Period 1
7 Investment Tranche,⁴² Citizens will have 30 days to exercise its option
8 for ~~the~~ Option Period 1 ~~Investment Tranche~~ (provided that such date is
9 no earlier than the expected closing date PG&E previously provided to
10 Citizens).⁴³ This deadline is referred to in the DCOA as the “Target
11 Closing Date.”⁴⁴ If Citizens does not exercise its option by the Target
12 Closing Date, the option for the Option Period 1 Investment Tranche will
13 expire.⁴⁵ If Citizens timely exercises its option, PG&E and Citizens will
14 have 30 days to execute, acknowledge, and deliver an Entitlements
15 Lease with respect to the Option Period 1 Investment Tranche.⁴⁶ Upon
16 execution of the Entitlements Lease ~~and consistent therewith~~, Citizens
17 will pay to PG&E the Prepaid Rent amount due for the Option Period 1
18 Investment Tranche.⁴⁷

19 **c. Option Mechanics – Option Periods 2 Through 5**

20 For ~~subsequent option periods~~ (“Option Periods 2 through 5”),¹ the
21 process will generally follow the sequencing and mechanics set out

⁴¹ See *Id.* § 4.2(b)(i).

⁴² If any of the applications for the required regulatory approvals with respect to the Investment Program or an Investment Tranche (i.e., the entering into an Entitlements Lease with respect to the projects comprising a given Investment Tranche) are denied or are approved with conditions that are materially adverse and unacceptable to a Party or otherwise materially inconsistent with the terms of the Investment Program or Entitlements Lease in a manner that is adverse to a Party, that Party will have the right to withdraw from and terminate (or partially terminate, as applicable) the DCOA. See DCOA § 8.1.

⁴³ See *Id.* § 1.1 (definition of Target Closing Date); *Id.* § 4.2(b)(i).

⁴⁴ The Target Closing Date also must be no later than 12 months after the effective date of the DCOA, unless the Parties agree that the unrealized conditions precedent are ultimately likely to be satisfied. See *Id.* § 1.1 (definition of Target Closing Date).

⁴⁵ *Id.* § 4.2(b)(i).

⁴⁶ *Id.* § 4.2(c)(i).

⁴⁷ *Id.*

1 above, but with some timing flexibility for PG&E to provide Citizens with
2 subsequent Project Lists.⁴⁸ This timing flexibility is necessary to
3 account for the reality that PG&E will need time to identify the most
4 appropriate eligible projects from the Master Project List for future
5 options and align closing thereon with the applicable regulatory
6 framework and required approvals. Option Periods 2 through 5 are
7 expected to follow an annual cadence.

8 For Option Periods 2 through 5, PG&E will have the opportunity (but
9 not the obligation) to present to Citizens a Project List setting forth the
10 projects comprising the upcoming Investment Tranche.⁴⁹ Such a
11 Project List may be presented by PG&E to Citizens no earlier than one
12 day and no later than nine months following the end of the immediately
13 preceding option period.⁵⁰ For Option Periods 2 through 5, Citizens
14 may exercise its option by delivering written notice to PG&E no later
15 than 30 days following the date PG&E delivers the applicable Project
16 List to Citizens.⁵¹ If Citizens fails to timely exercise its option, that
17 option will expire.⁵²

18 If Citizens does timely exercise its option, the Parties will work to
19 satisfy the conditions precedent to executing an Entitlements Lease for
20 that Investment Tranche. Those conditions precedent are: (1) receiving
21 required regulatory approvals, including Commission approval of that
22 Entitlements Lease pursuant to the Tier 3 Advice Letter Process
23 described below; (2) the projects comprising such Investment Tranche
24 having achieved their “Commercial Operation Date,” as defined in the
25 DCOA; and (3) Citizens’ securing of financing commitments sufficient to
26 fund the payment of the Prepaid Rent required for the closing of the
27 applicable option period.⁵³

⁴⁸ See *Id.* § 3.4(c).

⁴⁹ *Id.*

⁵⁰ *Id.* ~~if~~ PG&E does not deliver a Project List within this timeframe, then such option period will be extinguished and the subsequent option period will begin. *Id.*

⁵¹ *Id.* § 4.2(b)(ii).

⁵² *Id.*

⁵³ *Id.* §§ 4.2(c)(ii); 4.3(b).

1 Within 30 days of satisfaction of the applicable conditions precedent,
2 PG&E and Citizens will execute, acknowledge, and deliver an
3 Entitlements Lease with respect to the Investment Tranche for that
4 option period.⁵⁴ Upon execution of the Entitlements Lease, Citizens will
5 pay to PG&E the Prepaid Rent amount due under that Entitlements
6 Lease (which is expected to be approximately \$200 million on average
7 per Entitlements Lease, although the exact amount may vary subject to
8 the limitations set out in the DCOA and described below).⁵⁵

9 **d. Flexibility Provided Under the DCOA**

10 If the Investment Program follows the expected annual cadence and
11 if Citizens exercises each of its options as expected, PG&E expects that
12 Citizens will invest on average approximately \$200 million per year over
13 a five-year period pursuant to five Entitlements Leases, for a total
14 Citizens investment of \$1.0 billion.⁵⁶ The DCOA, however, provides the
15 Parties with flexibility in the timing and sizing of, as well as the ability to
16 skip, options.⁵⁷ Accordingly, the dollar value of the Prepaid Rent due
17 under a given Entitlements Lease may be greater or less than
18 \$200 million. If the Parties execute an Entitlements Lease for an
19 amount other than \$200 million or if Citizens is not provided with or does
20 not exercise an option in a particular option period, the amount of
21 Citizens' Prepaid Rent payment for Entitlements leased pursuant to
22 subsequently exercised options may be adjusted (upward or downward)
23 to reflect the previously exercised or unexercised amount.⁵⁸ However,
24 under the express terms of the DCOA, Citizens' aggregate investment
25 under the DCOA cannot (1) exceed \$1.0 billion⁵⁹ or (2) result in Citizens

⁵⁴ *Id.* § 4.2(c)(ii).

⁵⁵ *Id.* § 4.2(d).

⁵⁶ See *Id.* § 3.4(b)-(c).

⁵⁷ See *Id.*

⁵⁸ *Id.* § 4.2(d).

⁵⁹ *Id.* Recitals; *Id.* §§ 2.1(iii), 4.2(d).

1 holding a leasehold interest in the Entitlements to any individual project
2 in excess of 49.9 percent.⁶⁰

3 As discussed above, PG&E also will have the ability to make certain
4 modifications to a Project List submitted to Citizens prior to execution of
5 the applicable Entitlements Lease.⁶¹ Additionally, for Option Periods 2
6 through 5, PG&E will have flexibility in the timing of providing Citizens
7 with the Project List for the upcoming option.⁶²

8 This flexibility is important so that PG&E can account for the
9 complexity and multi-year nature of transmission development and tailor
10 the multi-year Investment Program to focus on projects that meet its
11 operational and customer needs at the relevant time. It will also allow
12 the Parties to adapt to financing and market considerations that Citizens
13 and PG&E will encounter over the term of the Investment Program and
14 make adjustments to reflect the timing of required regulatory approvals.

15 PG&E recognizes that the need for flexibility must be balanced with
16 the need to inform the Commission and stakeholders about the specific
17 projects that will be subject to Entitlements Leases. Thus, PG&E will
18 identify for the Commission and stakeholders the specific projects that
19 will be subject to an Entitlements Lease prior to execution of the relevant
20 lease and to seek Commission approval before entering into each of the
21 Entitlements Leases.

22 If the Commission approves the Amended Application prior to
23 December 31, 2025, the first Entitlements Lease will include only
24 projects on the Proposed Project List for Option Period 1. If
25 Commission approval is not obtained until after 2025, the first
26 Entitlements Lease will include only projects on the Master Project List.
27 Additionally, the Commission will have the opportunity to review each of
28 the Project Lists for Option Periods 2 through 5 as part of the proposed
29 expedited Tier 3 Advice Letter Process described in the Amended
30 Application and in Section C.2 below.

⁶⁰ *Id.* § 1.1 (definition of Citizens Percentage Interest); *Id.* §§ 3.4(d), 4.2(d); Entitlements Lease § 1.1 (definition of Citizens Percentage Interest).

⁶¹ See DCOA § 3.4(d).

⁶² *Id.* § 3.4(c).

1 **e. Prepaid Rent**

2 Upon execution of an Entitlements Lease, Citizens will prepay the
3 rent due to PG&E for Citizens' 30-year leasehold interest in the
4 Entitlements.⁶³ This lump sum payment will equal the sum of the
5 "Project Costs" (as defined in the applicable Entitlements Lease) of each
6 of the projects comprising the Investment Tranche (i.e., subject to that
7 Entitlements Lease) multiplied by Citizens' leasehold percentage
8 interest in the Entitlements to such projects (which cannot exceed
9 49.9 percent for any individual project).⁶⁴ For example, if the total
10 Project Costs for all of the projects in a given Investment Tranche is
11 \$500 million and Citizens will be leasing 40 percent of the Entitlements
12 to those projects under the applicable Entitlements Lease, then the total
13 Prepaid Rent due to PG&E at execution will be \$200 million.

14 The Parties will attach a schedule to each Entitlements Lease
15 allocating the Prepaid Rent payment over the 30-year lease term and
16 will report this payment as accruing for tax purposes semi-annually in
17 arrears according to the schedule.⁶⁵ To the extent the payment
18 exceeds the rent that has accrued, the Parties will treat it as a loan by
19 Citizens to PG&E that bears interest at a rate equal to 110 percent of
20 the "applicable Federal rate" as required by Internal Revenue Code
21 (IRC) § 467.⁶⁶ The amended testimony of PG&E witness James
22 Higham Jr. (Amended Chapter 4) provides additional details on tax
23 matters.

24 **4. Important Features of the Investment Program**

25 This section discusses several important features of the Investment
26 Program, including: (1) Citizens' binding commitment to charitable
27 ~~contributions that will support disadvantaged communities and low-income~~
28 ~~families~~ direct bill-paying assistance for PG&E customers in PG&E's service
29 area; need; (2) customer benefits and protections; (3) express confirmation

63 *Id.* § 4.2(c); Entitlements Lease § 4.1.1.

64 See DCOA § 1.1 (definition of Project Rent); *Id.* § 4.2(d).

65 Entitlements Lease § 8.2; *id.* Exh. C.

66 *Id.* § 8.2.

that PG&E does not guarantee Citizens' cost recovery;⁶⁷ (4) the responsibility for operations and maintenance (O&M) and recovery of expense-related costs;⁶⁸ (5) provisions on capital improvements;⁶⁹ (6) transfer of operational control of leased Entitlements;⁷⁰ (7) structuring the Entitlements Leases pursuant to IRC § 467;⁷¹ (8) PG&E's right of first refusal;⁷² and (9) the status of the projects at the end of the applicable Entitlements Lease.

a. Citizens' Contributions to ~~Low-Income~~ Direct Bill-Paying Assistance Programs

~~A key aspect~~ Following conversations with stakeholders that stressed the importance of ensuring affordable access to electricity for residential customers in California, Citizens decided to commit 100 percent of the charitable contributions associated with the Investment Program ~~is Citizens' contractual commitment to contribute a significant portion of its net after-tax profits from its leased Entitlements to charitable~~ to programs that provide direct bill-paying assistance to ~~disadvantaged communities and low-income families in PG&E's service territory.~~ E customers in need.

In Citizens' previous transmission investments in the Sunrise Powerlink Project (~~"Sunrise Project"~~) and the Sycamore-Penasquitos Transmission Project (~~"Sycamore Project"~~),⁷³ Citizens agreed to dedicate 50 percent of its associated net after-tax profits to support energy-related charitable programs or entities assisting disadvantaged communities and low-income families in the project area.⁶⁷ Under the Investment Program here, Citizens has contractually committed to dedicate escalating percentages of its associated net after-tax profits for ~~these charitable purposes~~ direct bill-paying assistance programs that support customers in need in the PG&E service area based on the following schedule:

1. 50 percent of the net after-tax profits from the first \$200 million invested;

⁶⁷ See ~~Decision (D.)~~ 19-03-024 at 18 (Sycamore Section 851 Decision), 2019 WL 1571659 (Cal. P.U.C. Lexis 154, at *25-26 (Cal. P.U.C.) at *9-10; 2019) D.11-05-048 at 1 (Sunrise Section 851 Decision), 2011 Cal. P.U.C. Lexis 302, at *1 (Cal. P.U.C.) at *1; 2011).

2. 60 percent of the net after-tax profits from the next \$200 million invested;
3. 70 percent of the net after-tax profits from the next \$200 million invested;
4. 80 percent of the net after-tax profits from the next \$200 million invested; and
5. 90 percent of the net after-tax profits from the final \$200 million invested.⁶⁸

Thus, as the Investment Program continues and Citizens enters into subsequent Entitlements Leases, Citizens' after-tax contributions will grow. As the amended testimony of Citizens Chief Executive Officer Peter F. Smith (Amended Chapter 5) explains, Citizens estimates that if the full \$1.0 billion investment is made under the Investment Program, over the terms of the contemplated Entitlements Leases (a total span of approximately 35 years), Citizens will contribute more than ~~\$400 million in charitable assistance to disadvantaged communities and low-income families in the PG&E service area to enable such communities and families to participate in California's clean energy initiatives.~~ 450 million to direct bill-paying assistance programs.

~~Under the terms of the Entitlements Lease, Citizens will retain all decision-making authority regarding the allocation of charitable contributions.~~⁶⁹ ~~However, PG&E and Citizens will collaborate so that Citizens' charitable funding will be complementary and not duplicative of PG&E's activities.~~⁷⁰ ~~Citizens' contributions and the programs~~ Citizens' contributions and the direct bill-paying assistance they support will be incremental to any benefits or programs currently supported through PG&E's rates, PG&E's own charitable contributions, and ~~the other~~ federal or state programs for direct bill relief. The annual

⁶⁸ DCOA § 4.4; Entitlements Lease § 5.3.1 & n.12.

⁶⁹ ~~Entitlements Lease § 5.3.1.~~

⁷⁰ ~~Id.~~

information-only submittals discussed below will provide sufficient detail to confirm the incremental benefit.⁷¹

b. Benefits and Protections

The DCOA and Entitlements Lease include the same important ratepayer benefits and protections the Commission approved in the Sunrise and Sycamore Section 851 Decisions plus certain additional protections.

First, one of PG&E's main goals in negotiating the Investment Program has been to protect customers from incurring costs above those that PG&E would have charged without Citizens' involvement. Accordingly, under the terms of the DCOA and the Entitlements Lease, Citizens has committed that it will not recover in its rates upfront and ongoing incremental costs that would not be incurred without Citizens' involvement in the Investment Program. These costs include Citizens' own project costs, development costs, transaction costs, regulatory costs, O&M costs, administrative and general (A&G) costs, sales tax costs, use tax costs, payroll tax costs, excise tax costs, and costs to effect billing and settlements with CAISO.⁷² This ratepayer protection was not included in the prior Citizens/SDG&E transactions. Citizens is able to offer this additional protection here because of the size and multi-year structure of the Investment Program.

The costs Citizens will recover in rates are limited to its capital costs (i.e., the Prepaid Rent plus actual financing costs, capped at one percent of the Prepaid Rent amount) plus a proportionate share of the O&M and other expense costs allocated to Citizens by PG&E as "Additional Rent."⁷³ Although Citizens will recover its actual financing costs (capped at one percent of Prepaid Rent) in its rates,⁷⁴ it is important to recognize that in the absence of Citizens' involvement in the Investment Program, PG&E would have to finance ~~and contribute~~

⁷¹ See *infra* § C.2.

⁷² DCOA § 4.5; Entitlements Lease § 4.3.2.

⁷³ See *generally* Entitlements Lease § 4.3.

⁷⁴ DCOA § 4.5; Entitlements Lease §§ 4.3.2, 4.3.2(a), 4.3.3.

1 the portion Citizens pays. Such amounts, including PG&E's associated
2 financing costs, would be recovered through PG&E's rates.
3 Accordingly, Citizens' financing costs should not be considered
4 "incremental" costs, ~~and in any event, they are capped at one percent of~~
5 ~~Prepaid Rent.~~

6 Second, like SDG&E in the prior Citizens transactions, PG&E was
7 concerned about the rates Citizens could obtain at FERC in connection
8 with its participation in the Investment Program. Citizens' capital cost
9 recovery (i.e., the recovery of the Prepaid Rent paid to PG&E at the
10 outset of an Entitlements Lease and financing costs, capped at
11 one percent of the Prepaid Rent) will be the largest component of the
12 rate Citizens will charge ~~CAISO~~-customers. Thus, as PG&E witness
13 Divya Raman discusses in her amended testimony (Amended Chapter
14 3), PG&E and Citizens have agreed to cap the capital cost component
15 of Citizens' FERC rate at an approximation of the rate PG&E could
16 charge at the time of execution of an Entitlements Lease for the portion
17 of the transmission projects subject to Citizens' leasehold interests (i.e.,
18 if PG&E held 100 percent of the Entitlements). The Parties will use the
19 "Representative Rate Model" in the Entitlements Lease to generate the
20 approximate PG&E rate at the time the applicable Entitlements Lease is
21 executed (~~"(PG&E Representative Rate)"~~).⁷⁵ This structure is closely
22 modeled on the Citizens/SDG&E transactions, which included similar
23 models that the Commission reviewed and approved.⁷⁶

24 The PG&E Representative Rate Model uses inputs determined at
25 the time the applicable Entitlements Lease is executed.⁷⁷ This
26 cost-based revenue recovery is amortized over a 30-year period on a
27 level basis each year based on fixed and variable model parameters.⁷⁸

⁷⁵ Entitlements Lease § 4.3.2; *id.* Exh. B.

⁷⁶ See D.19-03-024 at 12-14 (Sycamore Section 851 Decision), 2019 [WL 1571659](#)
(~~Cal. PUC Lexis 154, at *17-20 (Cal. P.U.C.)~~, ~~at *6-7~~; 2019); D.11-05-048 at 19-22
(Sunrise Section 851 Decision), 2011 Cal. PUC Lexis 302 (~~Cal. P.U.C.~~), ~~at *29-32~~
(~~Cal. P.U.C. 2011~~).

⁷⁷ See ~~Id.~~ Entitlements Lease § 4.3.2(b).

⁷⁸ See *Id.* § 4.3.2(a), 4.3.2(d).

1 The Representative Rate Model produces a theoretical levelized annual
2 amount referenced in the Entitlements Lease as the PG&E
3 Representative Rate.⁷⁹

4 The PG&E Representative Rate is then compared to the rate
5 Citizens calculates for its capital cost recovery using its own ratemaking
6 methodology described by Citizens' expert witness Ronald E. Kennedy
7 (Amended Chapter 6). Under the terms of the Entitlements Lease,
8 Citizens' capital cost recovery cannot exceed the PG&E Representative
9 Rate.⁸⁰ This rate comparison is made at or within five business days
10 prior to the execution date of the relevant Entitlements Lease.⁸¹ The
11 capital cost component of Citizens' rate, which is capped by the PG&E
12 Representative Rate, will be fixed and will not be subject to modification
13 at any time during the term of the Entitlements Lease, absent a change
14 in law.⁸²

15 Third, Citizens' annual capital cost revenue requirement will be fixed
16 and levelized (i.e., equal) over the 30-year term of the applicable
17 Entitlements Lease.⁸³ This fixed and levelized rate provides ratepayers
18 with certainty about what they will pay and protects today's ratepayers
19 against front-ended costs.

20 Finally, the Investment Program is structured to prevent double
21 recovery of any project-related costs.⁸⁴ More specifically, the
22 transaction documents include express provisions: (1) requiring
23 compliance with the project eligibility requirements discussed above,
24 including the requirement that an amount equal to or greater than the
25 expected Citizens leasehold percentage interest of the capital costs of
26 each project must not already be included in PG&E's existing FERC
27 transmission rates for purposes of cost recovery;⁸⁵ (2) requiring that

⁷⁹ *Id.* § 4.3.2(a).

⁸⁰ *Id.* § 4.3.2(c), (e).

⁸¹ *Id.* § 4.3.2(d).

⁸² *Id.* §§ 4.3.2, 4.3.3.

⁸³ See Entitlements Lease § 4.3.2.

⁸⁴ See DCOA §§ 3.4(a)(i), 4.6; Entitlements Lease § 4.1.2.

⁸⁵ DCOA § 3.4(a)(i).

1 PG&E exclude from its transmission rates for cost recovery an amount
2 of dollars equivalent to the total Prepaid Rent received from Citizens;⁸⁶
3 and (3) requiring that PG&E exclude from its transmission rates for cost
4 recovery an amount of dollars equivalent to the Additional Rent
5 allocated to Citizens.⁸⁷ These principles are consistent with the
6 Citizens/SDG&E transactions, which the Commission found to
7 adequately protect against double recovery.⁸⁸ Here, as an added
8 protection, PG&E and Citizens expressly incorporated these protections
9 into the DCOA.⁸⁹

10 This combination of customer protections provides that the costs
11 customers will pay approximate what they would pay without Citizens'
12 involvement in the Investment Program while also providing significant
13 benefits to ratepayers in terms of rate stability and predictability over the
14 course of the 30-year Entitlements Leases. In determining whether the
15 Investment Program is in the public interest, PG&E requests that the
16 Commission consider these ratepayer protections and benefits together
17 with the other benefits described herein, including the significant
18 ~~contributions~~direct bill-paying assistance that Citizens will ~~make~~provide
19 to ~~support the needs of disadvantaged communities and low-income~~
20 ~~families~~PG&E customers in ~~PG&E's service territory~~need.

21 **c. PG&E Does Not Guarantee Citizens' Cost Recovery**

22 So long as PG&E is part of CAISO or a successor system operator,
23 PG&E shall not be responsible to guarantee or financially support
24 Citizens' cost recovery.⁹⁰

86 *Id.* § 4.6.

87 *Id.* § 4.6; Entitlements Lease § 4.1.2.

88 See D.11-05-048 at 19 (Sunrise Section 851 Decision), 2011 Cal. PUC LEXIS 302, at
*28-29 (Cal. P.U.C.), at *28-29, 2011.

89 DCOA §§ 3.4(a)(i), 4.6.

90 Entitlements Lease § 5.2.1.

1 **d. Operations and Maintenance Responsibility and Allocation of**
2 **Expense Costs**

3 PG&E will retain responsibility for the O&M of the projects.⁹¹ PG&E
4 also will act as the interconnection agent for the projects subject to the
5 Entitlements Leases.⁹²

6 As identified in the Entitlements Lease, Citizens will be responsible
7 for its proportionate share of the O&M and certain other expense costs
8 PG&E incurs for each of the projects subject to that Entitlements
9 Lease.⁹³ More specifically, PG&E will charge Citizens Additional Rent
10 for expense costs that PG&E incurs that are reasonably attributable to
11 the Citizens Entitlements, including, but not limited to, a reasonable
12 allocation of O&M costs; A&G activities; common, general, and
13 intangible plant; the amortized cost of removing the projects; sales, use,
14 payroll, and excise taxes; property taxes; and other costs FERC
15 authorizes.⁹⁴ Through a FERC-approved rate, PG&E will recover these
16 costs from Citizens as Additional Rent. To protect against double
17 recovery, PG&E is obligated to exclude from its own transmission rates
18 for cost recovery any such Additional Rent allocated to Citizens.⁹⁵

19 Citizens will recover its allocated Additional Rent through Citizens'
20 rates, which will be filed with FERC and subject to FERC approval.⁹⁶ In
21 the absence of Citizens' investment, PG&E would recover ~~Citizens'~~
22 ~~share of~~ these costs in its own customer rates.

23 Citizens will incur certain incremental costs in connection with its
24 participation in the Investment Program. Citizens has agreed it will not
25 recover in its rates upfront and ongoing incremental costs associated
26 with its involvement in the Investment Program. More specifically,
27 Citizens has agreed to forgo recovery in rates of its own project costs,

91 *Id.*, Recital D; *Id.* §§ 3.2, 5.1.

92 *Id.* § 3.6.

93 *Id.* § 4.1.2.

94 *Id.*; see Chapter 3 § E.1.

95 See Entitlements Lease § 4.1.2; DCOA § 4.6.

96 See Entitlements Lease § 4.3.1.

development costs, transaction costs, regulatory costs, O&M costs, A&G costs, sales tax costs, use tax costs, payroll tax costs, excise tax costs, and costs to effect billing and settlements with CAISO.⁹⁷

e. Capital Improvements

PG&E will have sole discretion to decide upon, develop, design, engineer, procure, construct, commission, own, operate, maintain, and finance any upgrades or renewals to a project following the effective date of the applicable Entitlements Lease.⁹⁸ PG&E will be solely responsible for the costs of such upgrades or renewals and Citizens' leasehold percentage interest will be adjusted accordingly.⁹⁹

f. Transfer of Operational Control of Leased Entitlements

Citizens' leasehold interest in the Entitlements to the applicable projects will be recorded with CAISO. Citizens will sign a Transmission Control Agreement with CAISO as a Participating Transmission Owner (PTO)¹⁰⁰ and will obtain FERC approval of its PTO Tariff, any necessary revisions thereto, and its transmission revenue requirements applicable to the leased Entitlements.¹⁰¹

Prior to entering into an Entitlements Lease, PG&E will transfer operational control over each applicable project to CAISO (or, if applicable at the time, a successor system operator).¹⁰² Upon executing an Entitlements Lease, Citizens will transfer operational control of the leased Entitlements to CAISO (or, if applicable at the time, a successor system operator).¹⁰³ This transfer will ensure that the portion of the projects subject to the Entitlements Lease will continue to

⁹⁷ See DCOA § 4.5; Entitlements Lease § 4.3.2.

⁹⁸ Entitlements Lease §§ 3.3, 3.4.

⁹⁹ See *Id.*; *Id.* § 3.5.

¹⁰⁰ See DCOA § 4.3(a)(ii).

¹⁰¹ See DCOA § 4.3(a)(ii)(1), (b)(iii)(1); Entitlements Lease § 4.2.

¹⁰² See DCOA § 1.1 (defining Commercial Operation Date); Entitlements Lease, Recital F; *Id.* § 1.1 (defining Commercial Operation Date).

¹⁰³ See Entitlements Lease §§ 2.1, 5.3.3.

1 be made available to customers on a comparable, non-discriminatory
2 basis.

3 Citizens will be entitled to the revenue associated with the use of its
4 Entitlements, which will be paid directly to it by CAISO through the
5 High-Voltage TAC.¹⁰⁴ This approach is consistent with the approach
6 Citizens used in its prior transactions with SDG&E.

7 The projects subject to the Entitlements Leases will remain under
8 the operational control of CAISO or a successor system operator.¹⁰⁵
9 For as long as PG&E is a member of CAISO, Citizens will be required to
10 assign to CAISO operational control over its leased Entitlements. If
11 PG&E were to cease its participation in CAISO, Citizens would be
12 required to assign operational control of its leased Entitlements to PG&E
13 or whatever entity has operational control over PG&E's transmission
14 system. Citizens will maintain its status as a PTO for so long as it
15 leases Entitlements to the projects identified under any Entitlements
16 Lease and PG&E remains part of CAISO.

17 **g. The Entitlements Leases Are Structured Pursuant to Internal**
18 **Revenue Code § 467**

19 Under general tax principles, amounts received by a taxpayer that
20 constitute gross income must be included as taxable income in the year
21 the payment is received and subject to tax. IRC § 467, however, uses
22 rental accrual rules to match when a lessee deducts rent payments with
23 when a lessor recognizes rental income for certain rental agreements.
24 In an IRC § 467 lease arrangement, the lessor and lessee are required
25 to treat rents in the same complimentary manner and consider
26 time-value-of-money principles. Also, taxpayers with IRC § 467 rental
27 agreements that have Prepaid Rent are required to treat a portion of the
28 initial prepayment of rent as a "loan" from the lessee to the lessor and
29 reclassify a portion of the accrued rental payment as interest expense
30 on such "loan."

¹⁰⁴ See DCOA § 3.4(a)(ii).

¹⁰⁵ See Entitlements Lease §§ 2.1, 5.3.3.

1 Consistent with the prior Citizens/SDG&E transactions,¹⁰⁶ PG&E
2 and Citizens agreed to structure the Entitlements Leases as IRC § 467
3 leases to obtain the increased certainty about tax treatment that both
4 Parties desire and to spread the income and expense items for tax
5 purposes over the life of the applicable Entitlements Leases in
6 accordance with IRC § 467 and the Treasury regulations thereunder.
7 The amended testimony of PG&E witness James Higham Jr. (Amended
8 Chapter 4) more fully explains this treatment.

9 **h. PG&E's Right of First Refusal**

10 PG&E has the right of first refusal in any proposed sale of Citizens'
11 interests in an Entitlements Lease.¹⁰⁷

12 **i. Status of Projects at the End of the Applicable Entitlements Lease**

13 At the end the applicable Entitlements Lease, Citizens' leasehold
14 interest in the Entitlements will revert back to PG&E, free and clear of
15 any liens or encumbrances.¹⁰⁸

16 By the expiration of an Entitlements Lease, the capital costs for the
17 portions of the projects that were subject to Citizens' leasehold interest
18 will have been fully depreciated. Since the leased Entitlements to the
19 projects revert to PG&E at the expiration of an Entitlements Lease,
20 customers will receive the benefit for the remaining useful life of those
21 facilities without being charged for ~~their~~any capital costs for such period.

22 **C. Necessary Regulatory Filings**

23 **1. FERC Filings**

24 Execution and implementation of the Investment Program is contingent
25 on the Commission's approval of ~~this~~the Amended Application as well as
26 FERC's approval of several forthcoming filings. This combination of
27 required Commission and FERC approvals is ~~closely~~ modeled on Citizens'

¹⁰⁶ See, e.g., D.19-03-024 at 7 (Sycamore Section 851 Decision), 2019 WL 1571659 (Cal. PUC Lexis 154, at *8-9 (Cal. P.U.C.), at *3, 2019).

¹⁰⁷ Entitlements Lease § 11.4.

¹⁰⁸ See *Id.* § 2.2; DCOA § 4.2(a).

1 prior transactions with SDG&E. A description of PG&E's and Citizens'
2 respective obligations to obtain necessary FERC approvals follows.

3 Prior to the execution of an Entitlements Lease with Citizens, PG&E
4 must obtain approvals from FERC under Federal Power Act (FPA) §§ 203
5 and, as applicable, § 205.¹⁰⁹ The FPA § 203 filing (which will be made
6 jointly by PG&E and Citizens) will request FERC authorization for PG&E to
7 enter into the applicable Entitlements Lease. The list of transmission
8 projects that will be subject to a given Entitlements Lease will be described
9 in the applicable and publicly filed FPA § 203 application.¹¹⁰ PG&E's FPA
10 § 205 filing will seek approval of a formula rate designed to recover from
11 Citizens (in the form of Additional Rent) its portion of the O&M and other
12 expense costs associated with the applicable projects.

13 PG&E's filings with FERC will make clear that, consistent with the prior
14 Citizens/SDG&E transactions, PG&E will not be permitted to "double
15 recover" from Citizens or from CAISO customers the capital costs or O&M
16 and other expense costs associated with the portion of the projects subject
17 to an Entitlements Lease. CAISO customers thus will be protected from any
18 such potential adverse rate impacts. Further, at the expiration of an
19 Entitlements Lease, PG&E will not have on its books any capital costs
20 associated with the Citizens transaction because Citizens will have fully
21 depreciated the portion of any projects subject to an Entitlements Lease.

22 Citizens has the responsibility for obtaining from FERC the regulatory
23 approvals necessary for Citizens to effectuate and finance the Entitlements
24 Leases, and PG&E agrees to cooperate with and assist Citizens in obtaining
25 such approvals from FERC and from CAISO.¹¹¹ As the amended testimony
26 of Citizens witness Peter F. Smith (Amended Chapter 5) explains, Citizens
27 will seek has requested a declaratory order from FERC regarding its rate
28 methodologies and will seek FERC authorizations under FPA §§ 204 and
29 205.

¹⁰⁹ See DCOA § 4.3(a)(i), (b)(ii).

¹¹⁰ As discussed in the subsequent section, the Commission and stakeholders also will have the opportunity to review the projects that will be subject to each Entitlements Lease prior to lease execution.

¹¹¹ See ~~Id.~~ DCOA § 4.3(a)(ii), (b)(iii).

2. ~~Proposal to Keep the~~Proposed Commission ~~Informed Through~~
~~Information-Only Submittals~~Review and Oversight Process

~~To provide the Commission with visibility into the Investment Program and the projects included in future Entitlements Leases, PG&E proposes to submit to the Commission on a periodic basis detailed information-only submittals that summarize key aspects of the Investment Program. Specifically, PG&E proposes that within 30 days of the execution of an Entitlements Lease, PG&E will provide to the Commission an information-only submittal that describes and appends a copy of the newly executed Entitlements Lease. This submittal will include a summary of transmission projects subject to the newly executed Entitlements Lease and will specify Citizens' leasehold percentage interest in the Entitlements to such projects. PG&E further proposes that for each year in which any Entitlements Lease is in effect, PG&E will provide an annual information-only submittal that summarizes Citizens' charitable giving activities in connection with the Investment Program, including the entities and the actions or activities that were funded by Citizens' net after-tax profits from the Investment Program.~~

To provide a transparent process for Commission review, PG&E proposes to seek Commission authorization for each specific Entitlements Lease that it will enter into with Citizens pursuant to the Investment Program created by the DCOA. As discussed in greater detail in the Amended Application, PG&E seeks authorization to enter into the first Entitlements Lease with Citizens pursuant to the terms and conditions of the Investment Program created by the DCOA and as described in the Amended Application. PG&E further seeks authorization to seek approval for each of the second through fifth Entitlements Leases through the stakeholder consultation and expedited Tier 3 Advice Letter process described in the Amended Application. This process will ensure each future Entitlements Lease is consistent with the terms of the DCOA, including the project eligibility criteria and the Commission's order on the Amended Application. PG&E also proposes to submit reports regarding executed Entitlements Leases and Citizens' direct bill-paying assistance.

1 A key to delivering the significant benefits of the Investment Program to
2 customers and communities in the PG&E service territory lies in the
3 efficiency with which PG&E and Citizens will be able to execute and
4 effectuate Entitlements Leases that comply with the terms of the DCOA
5 while minimizing delays and implementation costs. Multiple investments by
6 Citizens over the term of the DCOA will permit PG&E to accelerate ~~required~~
7 ~~electric infrastructure investments necessary to meet California's~~
8 ~~decarbonization goals, while increasing capacity, reliability, asset health,~~
9 ~~and the interconnection of generation (including renewable generation) and~~
10 ~~load on the PG&E system.~~¹¹² necessary electric infrastructure. The ability to
11 move forward efficiently with each Entitlements Lease will enable PG&E to
12 plan effectively and execute its capital plan with certainty.

13 PG&E's proposal ~~in this Application for a programmatic Section 854~~
14 ~~authorization with periodic information only submittals about~~^{of} the
15 ~~Investment Program, including the underlying~~^{first} Entitlements
16 ~~Leases,~~ Lease and the expedited Tier 3 Advice Letter process through which
17 PG&E may seek approval to lease additional Entitlements to Citizens strikes
18 a careful balance from a regulatory perspective. It will allow for necessary
19 efficiency in the execution of the Investment Program while preserving the
20 Commission's oversight authority and providing the Commission and
21 stakeholders with the information ~~it needs~~^{needed} to track ~~its~~^{the Investment}
22 Program's progress and benefits. ~~The proposed programmatic~~ This tiered
23 approach helps conserve Commission resources when compared to a
24 process requiring future resource-intensive formal application proceedings
25 for each tranche of the Investment Program. This tiered approach also
26 ~~minimizes~~^{reduces} the Investment Program's regulatory and administrative
27 costs, which results in a larger pool of net after-tax profits for Citizens that
28 can be used to maximize ~~support for disadvantaged communities and~~
29 ~~low-income families~~ the direct bill-paying assistance benefits of the
30 Investment Program for customers in need.

¹¹² ~~PG&E will use the proceeds from the Entitlements Leases as a source of funding for~~
~~PG&E's utility capital expenditure program, including investments in electric~~
~~transmission and distribution system safety and reliability upgrades, risk mitigation, and~~
~~investments in electrification and related efforts to combat climate change.~~

1 **D. Public Interest Basis for Commission Approval**

2 As PG&E witness Barry J. Bentley discusses in his amended testimony
3 (Amended Chapter 1), PG&E believes approving the Investment Program is in
4 the public interest for several reasons. The Investment Program will provide
5 significant benefits to the public and customers through (1) Citizens'
6 ~~energy-related~~ charitable contributions to direct bill-paying assistance programs
7 that support PG&E customers in need, including those in disadvantaged
8 communities ~~and low-income families~~; (2) providing additional capital to support
9 PG&E's electric infrastructure needs; (3) providing rate certainty and rate
10 stability to customers; (4) allowing customers to benefit from the remaining
11 useful life of the relevant projects after expiration of the Entitlements Lease(s);
12 and (5) the involvement of diverse interests in transmission development.¹¹³ In
13 addition, the transaction documents provide that the public will continue
14 receiving electric service at fair and reasonable rates by capping the capital cost
15 component of Citizens' FERC rate at an approximation of the rate PG&E could
16 charge at the time of execution of an Entitlements Lease for the portion of the
17 transmission projects subject to Citizens' leasehold interests, protecting against
18 double recovery, precluding recovery of Citizens' upfront and ongoing
19 incremental costs, and confirming that PG&E does not guarantee Citizens' cost
20 recovery as long as PG&E is part of CAISO or a successor.¹¹⁴ The Investment
21 Program also ensures that operational control of the leased Entitlements will be
22 transferred to CAISO.¹¹⁵ Notably, the Investment Program is consistent with
23 prior Citizens/SDG&E transactions approved by the Commission under Section
24 851 and indeed provides additional significant benefits to customers and the
25 community.

26 **E. Commission Precedent Supports the Investment Program**

27 The Investment Program between PG&E and Citizens, including the
28 underlying Entitlements Leases, is ~~closely~~ modeled on Citizens' two prior

¹¹³ See Chapter 1 § D.

¹¹⁴ See *supra* §§ B.4.b to B.4.d.

¹¹⁵ See *supra* § B.4.f.

1 transactions with SDG&E discussed above.¹¹⁶ The Commission approved both
2 transactions, finding them in the public interest.¹¹⁷ Here, PG&E is proud to
3 present for Commission approval the Investment Program, which builds upon
4 the success of the prior transactions but with added customer protections and
5 benefits.¹¹⁸

¹¹⁶ See [D.19-03-024](#) (Sycamore Section 851 Decision), 2019 Cal. PUC Lexis 154 (Cal. P.U.C. 2019); [D.11-05-048](#) (Sunrise Section 851 Decision), 2011 Cal. PUC Lexis 302 (Cal. P.U.C. 2011).

¹¹⁷ D.11-05-048 at 1, 21-23, 25-26 (Sunrise Section 851 Decision), 2011 Cal. PUC Lexis 302 ([Cal. P.U.C.](#)), at *1, *32-34, *38; ([Cal. P.U.C. 2011](#)); D.19-03-024 at 2, 18, 20, 25 (Sycamore Section 851 Decision), 2019 [WL 1571659](#) (Cal. [PUC Lexis 154](#), at *1-2, *25, *29, *35-36([Cal. P.U.C.](#)), 2019), at *1, *9, *11, *13.

¹¹⁸ DCOA § 4.5; Entitlements Lease § 4.3.2.

PACIFIC GAS AND ELECTRIC COMPANY

AMENDED CHAPTER 3

INVESTMENT PROGRAM RATE IMPLICATIONS

PACIFIC GAS AND ELECTRIC COMPANY
AMENDED CHAPTER 3
INVESTMENT PROGRAM RATE IMPLICATIONS

TABLE OF CONTENTS

A. Introduction.....	3-1
B. Purpose of Amended Testimony	3-2
C. Recovery of Capital Costs	3-3
D. The Representative Rate Model and Illustrative Base Case Comparison	3-7
1. Components of the Capital-Related Revenue Requirement	3-8
2. Representative Rate Model Calculations	3-11
3. Results of the Illustrative Base Case Comparison	3-11
E. Recovery of Expense-Related Costs.....	3-13
1. PG&E's Allocation of Additional Rent to Citizens	3-13
2. Citizens' Agreement Not to Recover Its Upfront and Ongoing Incremental Costs From Customers.....	3-15
F. Conclusion.....	3-16

PACIFIC GAS AND ELECTRIC COMPANY
AMENDED CHAPTER 3
INVESTMENT PROGRAM RATE IMPLICATIONS

A. Introduction

The Amended Application requests California Public Utilities Commission (Commission) approval under Section 851 of the California Public Utilities Code for Pacific Gas and Electric Company (PG&E) to lease Entitlements¹ to certain PG&E transmission projects to a wholly owned subsidiary of Citizens Energy Corporation subject to the terms and conditions of the Investment Program created by the Development, Coordination, and Option Agreement (DCOA) attached to the Amended Application as Attachment 1 and as described in the Amended Application. PG&E and Citizens Energy Corporation (together with its wholly owned subsidiary Citizens Pacific Transmission LLC, “Citizens”²) executed the DCOA on February 20, 2024, and amended and restated it on January 29, 2025.

~~Subject to Commission approval,~~ Under the Investment Program, PG&E may offer Citizens up to five separate options to lease Entitlements to PG&E high-voltage transmission projects ~~that~~ which will be ~~identified in~~ submitted to the Commission and stakeholders for review prior to execution of the relevant lease and will meet specified eligibility requirements—for a total Citizens investment of up to \$1.0 billion ~~dollars~~. If PG&E and Citizens close on a given

¹ Entitlements are defined in Appendix A to the California Independent System Operator CAISO Tariff as “[t]he right of a Participating [Transmission Owner] obtained through contract or other means to use another entity’s transmission facilities for the transmission of Energy.” See CAISO Fifth Replacement Federal Energy Regulatory Commission (FERC) Electronic Tariff, Appendix A, Entitlements.

² The DCOA is an agreement between PG&E and Citizens Energy Corporation. Citizens Pacific Transmission LLC is an indirect wholly owned subsidiary of Citizens Energy Corporation and is the entity that Citizens Energy Corporation expects to enter into leases with PG&E pursuant to the DCOA. The DCOA permits Citizens Energy Corporation to select a wholly owned subsidiary other than Citizens Pacific Transmission LLC to enter into leases with PG&E. This testimony refers to Citizens Energy Corporation and its subsidiary Citizens Pacific Transmission LLC, or other wholly owned subsidiary that Citizens selects to enter into an Entitlements Lease, collectively as “Citizens.”

option, they will enter into a 30-year “Entitlements Lease” for the applicable group of projects.³

B. Purpose of Amended Testimony

The purpose of this amended testimony is to explain the rate implications of the Investment Program and the treatment of capital- and expense-related costs pertaining to the proposed Entitlements Leases between PG&E and Citizens. Below is a brief summary of the remaining sections of this amended testimony.

Section C discusses recovery of PG&E’s E and Citizens’ capital costs under the Entitlements Leases. This section explains how the “Representative Rate Model” will ~~be used to~~ calculate a “PG&E Representative Rate” for each Entitlements Lease ~~that~~. The PG&E Representative Rate approximates PG&E’s capital cost recovery at the time of lease execution as if PG&E had not leased the Entitlements to Citizens ~~and which~~. It also explains how the PG&E Representative Rate will act as a cap on Citizens’ capital cost recovery ~~from~~, ensuring that Citizens cannot charge customers more than PG&E would be expected to charge if PG&E had not entered into the Entitlements Lease. It also explains how the DCOA protects against double recovery of capital costs.

Section D discusses the methodology and key inputs used in the Representative Rate Model to calculate the PG&E Representative Rate. To demonstrate how the Representative Rate Model works and how Citizens’ capital cost recovery will be capped based on the PG&E Representative Rate, this section uses the Representative Rate Model to calculate an illustrative annual levelized capital-related revenue requirement (i.e., an illustrative PG&E Representative Rate) for a scenario that assumes no transaction (i.e., Citizens does not participate in the Investment Program and PG&E retains all the Entitlements to the relevant transmission projects) (PG&E Base Case). It then compares the ~~illustrative PG&E Representative Rate calculated for the~~ PG&E Base Case to an illustrative annual levelized capital-related revenue requirement for a second scenario. The second scenario assumes Citizens participates in the Investment Program by exercising its first option and entering into an Entitlements Lease with a total prepaid rent amount of \$200 million (Citizens

³ A Form of Entitlements Lease is Exhibit A to the DCOA (Entitlements Lease). Unless otherwise specified, all references to the DCOA and the Entitlements Lease refer to the amended and restated versions of those documents.

1 Base Case). Section D compares the ~~illustrative annual levelized capital-related~~
2 ~~revenue requirements in the~~ PG&E Base Case and the Citizens Base Case and
3 explains how the PG&E Representative Rate would act to cap Citizens' capital
4 cost recovery and protect customers.

5 Finally, Section E discusses the treatment of expense-related costs. It
6 explains how PG&E will allocate to Citizens a share of expense costs (referred
7 to as Additional Rent), including operations and maintenance (O&M) costs, that
8 are reasonably attributable to Citizens. It also explains Citizens'
9 ~~agreement~~contractual commitment not to recover from ~~ratepayers~~customers its
10 own (and its affiliates') upfront and ongoing incremental costs ~~that would not be~~
11 ~~incurred without~~—protecting customers from incremental costs of Citizens'
12 involvement in the Investment Program.

13 C. Recovery of Capital Costs

14 Each Citizens investment under an Entitlements Lease will take the form of
15 a lump sum prepaid rent payment by Citizens to PG&E (Prepaid Rent) that will
16 confer on Citizens a leasehold percentage interest in the Entitlements to a
17 specified group of PG&E transmission projects for the duration of the 30-year
18 Entitlements Lease.⁴ The capital costs Citizens will recover in rates (referred to
19 as the "Costs of Entitlements" in the Entitlements Lease) are limited to the
20 Prepaid Rent due under the Entitlements Lease and the Financing Costs that
21 Citizens incurs.⁵

22 As Citizens' expert witness Ronald E. Kennedy (Amended Chapter 6)
23 explains, Citizens will raise the funds for the Prepaid Rent for each Entitlements
24 Lease by taking on long-term debt at a fixed rate close in time to the execution
25 of each Entitlements Lease.⁶ This debt will have a 30-year term, and the
26 interest rate will be fixed for the duration of the loan and reflect then-prevailing
27 market conditions.⁷ Mr. Kennedy anticipates Citizens' cost of debt for the first
28 Entitlements Lease to be 5.73 percent.⁸

4 See DCOA § 4.2(c), (d); Entitlements Lease § 4.1.1.

5 Entitlements Lease § 4.3.2(a).

6 See Amended Testimony of Ronald E. Kennedy (Amended Chapter 6) at A4 and A5.

7 See Amended Testimony of Ronald E. Kennedy (Amended Chapter 6) at A12.

8 See Amended Testimony of Ronald E. Kennedy (Amended Chapter 6) at A5.

1 The way Citizens will secure long-term debt financing for each Prepaid Rent
2 payment aligns with how PG&E secures long-term debt to finance its
3 investments in large, long-lived assets. PG&E also issues long-term debt (e.g.,
4 30-year bonds) for long-term capital assets (e.g., 55-year useful life) like the
5 transmission projects included in the Investment Program. Typically, these
6 PG&E bonds would have a fixed coupon interest rate and so, like Citizens, that
7 interest rate would be locked in for the term of the bond and reflect then
8 prevailing interest rates. Like Citizens, PG&E also typically holds this debt to
9 maturity (e.g., 30 years after issuance) rather than attempting to restructure it in
10 response to decreases in market rates. This is because PG&E cannot
11 meaningfully reduce its costs through restructuring. Instead, PG&E would need
12 to make a lump-sum payment equal to the present value of all future coupon
13 payments to retire the existing debt, and then issue new debt at the lower
14 market rate, in effect replacing one debt with another without generating
15 meaningful savings, if any. PG&E's estimated cost of debt associated with the
16 first Entitlements Lease is 5.91 percent. I understand that because Citizens'
17 credit profile is better than PG&E's, Citizens' estimated cost of debt in
18 connection with the first Entitlements Lease is slightly lower than PG&E's cost of
19 debt.⁹ PG&E would recover the cost of this debt from customers in FERC-
20 approved rates, like Citizens expects to do. Thus, as Citizen's expert Susan
21 Tierney confirms, (Amended Chapter 8), customers are not disadvantaged by
22 Citizens' use of long-term fixed debt financing because this same practice, and
23 the associated costs, are consistent with PG&E's own debt-financing practices
24 for such assets.¹⁰

25 Under the terms of the Entitlements Lease, the Financing Costs included in
26 the Costs of Entitlements may not exceed one percent of the Prepaid Rent.¹¹

27 The term "Financing Costs" means all reasonable and customary financing costs
28 associated with the term financing that Citizens will consummate for the
29 acquisition of its leasehold interest in the relevant Entitlements, including
30 lenders' fees, consultants' and lawyers' fees (for Citizens and its lenders), and

⁹ See Amended Testimony of Ronald E. Kennedy (Amended Chapter 6) at A8 and A9.

¹⁰ See Prepared Testimony of Susan F. Tierney (Chapter 8), Section C.3.

¹¹ *Id.*

capitalized interest charged prior to commencement of rate recovery.¹² This provision protects customers by capping Citizens' financing costs to that of traditional utilities whose financing costs are typically approximately one percent of the amount borrowed. ~~Under the terms of the Entitlements Lease, the Financing Costs included in the Costs of Entitlements may not exceed one percent of the Prepaid Rent.~~¹³

~~As the testimony of Citizens' expert witness Ronald E. Kennedy (Chapter 6) discusses,~~ Citizens will develop its own ratemaking methodology for recovery of its capital costs at a fixed and levelized rate. as discussed in Mr. Kennedy's testimony (Amended Chapter 6). Citizens' ratemaking methodology will be filed with and approved by the FERC.¹⁴ This ratemaking methodology will be used to calculate an annual levelized capital-related revenue requirement referred to in this amended testimony as the "Citizens Uncapped Rate."

Under the Entitlements Lease, Citizens' recovery of capital costs will be capped at a rate that approximates the capital cost recovery rate PG&E estimates it would be authorized to charge at the time the relevant Entitlements Lease is executed if PG&E had not leased such interests to Citizens – i.e., the PG&E Representative Rate.¹⁵ The PG&E Representative Rate will be calculated using the Representative Rate Model attached as Exhibit B to the Entitlements Lease and described in Section D below. ~~This approach~~ This approach protects customers from Citizens charging a potentially higher rate than PG&E is expected to charge for the same projects and is consistent with the approach used for Citizens' investments with San Diego Gas & Electric Company (SDG&E) to lease Entitlements to the Sycamore-Penasquitos Transmission Line and the Sunrise Power-Link Transmission Line.¹⁶

Typically, PG&E's electric transmission system investments are recovered through FERC approved rates in PG&E's Transmission Owner (TO) Tariff. The

¹² *Id.*

¹³ *Id.*

¹⁴ DCOA § 4.3(a)(ii), (b)(iii); Entitlements Lease §§ 4.2, 4.3.

¹⁵ Entitlements Lease § 4.3.2.

¹⁶ D.11-05-048 at 19-22 (Sunrise Section 851 Decision), 2011 Cal. PUC Lexis 302, at *29-32 (Cal. P.U.C. 2011) (describing SDG&E Representative Rate Model); D.19-03-024 at 12-14 (Sycamore Section 851 Decision), 2019 Cal. PUC Lexis 154, at *17-20 (Cal. P.U.C. 2019) (same).

1 TO Tariff revenue requirement includes both a capital-related revenue
2 requirement and an expense related revenue requirement. PG&E's capital
3 related revenue requirement includes depreciation, taxes, and return on rate
4 base. These components are calculated using FERC-approved parameters
5 such as depreciable life, return on equity (ROE), and capital structure. As I
6 discuss in greater detail below, the Representative Rate Model generally reflects
7 the FERC approved ratemaking methodology and parameters for PG&E's
8 capital related revenue requirement.

9 Notably, the Investment Program includes protections against double
10 recovery of capital costs. Under the DCOA, transmission projects may be
11 eligible to be included in an Entitlements Lease only if an amount equal to or
12 greater than the expected Citizens leasehold percentage interest of the capital
13 costs of such projects has not already been included in PG&E's existing FERC
14 transmission rates for purposes of cost recovery.¹⁷ Additionally, PG&E is
15 required to exclude from its transmission rates for cost recovery an amount of
16 dollars equivalent to the total Prepaid Rent that PG&E receives from Citizens.¹⁸

¹⁷ DCOA § 3.4(a).

¹⁸ *Id.* § 4.6.

1 **D. The Representative Rate Model and Illustrative Base Case Comparison**

2 The Representative Rate Model calculates an annual capital-related
3 revenue requirement referred to as the PG&E Representative Rate. The PG&E
4 Representative Rate approximates the capital costs PG&E could recover at the
5 time of execution of an Entitlements Lease for the projects subject to the
6 Entitlements Lease over the life of those assets if PG&E had not leased the
7 Entitlements to Citizens. It uses a “cost of service” ratemaking methodology and
8 inputs consistent with parameters in the PG&E FERC-approved TO Tariff
9 Formula Rate that was most recently authorized by FERC in a final and
10 non-appealable order not subject to refund as of the date of execution of the
11 relevant Entitlements Lease. The Representative Rate Model will be used to
12 calculate the PG&E Representative Rate for each Entitlements Lease at or
13 within five business days prior to lease execution.¹⁹ The PG&E Representative
14 Rate, in turn, will be used to cap Citizens’ recovery of capital costs for each
15 Entitlements Lease.²⁰

16 If the ratemaking methodology Citizens uses for recovery of its capital costs
17 at a fixed and levelized rate produces a Citizens Uncapped Rate that is lower
18 than the PG&E Representative Rate for a given Entitlements Lease, the Citizens
19 Uncapped Rate will be used by Citizens for purposes of capital cost recovery.
20 However, if the Citizens Uncapped Rate is higher than the PG&E
21 Representative Rate for a given Entitlements Lease, Citizens will cap its capital
22 cost recovery so that it does not exceed the PG&E Representative Rate. In
23 other words, customers are guaranteed the lower rate, whether it is the Citizens
24 Uncapped Rate or the PG&E Representative Rate.

25 To illustrate how the Representative Rate Model works, I compare annual
26 levelized capital revenue requirements under two scenarios. The first scenario –
27 the PG&E Base Case – assumes Citizens does not participate in the Investment
28 Program and PG&E retains all the Entitlements to the relevant transmission
29 facilities. The PG&E Base Case uses the Representative Rate Model to
30 produce an illustrative PG&E Representative Rate. The second scenario – the
31 Citizens Base Case – assumes Citizens does participate in the Investment

¹⁹ Entitlements Lease § 4.3.2(d).

²⁰ *Id.* § 4.3.2; DCOA § 4.5.

1 Program by exercising its first option and enters into an Entitlements Lease with
2 a total Prepaid Rent amount of \$200 million. As ~~the testimony of Citizens' expert~~
3 ~~witness Ronald E. Mr.~~ Kennedy (Amended Chapter 6) explains in greater detail,
4 the Citizens Base Case uses Citizens' own ratemaking methodology to produce
5 an illustrative Citizens Uncapped Rate.

6 **1. Components of the Capital-Related Revenue Requirement**

7 The capital-related revenue requirement calculated by the
8 Representative Rate Model consists of a return on rate base, depreciation
9 on plant, and income taxes. Certain inputs used to calculate these
10 components will be determined at or within five business days prior to the
11 execution date of the relevant Entitlements Lease.²¹ For purposes of the
12 illustrative base case comparison, PG&E used values as of February
13 4December 5, 2024, for these variable inputs to calculate the illustrative
14 PG&E Representative Rate.²²

15 As explained above, the Costs of Entitlements that Citizens may recover
16 in rates are limited to the Prepaid Rent due under the Entitlements Lease
17 and Citizens' Financing Costs, which are capped at one percent of the
18 Prepaid Rent.²³ The Costs of Entitlements will be determined at or within
19 five business days prior to execution of the relevant Entitlements Lease.²⁴
20 For purposes of the illustrative base case comparison, PG&E assumed
21 \$200 million in Project Costs associated with Citizens' Entitlements and
22 assumed that Financing Costs will equal one percent of the Prepaid Rent.
23 ~~capital-related costs for the PG&E Base Case scenario.~~ as indicated in
24 Table 3-1.

²¹ Section 4.3.2 of the Entitlements Lease details the variable inputs that will be determined at the time of execution of the relevant Entitlements Lease include: (1) the Costs of Entitlements, (2) the five-day average Moody's Baa 30-year Utility Bond Index, (3) the 12-month average spread on PG&E's most recently issued 30-year bond, (4) PG&E's FERC-approved ROE, (5) PG&E's FERC-approved capital structure, (6) PG&E's actual AFUDC related to the Entitlements Lease, and (7) the composite FERC-approved average service life for PG&E electric transmission assets.

²² As Mr. Kennedy (Amended Chapter 6) explains, Citizens calculated the illustrative Citizens Uncapped Rate based on variable inputs as of December 5, 2024.

²³ Entitlements Lease § 4.3.2(a).

²⁴ *Id.* § 4.3.2(a), (d).

**TABLE 3-1
PG&E CAPITAL COSTS**

Line No.	Capital -Related Costs	PG&E Base Case
1	Project Costs Associated with Citizens' Entitlements	\$200,000,000
2	Financing Costs	2,000,000
3	Total Costs of Entitlements	\$202,000,000

In the Representative Rate Model, rate base is calculated as Plant in Service less Accumulated Depreciation less Accumulated Deferred Taxes. The Representative Rate Model calculates return on rate base using PG&E's weighted average cost of capital (WACC). Several of the inputs used to calculate PG&E's WACC will be determined at or within five business days prior to execution of the relevant Entitlements Lease. PG&E's cost of debt will be determined based on the five-day average Moody's Baa 30-year Utility Bond Index and the 12-month average spread on PG&E's most recently issued 30-year bond at the time of Entitlements Lease execution.²⁵ For purposes of calculating PG&E's WACC for use in the Representative Rate Model, PG&E will use the ROE and capital structure that at the time of Entitlements Lease execution were most recently authorized by FERC in a final and non-appealable order not subject to refund.²⁶

For purposes of calculating the illustrative PG&E Representative Rate used in this amended testimony, PG&E's WACC is based on the cost of debt calculated using the Moody's Baa 30-year Utility Bond Index as of ~~February 1~~ December 5, 2024 (which was 5.~~50~~ 54 percent), plus the 12-month average spread on PG&E's most recently issued 30 year-bond as of ~~February 1~~ December 5, 2024. For purposes of this calculation, PG&E used the ROE and capital structure from its TO20 Formula Rate case, which is the PG&E TO Tariff most recently authorized by FERC in a final and non-appealable order not subject to refund as of ~~February 1~~ December 5,

²⁵ *Id.* § 4.3.2(a), (b) & nn.5, 10.

²⁶ *Id.* § 4.3.2(b) & nn.6-8.

2024.²⁷ Table 3-2 below shows the WACC calculation of 8.45%^{17 percent} based on values as of February 1December 5, 2024, which is used for the PG&E Base Case.

**TABLE 3-2
PG&E'S WACC
BASED ON VALUES AS OF FEBRUARY 1DECEMBER 5, 2024**

Line No.	Component	Capital Structure	Cost of Capital	WACC
1	Debt	49.75%	6.47 5.91%	3.22 2.94%
2	Preferred Equity	0.50%	5.52%	0.03%
3	Common Equity	49.75%	10.45%	5.20%
4	WACC			8.45 8.17%

The Representative Rate Model also incorporates a calculation of the depreciation on assets placed into service. The Representative Rate Model will use the composite average service life for PG&E electric transmission assets that at the time of execution of the relevant Entitlements Lease was most recently authorized by FERC in a final and non-appealable order not subject to refund.²⁸ For purposes of the PG&E Base Case, PG&E has used the Network Electric Transmission composite average service life of 55 years, which was derived from the average service lives at the asset class level in PG&E's TO20 Formula Rate²⁹ (i.e., the PG&E TO Tariff most recently authorized by FERC in a final and non-appealable order not subject to refund as of February 1December 5, 2024).

Finally, PG&E has calculated income taxes in alignment with the current Internal Revenue Service rules. Federal and State income tax rates used in the Representative Rate Model (for purposes of the PG&E Base Case) and Citizens Base Case are 21 percent and 8.84 percent, respectively.

²⁷ See *Pac. Gas & Elec. Co.*, 173 FERC ¶ 61,281 (2020) (FERC letter order accepting settlement in PG&E's TO20 Formula Rate Case establishing ROE and capital structure).

²⁸ Entitlements Lease § 4.3.2(a) & n.4.

²⁹ See *Pac. Gas & Elec. Co.*, 173 FERC ¶ 61,281 (2020) (FERC letter order accepting settlement in PG&E's TO20 Formula Rate Case approving Network Electric Transmission depreciation rates).

Section D of the amended testimony of PG&E witness James Higham Jr. (Amended Chapter 4) explains the tax inputs and considerations in detail.

2. Representative Rate Model Calculations

Using the inputs described above, the Representative Rate Model calculates an annual levelized capital-related revenue requirement over the 30-year lease term, producing the PG&E Representative Rate. Using cost of service ratemaking principles, the Representative Rate Model produces annual capital-related revenue requirements that are added together over the composite average service life for PG&E electric transmission assets that at the time of execution of the relevant Entitlements Lease was most recently authorized by FERC in a final and non-appealable order not subject to refund (55 years for purposes of the illustrative base case comparison) and discounted at PG&E's WACC presented in the Representative Rate Model. The discounted sum of the capital-related revenue requirements is then levelized over the 30-year lease period to produce a single levelized annual capital-related revenue requirement, known as the PG&E Representative rate.

3. Results of the Illustrative Base Case Comparison

This section compares the illustrative PG&E Representative Rate produced by the Representative Rate Model to the illustrative Citizens Uncapped Rate produced by Citizens' ratemaking methodology. Ultimately customers will be charged only the lower of the two rates resulting from these models.

Using the assumptions and inputs described above, the Representative Rate Model calculates the annual levelized capital-related revenue requirement for the PG&E Base Case – i.e., the illustrative PG&E Representative Rate – which is \$20.94 million, as shown in Table 3-3.

Citizens' ratemaking methodology described in the Mr. Kennedy's amended testimony ~~of Citizens' expert witness Ronald E. Kennedy~~ (Amended Chapter 6) calculates the annual levelized capital revenue requirement for the Citizens Base Case – i.e., the illustrative Citizens Uncapped Rate – which is \$22.7 million, as shown in Table 3-3.

**TABLE 3-3
COMPARISON OF ILLUSTRATIVE ANNUAL LEVELIZED CAPITAL-RELATED REVENUE
REQUIREMENTS**

Line No.	Illustrative Rate	PG&E Base Case (Illustrative PG&E Representative Rate)	Citizens Base Case (Illustrative Uncapped Citizens Rate)	Variance
1	Annual Levelized Capital-Related Revenue Requirement	\$20,929,939 <u>\$20,436,208</u>	\$22,735,447 <u>\$22,027,018</u>	\$1,805,508 <u>\$1,590,810</u>

A comparison of the PG&E Base Case to the Citizens Base Case in this illustrative example shows that the annual levelized capital-related revenue requirement in the Citizens Base Case (i.e., the illustrative Citizens Uncapped Rate) is higher than the PG&E Base Case (i.e., the illustrative PG&E Representative Rate) by \$1.~~8-6~~7.78 million annually or ~~8-6~~7.78 percent. As discussed above, for any given Entitlements Lease, if the Citizens Uncapped Rate is higher than the PG&E Representative Rate, the rate charged to customers will be capped at the PG&E Representative Rate. If the Citizens Uncapped Rate is lower than the PG&E Representative Rate, the Citizens Uncapped Rate will be charged to customers. Capping Citizens' capital-related revenue requirement at the PG&E Representative Rate means customers will pay no more than an approximation of the rate PG&E could charge at the time of execution of the Entitlements Lease for the portion of the projects subject to Citizens' leasehold interests (i.e., if PG&E held 100 percent of the Entitlements).

In addition to the use of the PG&E Representative Rate as a cap on Citizens' capital-related cost recovery, there are several additional financial benefits for customers associated with the Investment Program. First, the capital cost recovery in the rates Citizens will charge will be fixed at current levels over the 30-year terms of the Entitlements Leases. The rates PG&E would charge customers, in contrast, would be subject to change as ~~costs~~ change PG&E's WACC changes. Citizens' involvement in the Investment Program thus will provide valuable certainty and predictability to

1 ~~ratepayers~~customers.³⁰ Second, as explained in detail in the amended
2 testimony of Citizens witness Peter F. Smith (Amended Chapter 5), Citizens
3 estimates its contributions of net after-tax profits from the Investment
4 Program to ~~energy-related charitable~~direct bill-paying assistance programs
5 that benefit ~~disadvantaged~~communities and ~~low-income families~~customers
6 in need are expected to total more than \$~~400~~450 million over the life of the
7 Investment Program (assuming a total investment of \$1.0 billion). This is a
8 significant benefit that would not be achieved without Citizens' participation
9 in the Investment Program.

10 **E. Recovery of Expense-Related Costs**

11 In addition to the capital-related costs described above, there are also
12 expense costs related to the Entitlements Leases. PG&E will allocate to
13 Citizens as "Additional Rent" a share of expense costs, ~~including O&M costs,~~
14 that are reasonably attributable to Citizens.³¹ Citizens will recover its Additional
15 Rent expenses from customers; PG&E will not recover from customers the
16 Additional Rent allocated to Citizens.³² Additionally, Citizens has agreed not to
17 recover from customers its (and its affiliates') own upfront and ongoing
18 incremental costs.³³ Because Additional Rent is the only expense-related cost
19 Citizens will recover from customers and Additional Rent costs will be passed
20 through to customers (either by PG&E or by Citizens) regardless of whether
21 Citizens participates in the Investment Program, expense-related costs are not
22 included in the illustrative base case comparison discussed above in Section D.

23 **1. PG&E's Allocation of Additional Rent to Citizens**

24 Section 4.1.2 of the Entitlements Lease describes how PG&E will
25 allocate certain expense costs to Citizens in the form of Additional Rent.
26 This Additional Rent will include a monthly charge equal to the sum of:
27 (1) the expense costs PG&E incurs that are reasonably attributable to the

³⁰ D.11-05-048 at 15-17 (Sunrise Section 851 Decision), 2011 Cal. PUC Lexis 302, at *22-26 (Cal. P.U.C. 2011) (explaining value of rate stability); D.19-03-024 at 15-16 (Sycamore Section 851 Decision), 2019 Cal. PUC Lexis 154, at *20-22 (Cal. P.U.C. 2019) (same).

³¹ Entitlements Lease § 4.1.2.

³² DCOA § 4.6.

³³ *Id.* § 4.5; Entitlements Lease § 4.3.2.

1 Citizens Entitlements, including a reasonable allocation of O&M costs;
2 administrative and general (A&G) activities; Common, General, and
3 Intangible (CGI) plant costs; the amortized cost of removal; sales, use,
4 payroll, and excise taxes; and other costs authorized by FERC, plus and
5 (2) Citizens' share of property tax paid by PG&E.³⁴ The allocation portion of
6 the CGI plant costs attributable to the Citizens Citizens' Entitlements
7 includes, but is not limited to, capital costs for office building, furniture,
8 computer equipment, communication equipment, and tools.

9 The allocation methodology for O&M and A&G will be based on PG&E's
10 gross plant ratio. A gross plant ratio or leased plant factor will be calculated
11 by using the ratio of the leased gross plant amount to Citizens over PG&E's
12 Total End of Year Network Transmission Functional Gross Plant. The
13 leased gross plant will be adjusted to reflect the 12-month average to take
14 into consideration that an Entitlements Lease may be effective for only part
15 of the year during the years in which the lease commences and expires.
16 This gross plant factor will be applied to PG&E's electric network
17 transmission allocated O&M and A&G balances to arrive at the total amount
18 to charge Citizens. The electric network transmission allocated O&M and
19 A&G balances will be determined in PG&E's TO Formula Rate. The same
20 allocation methodology will be applied for allocating payroll and other taxes
21 such as excise taxes.

22 The CGI plant-related rate base—which includes gross plant,
23 accumulated depreciation, and accumulated deferred income tax—and the
24 CGI-related depreciation also will be allocated based on a gross plant factor
25 described above. Return on rate base and associated income taxes will be
26 calculated based on the CGI rate base allocated to Citizens. Similar
27 treatment will be applied to other rate base items such as Prepayment and
28 Materials and Supplies. Cash Working Capital will be calculated as one-
29 eighth of Citizen's allocated O&M and A&G. The one-eighth approach is
30 consistent with the proposal in PG&E's TO21 formula rate and is subject to

³⁴ Entitlements Lease § 4.1.2; see *id.* § 1.1 (defining "Additional Rent," "Citizens Additional Rent Rate," and "Reimbursable Property Taxes"); *id.* §§ 8.1, 8.3.

1 change based on the final approved TO21 formula rate or subsequent
2 formula rate that replaces TO21.

3 Citizens' expense-related revenue requirement also will include the
4 amortized cost of removal for the plant included in each of the Entitlements
5 Leases. The cost of removal expense will be calculated annually based on
6 a composite net salvage factor associated with all the assets in each
7 Entitlements Lease.³⁵

8 Property tax allocation will be based on a ratio of the leased plant net
9 functional and CGI plant (gross plant less accumulated depreciation) over
10 PG&E's electric net functional and CGI plant.

11 PG&E will calculate Additional Rent to be allocated to Citizens and will
12 invoice Citizens for that amount.³⁶ The Additional Rent will be first
13 calculated based on prior year financial data and will be trued up on a two-
14 year lag similar to the TO Formula Rate. Citizens will in turn recover the
15 Additional Rent through rates filed with and accepted by FERC.³⁷ PG&E
16 will exclude from its transmission rates for purposes of cost recovery the
17 costs allocated to Citizens as Additional Rent.³⁸

18 Regardless of whether Citizens were to exercise an option under the
19 DCOA and execute an Entitlements Lease, these Additional Rent costs
20 would be passed through to customers (either by Citizens or, in the absence
21 of Citizens' participation in the Investment Program, by PG&E). Thus, the
22 Investment Program has no incremental financial impact on customers with
23 respect to these Additional Rent costs.

24 **2. Citizens' Agreement Not to Recover Its Upfront and Ongoing** 25 **Incremental Costs From Customers**

26 Citizens will incur certain incremental costs as a result of its participation
27 in the Investment Program. For instance, if Citizens exercises an option
28 under the DCOA and executes an Entitlements Lease, it will incur certain

³⁵ The composite net salvage factor is derived using the FERC-authorized net salvage percentages for each asset.

³⁶ Entitlements Lease § 4.1.2.

³⁷ *Id.* §§ 4.2, 4.3.1.

³⁸ DCOA § 4.6.

1 incremental A&G costs required for Citizens to carry out its responsibilities
2 under the Entitlements Lease to perform the role of a Participating TO in
3 CAISO. Given the size and scope of the Investment Program, Citizens has
4 agreed it will not recover in its rates its (or its affiliates') upfront and ongoing
5 incremental costs associated with its involvement. These costs include
6 Citizens' own project costs, development costs, transaction costs, regulatory
7 costs, O&M costs, A&G costs, sales tax costs, use tax costs, payroll tax
8 costs, excise tax costs, and costs to effect billing and settlements with
9 CAISO.³⁹ Accordingly, Citizens' upfront and ongoing incremental costs will
10 have no impact on customer rates.

11 **F. Conclusion**

12 The rate and financial framework of the Investment Program is consistent
13 with prior transactions approved by the Commission and FERC, and crucially,
14 has been deliberately designed to protect customers from paying more for the
15 applicable projects. In approving the Investment Program, the Commission
16 would facilitate necessary funding for PG&E infrastructure improvements at fair
17 and reasonable rates, while unlocking significant tangible benefits for customers.

³⁹ *Id.* § 4.5; Entitlements Lease § 4.3.2.

PACIFIC GAS AND ELECTRIC COMPANY

AMENDED CHAPTER 4

TAX

PACIFIC GAS AND ELECTRIC COMPANY
AMENDED CHAPTER 4
TAX

TABLE OF CONTENTS

A. Introduction.....	4-1
B. Internal Revenue Code § 467 Leases	4-2
C. Prepaid Rent	4-3
D. PG&E Representative Rate Model – Income Tax Components	4-5
1. Income Tax Calculation.....	4-5
2. Accumulated Deferred Income Taxes	4-6
E. Protections Against Double Recovery	4-7
1. Reduction in Revenue Requirement for Income Taxes.....	4-7
2. Rate Base Adjustments for ADIT	4-8
F. Additional Rent Items	4-8
1. Property Tax	4-9
2. Common, General, and Intangible Plant – ADIT	4-9
3. Payroll and Business Taxes.....	4-10
4. Other Costs.....	4-10

PACIFIC GAS AND ELECTRIC COMPANY
AMENDED CHAPTER 4
TAX

A. Introduction

The purpose of my amended testimony is to discuss the tax implications arising from any Entitlements Lease¹ that Pacific Gas and Electric Company (PG&E) and a subsidiary of Citizens Energy Corporation—~~together with its wholly-owned subsidiary Citizens Pacific Transmission LLC (Citizens)~~—execute pursuant to the investment program (Investment Program) created by the Development, Coordination, and Option Agreement (DCOA), dated February 20, 2024 (as amended and restated on January 29, 2025) between PG&E and Citizens.² Specifically, my amended testimony discusses the following topics:

- Income tax treatment of prepaid rent(s) received from Citizens pursuant to any Entitlements Lease³ exercised as an Internal Revenue Code (IRC) § 467 Lease (Sections B and C);
- Tax components of PG&E’s “Representative Rate Model,”⁴ including a discussion of the income tax calculation approach and Accumulated Deferred Income Taxes (ADIT) (Section D);

¹ A form of which is attached as Exhibit A to the amended and restated DCOA (Entitlements Lease). The amended and restated DCOA is attached to the Amended Application as Attachment 1. Unless otherwise specified, all references to the DCOA and the Entitlements Lease refer to the amended and restated versions of those documents.

² The DCOA is an agreement between PG&E and Citizens Energy Corporation. Citizens Pacific Transmission LLC is an indirect wholly owned subsidiary of Citizens Energy Corporation and is the entity that Citizens Energy Corporation expects to enter into leases with PG&E pursuant to the DCOA. The DCOA permits Citizens Energy Corporation to select a wholly owned subsidiary other than Citizens Pacific Transmission LLC to enter into leases with PG&E. This testimony refers to Citizens Energy Corporation and its subsidiary Citizens Pacific Transmission LLC, or other wholly owned subsidiary that Citizens selects to enter into an Entitlements Lease, collectively as “Citizens.”

³ See Recitals of the Entitlements Lease, which describe the Investment Program and the options described thereunder.

⁴ For general discussion of the Representative Rate Model, see the amended testimony of PG&E witness Divya Raman (Amended Chapter 3).

- How provisions in the DCOA and Form of Entitlements Lease attached as Exhibit A to the DCOA (Entitlements Lease) that protect against double recovery will apply with respect to certain tax-related items (Section E); and
- The inclusion of certain tax items in PG&E's "Additional Rent" allocable to Citizens (Section F).

B. Internal Revenue Code § 467 Leases

Under general income tax principles, amounts received by a taxpayer that constitute gross income must be included as taxable income in the year the payment is received and subject to tax. In a rental arrangement, general tax principles would have a lessor recognize rental income when the lessor receives rental payments, including prepaid rent amounts in Year 1. Lessees, on the other hand, under general tax principles, would deduct current rental payments as an ordinary and necessary business expense as the property is being used, but may not deduct any prepaid rents. Instead, lessees must capitalize any prepaid rent paid to a lessor over the life of the lease and then deduct rent as the property is used over time (i.e., lessees cannot deduct the entire prepaid rent amount paid to a lessor in the year of the prepayment). Thus, general tax principles create a reporting mismatch between lessors and lessees when prepaid rent is part of a leasing arrangement (i.e., lessors recognize all prepaid rent as taxable income in Year 1, but lessees must deduct rental expense over the life of the lease).

To address this mismatch, Congress enacted IRC § 467, which uses rental accrual rules to match when a lessee deducts rent payments with when a lessor recognizes rental income for certain rental agreements. In an IRC § 467 lease arrangement, the lessor and lessee are required to treat rents in the same complementary manner and consider time-value-of-money principles. Also, taxpayers with IRC § 467 rental agreements that have prepaid rent are required to treat a portion of the initial prepayment of rent as a "loan" from the lessee to the lessor and reclassify a portion of the accrued rental payments as interest expense on such "loan."

PG&E and Citizens (Parties) agreed to structure the Entitlements Lease(s) as IRC § 467 lease(s), consistent with similar prior Citizens' lease transactions

1 approved by the California Public Utilities Commission (CPUC or Commission),⁵
2 to obtain the increased certainty about tax treatment that both Parties desire and
3 to spread the income and expense items for tax purposes over the life of the
4 applicable Entitlements Lease(s) in accordance with IRC § 467 and the Treasury
5 regulations thereunder.

6 **C. Prepaid Rent**

7 Under the Investment Program, subject to Commission approval, PG&E
8 may offer Citizens up to five separate options to lease a minority percentage⁶ of
9 the Entitlements to PG&E high-voltage transmission projects that ~~will be~~
10 ~~identified in the relevant Entitlements Lease and will~~ meet specified eligibility
11 requirements, for a total Citizens investment of up to \$1.0 billion. Entitlements
12 are defined in Appendix A to the California Independent System Operator
13 Corporation Tariff as:

14 The right of a Participating [Transmission Owner] obtained through contract
15 or other means to use another entity's transmission facilities for the
16 transmission of Energy.

17 Under the DCOA, the maximum aggregate value of the five leases (i.e., the
18 total prepaid rent that PG&E may receive) if all the options are exercised is
19 capped at \$1.0 billion. If all five options are exercised, then each Entitlements
20 Lease is expected to provide an average of \$200 million in prepaid rent to
21 PG&E. For each Entitlements Lease, PG&E will amortize the prepaid rent into
22 taxable income over the 30-year lease term based on a rent schedule calculated
23 under the rules of IRC § 467. As discussed above, a portion of the prepaid rent
24 for each Entitlements Lease will be treated as a loan from Citizens to PG&E. To
25 the extent the unamortized prepaid rent exceeds the cumulative rental payments
26 due at the end of each rental accrual period (as calculated under IRC § 467), the
27 excess is deemed to be the outstanding loan balance, subject to interest
28 payable to Citizens. IRC § 467 requires PG&E and Citizens to establish a
29 schedule showing the taxable interest income to be recognized by Citizens and

5 See Application 09-10-010, Direct Testimony of Randall Rose ([CPUC Cal. P.U.C.](#) filed Oct. 9, 2009); D.11-05-048 (Sunrise Section 851 Decision), 2011 Cal. PUC Lexis 302 ([CPUC Cal. P.U.C. 2011](#)); D.19-03-024 at 7 (Sycamore Section 851 Decision), 2019 ~~WL~~ [1571659 \(CPUC\)](#), [Cal. PUC Lexis 154](#), at ~~*3~~ [*8-9 \(Cal. P.U.C. 2019\)](#).

6 Under the terms of the DCOA, Citizens will not be able to acquire a leasehold interest in more than 49.9 percent of the Entitlements for any individual transmission project.

1 the deductible interest expense to be recognized by PG&E for each accrual
2 period. This loan bears interest at 110 percent of the Applicable Federal Rate
3 (AFR), pursuant to IRC § 467(e)(4) and Treas. Reg. § 1.467-2(b)(1). For these
4 purposes, the AFR is the federal long-term interest rate as published by the
5 United States Treasury Department. For example, the long-term semi-annual
6 rate at 110 percent AFR for February 2024 is 4.55 percent.⁷

7 The provisions of IRC § 467 do not change the total taxable income or total
8 expense to be recognized by PG&E or Citizens, respectively, as compared to
9 the recognition of prepaid rent upfront by PG&E and the deductible rent expense
10 by Citizens. However, the IRC § 467 lease does change how the items of
11 income and expense are labeled for tax purposes and the timing of their
12 recognition by the Parties. In looking at each Entitlements Lease in isolation,
13 PG&E will recognize net taxable income equal to the sum of its rental income
14 and interest expense on the deemed loan from Citizens. Conversely, Citizens
15 will recognize the net rental expense (tax deduction) and interest income
16 attributable to the deemed loan for each Entitlements Lease. As a result, the net
17 rental income less interest expense recognized by PG&E over the 30-year life of
18 each Entitlements Lease will exactly equal Citizens' prepaid rent. Likewise, over
19 the 30-year life of each Entitlements Lease, Citizens will have a complementary
20 tax treatment for fully deducting its prepaid rent amount.

21 A calculation of the IRC § 467 rents and interest on an assumed
22 \$200 million of projected prepaid rent is shown as Exhibit C of the Entitlements
23 Lease. Under Section 8.2 of the Entitlements Lease, PG&E and Citizens intend
24 to structure each Entitlements Lease as an IRC § 467 rental agreement (lease)
25 and as such will use the same IRC § 467 schedule(s) for each Entitlements
26 Lease to achieve complementary tax treatment.

7 See Revenue Ruling 2024-03 Table 1, <https://www.irs.gov/pub/irs-drop/rr-24-03.pdf>
(reproduced in part in Exhibit C of the Entitlements Lease).

D. PG&E Representative Rate Model – Income Tax Components⁸

The DCOA and Entitlements Lease include important ratepayer protections. PG&E and Citizens have agreed to cap the capital cost component of Citizens' rate based on a PG&E Representative Rate produced by the Representative Rate Model.⁹ The Representative Rate Model calculates a PG&E Representative Rate that provides an approximation of the rate that PG&E could charge at the time of execution of an Entitlements Lease for the portion of the transmission projects subject to Citizens' leasehold interests (i.e., if PG&E held 100 percent of the Entitlements). Below is a discussion of the income tax specific aspects of the Representative Rate Model.

1. Income Tax Calculation

The income tax calculation in the Representative Rate Model is comprised of the federal and state tax expense associated with PG&E's return on equity (including preferred stock), plus a permanent tax adjustment for Allowance for Funds Used During Construction (AFUDC) Equity,¹⁰ multiplied by the composite tax rate, and then grossed-up to a revenue requirement.

The calculation of income taxes can be summarized as follows:

$$\text{Total Income Taxes} = ((\text{Rate Base} \times \text{Equity Rate of Return}) + \text{AFUDC Equity tax adjustment}) \times \text{Composite Tax Rate} \times \text{Tax Gross-Up}$$

- Composite Tax Rate of 27.984 percent: This is a combination of the federal¹¹ (21 percent) and California state¹² (8.84 percent) corporate income tax rates, reflecting the benefit of the California state tax deduction (27.984% = 19.14% (21% - (8.84% x 21%)) + 8.84%).

⁸ Property taxes were excluded from the PG&E Representative Rate Model because any applicable portion of property taxes related to the Citizens Entitlements Lease(s) will be allocated separately to Citizens as part of Additional Rent. See Section F for further discussion.

⁹ Entitlements Lease § 4.3.2; *id.*, Exh. B.

¹⁰ AFUDC has a debt and equity component. However, only AFUDC Equity has tax implications because AFUDC Debt is fully deductible for tax purposes.

¹¹ Federal corporation income tax rate, as currently enacted.

¹² California corporation income tax rate, as currently enacted.

- Tax Gross-Up of 1.38857: This is one divided by the difference of one minus the Composite Tax Rate ($1.38857 = 1 / (1 - 27.984\%)$).

This percentage is necessary to calculate the appropriate revenue requirement for income taxes, due to the iterative effect of changing revenues for recovery of taxes.

- Tax adjustment for AFUDC Equity: This adjustment is necessary because AFUDC Equity is not a tax-deductible amount. The book-tax basis difference is a tax adjustment for ratemaking purposes and consistent with PG&E's formula rate models filed with the Federal Energy Regulatory Commission (FERC).

The Representative Rate Model's formulaic approach for income taxes¹³ is consistent with PG&E's Twentieth Transmission Owner (TO20) and Twenty-First Transmission Owner (TO21) rate cases filed with FERC, as this income tax formula approximates the appropriate amount of income taxes associated with the capital (rate base) projects subject to the Entitlements Leases with Citizens.

2. Accumulated Deferred Income Taxes

ADIT represents the tax effects on accumulated differences between the reported financial statement bases of assets and liabilities and their basis for income tax purposes, which will ultimately result in taxable or deductible amounts in future years when the reported amounts of the assets are recovered, and the reported amounts of liabilities are settled. Assets subject to FERC jurisdiction are fully normalized for income tax purposes.

Under the IRC normalization rules, the difference between federal tax depreciation computed under the Modified Accelerated Cost Recovery System specified in IRC § 168 and state tax depreciation computed using the Asset Depreciation Range system specified in California Revenue

¹³ See the amended testimony of PG&E witness Divya Raman (Amended Chapter 3) for discussion of the non-income tax components of the PG&E Representative Rate Model, such as the definition of rate base, the equity rate of return, depreciation on plant, etc.

1 Taxation Code § 24349 versus normalized depreciation¹⁴ computed using
2 the same life, method, and salvage assumptions used to compute book
3 depreciation will be included as an adjustment to rate base by PG&E for
4 purposes of establishing a baseline revenue requirement.

5 The Representative Rate Model includes an appropriate rate base
6 adjustment for ADIT related to tax depreciation, in compliance with the
7 normalization rules. This adjustment to rate base for depreciation-related
8 ADIT is consistent with PG&E's FERC TO20 and TO21 formula rate cases.

9 **E. Protections Against Double Recovery**

10 The DCOA and Entitlements Lease include various ratepayer protections to
11 protect against double recovery by PG&E of capital costs (i.e., prepaid rent and
12 financing costs, capped at one percent of prepaid rent) and the portion of
13 operations and maintenance and other expense costs allocated to Citizens by
14 PG&E as Additional Rent. PG&E will exclude the leased plant from its rate
15 base, and allocate Additional Rent to Citizens from PG&E's transmission
16 revenue requirement. This section discusses the implications of these
17 adjustments with respect to income taxes and ADIT.

18 **1. Reduction in Revenue Requirement for Income Taxes**

19 For income taxes, because federal and state income taxes are primarily
20 a function of equity return on rate base (as discussed above in Section D.1),
21 the reduction of rate base for any Entitlements leased to Citizens will reduce
22 income taxes payable by PG&E's customers (i.e., there is a smaller rate
23 base and less profit to be taxed in PG&E's FERC formula rate). Instead,
24 these income tax costs will be recovered from Citizens' customers pursuant
25 to Citizens' FERC filings.

¹⁴ For ratemaking purposes, in essence the Normalization Rules under IRC § 168(i)(9) require that, for purposes of computing federal tax expense, the book amount of depreciation be used. Additionally, IRC § 168(i)(9) requires that the difference between federal income tax expense used for computing rates and actual federal income tax be treated as a reserve for deferred taxes, which is factored into rate base.

2. Rate Base Adjustments for ADIT

Generally, rate base has an adjustment for certain ADIT for computing the revenue requirement for ratemaking purposes.¹⁵ ADIT for depreciation-related timing differences attaches to the plant. Since a portion of plant will be excluded from PG&E's FERC formula rate (smaller rate base), the associated plant related ADIT also will be excluded from PG&E's formula rate. Overall, PG&E customers will be paying less due to the reduced net rate base.

Additionally, for PG&E, there will be IRC § 467 lease revenue book-tax differences for tax reporting purposes if an Entitlements Lease is executed.¹⁶ To the extent it is later determined that Citizens included a ratemaking adjustment for its IRC § 467 lease expense book-tax difference (ADIT) in its FERC formula rate, PG&E will make a complementary¹⁷ rate base adjustment to its formula rate to offset ratepayer impacts. It should be noted that if Citizens does not include a rate base adjustment for the book-tax difference associated with lease rental expense, then PG&E also would not include a rate base adjustment for its lease revenue book-tax difference to maintain complementary rate base treatment.

F. Additional Rent Items

PG&E will allocate to Citizens a share of expense costs that are reasonably attributable to Citizens. The costs are referred to as "Additional Rent." As the amended testimony of PG&E witness Divya Raman (Amended Chapter 3) discusses in greater detail, Additional Rent is comprised of various items. The following section discusses certain tax-related items that will be included in the

¹⁵ The IRC Normalization rules under IRC § 168(i)(9) also require certain rate base adjustments to comply with a normalization method of accounting.

¹⁶ Ultimately, both book and tax will recognize the same amount (rental income for PG&E or rent expense for Citizens) for the Entitlements Lease by the end of the lease term.

¹⁷ As discussed in Section C, because the transaction is intended to constitute an IRC § 467 rental agreement, PG&E and Citizens will use the same IRC § 467 schedule to determine the amount of deemed rental income and deemed rental expense recognized by PG&E and Citizens, respectively, for tax purposes. See Entitlements Lease § 8.2. The use of the same IRC § 467 tax schedule and book straight-line treatment to calculate the book-tax difference for rental income and book-tax difference for rental expense should produce complimentary amounts. This matching of taxable income recognition for lessors with the same tax deduction amount taken by lessees is the underlying purpose of IRC § 467.

1 Additional Rent allocated to Citizens. Any Additional Rent allocated to Citizens
2 will not be recovered from PG&E's ratepayers. For a discussion of other
3 Additional Rent items, please see Divya Raman's amended testimony
4 (Amended Chapter 3).

5 **1. Property Tax**

6 The California State Board of Equalization (SBE) values utility property
7 on a unitary basis as an entire operating system rather than valuing each
8 component individually. The SBE then allocates the unitary value among
9 the affected counties according to a statutory formula. Pursuant to the
10 DCOA, PG&E will retain 100% percent of the ownership interests in each
11 project subject to an Entitlements Lease. As such, each project will be
12 included in PG&E's unitary value and the assessed value will be allocated to
13 the affected counties according to the statutory formula. The Investment
14 Program (including the DCOA and Entitlements Lease(s)) between PG&E
15 and Citizens should have no impact on the overall property tax revenues
16 allocated to the counties within PG&E's service territory.

17 Under PG&E's formula rate model filed with FERC, property tax
18 expense associated with FERC assets are recovered via an allocator factor
19 based on the FERC Form 1, total electric property tax amounts.¹⁸ Because
20 PG&E will still own the property for property tax assessment purposes,
21 PG&E will determine the appropriate allocator factor to calculate the share
22 of property taxes reasonably attributable to and allocable to Citizens.

23 **2. Common, General, and Intangible Plant – ADIT**

24 As the amended testimony of PG&E witness Divya Raman (Amended
25 Chapter 3) discusses, the Additional Rent calculation will also include a
26 component for Common, General, and Intangible (CGI) Plant. Since ADIT
27 attaches to the plant, an adjustment for ADIT also is required for this CGI
28 plant (rate base) calculation. The methodology for adjusting ADIT is
29 consistent with PG&E's FERC formula rate model.

¹⁸ For example, the 2022 amount is derived from 2022 FERC Form 1, ppp. 262-263, line 9
Ad Valorem Tax, column Electric for Account 408.1 and then multiplied by an allocator
for inclusion in the formula rate.

1 **3. Payroll and Business Taxes**

2 Payroll and businesses taxes are recovered in PG&E's FERC formula
3 rate by using FERC Form 1 information multiplied by a labor allocator factor.
4 Since PG&E will continue to maintain the projects subject to the
5 Entitlements Lease(s), a portion of payroll and business taxes reasonably
6 attributable to Citizens will be included as Additional Rent and allocated to
7 Citizens based on network transmission plant allocator.

8 **4. Other Costs**

9 The Additional Rent clause in Section 4.1.2. of the Entitlements Lease
10 permits other costs to be included as Additional Rent, subject to FERC
11 review and approval. A general provision for "other costs" is needed given
12 the 30-year duration of the Entitlements Lease(s). PG&E cannot anticipate
13 whether future changes to tax laws, fees, charges, or policy changes may
14 result in additional costs that are reasonably attributable—and thus, should
15 be allocated to—Citizens.

16 ~~This concludes my direct testimony.~~

PACIFIC GAS AND ELECTRIC COMPANY

AMENDED CHAPTER ~~5~~5

**CITIZENS ENERGY – INTRODUCTION AND PARTICIPATION IN
INVESTMENT PROGRAM**

~~PACIFIC GAS AND ELECTRIC COMPANY~~
~~CHAPTER 5~~
~~CITIZENS ENERGY- INTRODUCTION AND PARTICIPATION IN~~
~~INVESTMENT PROGRAM~~

~~TABLE OF CONTENTS~~

PACIFIC GAS AND ELECTRIC COMPANY
AMENDED CHAPTER 5
CITIZENS ENERGY- INTRODUCTION AND PARTICIPATION IN
INVESTMENT PROGRAM

Table of Contents

A. Purpose and Summary of Testimony.....	5-1 <u>5-1</u>
B. Background on <u>of</u> Citizens	5-3 <u>5-3</u>
1. 1979-1999:	5-4 <u>1979-1999</u> <u>5-4</u>
2. 2000- <u>Present</u> :-	5-4 <u>5-5</u>

INVESTMENT PROGRAM

TABLE OF CONTENTS (CONTINUED)

C. Citizens' Operations in the Electricity <u>Electric</u> Industry	5-5 <u>5-6</u>
D. Citizens Sunrise Transmission LLC	5-7 <u>5-7</u>
E. Citizens Sycamore-Penasquitos <u>Sycamore-Penasquitos</u> Transmission LLC	5-8 <u>5-8</u>
F. Citizens S-Line <u>S-Line</u> Transmission LLC	5-9 <u>5-10</u>
G. Citizens' Involvement With and Financing of the <u>Proposed</u> Investment Program	5-10 <u>5-10</u>
<u>H. FERC and CAISO Oversight Over Citizens Pacific</u>	<u>5-14</u>
<u>H.I. <u>Addressing Affordability and</u> Advancing the Important Policy Goal of SB 350 to Help Improve Life for the Residents of Low-Income<u>Low-Income</u> and Disadvantaged Communities</u>	5-13 <u>5-16</u>

~~PACIFIC GAS AND ELECTRIC COMPANY~~
~~CHAPTER 5~~
~~CITIZENS ENERGY – INTRODUCTION AND PARTICIPATION IN~~
~~INVESTMENT PROGRAM~~

PACIFIC GAS AND ELECTRIC COMPANY
AMENDED CHAPTER 5
CITIZENS ENERGY – INTRODUCTION AND PARTICIPATION IN
INVESTMENT PROGRAM

~~A.~~A. Purpose and Summary of Testimony

The purpose of this testimony is to support Pacific Gas and Electric Company's (PG&E) amended application for California Public Utilities Commission (CPUC or Commission) authorization, under Section 851 of the Public Utilities Code (Pub. Util. Code), to lease Entitlements¹ to certain PG&E ~~high-voltage~~high-voltage transmission projects to a wholly owned subsidiary of Citizens Energy Corporation, subject to the terms and conditions of the investment program ("Investment Program") created by the Amended and Restated Development, Coordination, and Option Agreement (DCOA) attached to the amended Application as Attachment 1. ~~PG&E~~

As explained below, Citizens Energy Corporation is a non-profit charitable organization. Our charitable mission is to help with life's basic necessities for those who live in disadvantaged communities or are otherwise marginalized. We use the after-tax profits from our business investments to fund our charitable work. It was for this purpose – that is, the charitable mission of our organization – that we entered into this transaction with PG&E.

¹ Entitlements are defined in Appendix A to the California Independent System Operator Corporation (CAISO) Tariff as "[t]he right of a Participating [Transmission Owner] obtained through contract or other means to use another entity's transmission facilities for the transmission of Energy." CAISO Fifth Replacement FERC Electronic Tariff, Appendix A, Entitlements.

1 PG&E and Citizens Energy ~~Company (“Citizens”)~~²Corporation executed the
2 DCOA on February 20, 2024 (as amended and restated it on January 29, 2025).
3 Citizens Pacific Transmission LLC (Citizens Pacific) is the wholly owned
4 subsidiary of Citizens Energy Corporation that is expected to enter into the
5 leases with PG&E under the Investment Program.²

6 My name is Peter Smith and I am the Chief Executive Officer of Citizens, a
7 non-profit charitable organization with the mission of helping low-income and
8 disadvantaged families with basic needs, including help with utility bills. My
9 testimony will provide background on Citizens generally and its participation in
10 the proposed Investment Program. As discussed in more detail below, Citizens
11 is contractually committed to dedicate ~~an~~ a significant and escalating amount of
12 its ~~after-tax~~ after-tax profits associated with the Investment Program to provide
13 charitable benefits ~~to disadvantaged communities and low-income~~ families in
14 need in the PG&E service area. ~~These benefits, including those in~~
15 disadvantaged communities. Specifically, Citizens is contractually committed to
16 dedicate these funds to providing direct bill-paying assistance to PG&E
17 residential customers in need. The total amount of the direct bill-paying relief
18 Citizens will provide, which will be ~~provided~~ distributed in a sustained manner
19 over an anticipated 35-year period, ~~are~~ is expected to ~~total more than~~ exceed
20 \$400450 million. ~~Thus~~

21 ~~, the~~ As explained in the testimony of Citizens witness, Dr. Susan P. Tierney,
22 a former state public utilities commissioner, we believe that the large-scale direct
23 bill-paying assistance that Citizens will provide in PG&E’s service territory, if this
24 transaction is approved, will benefit PG&E customers, including (1) families
25 residing in disadvantaged communities and (2) historically marginalized minority

² ~~The DCOA is an agreement between PG&E and Citizens Energy Corporation. Citizens Pacific Transmission LLC is an independent wholly owned subsidiary of Citizens Energy Corporation and is the entity that Citizens Energy Corporation expects to enter into leases with PG&E pursuant to the DCOA. The DCOA permits Citizens Energy Corporation to select a wholly owned subsidiary other than Citizens Pacific Transmission LLC to enter into leases with PG&E.~~

² The DCOA permits Citizens Energy Corporation to select a wholly owned subsidiary other than Citizens Pacific to enter into leases with PG&E. This testimony refers to Citizens Energy Corporation and its subsidiary Citizens Pacific, or other wholly owned subsidiary that Citizens selects to enter into an Entitlements Lease, collectively as “Citizens.”

1 and low-income populations. The Citizens investment, if approved by this
2 Commission and by the Federal Energy Regulatory Commission (FERC), will
3 provide a dedicated and stable source of ~~significant funding to advance the~~
4 ~~State of California's goal of ensuring that~~ funding to assist families in need,
5 including those in disadvantaged communities ~~and low-income families benefit~~
6 ~~from California's clean energy initiatives.~~

7 Thus, we believe that the proposed Investment Plan will advance several
8 important policy goals of this Commission, including: (1) Senate Bill (SB) 350's
9 goal of promoting benefits of California's clean energy transition for
10 disadvantaged communities; (2) the Commission's Environmental and Social
11 Justice (ESJ) Action Plan, which calls for addressing the needs of historically
12 marginalized minority and low-income populations; and (3) Governor Gavin
13 Newsom's Executive Order N-5-24 (issued October 30, 2024), which aims to
14 ameliorate the affordability challenge facing California utility ratepayers.

15 The Investment Program is ~~closely~~ modeled on several prior Citizens
16 investments in transmission projects in California, two of which were submitted
17 to and approved by this Commission.³ I will discuss these prior
18 ~~projects~~ transmission investments by Citizens, and the Commission's decisions
19 approving them. Here at the outset, I will point out that, when the first Citizens
20 transmission investment was presented to the Commission for approval in 2009,
21 the Commission's Division of Ratepayer Advocates (DRA), as it was then

3 The Commission approved two prior Citizens investments in the San Diego Gas & Electric Company (SDG&E) transmission system under Section 851 of the California ~~Pub. Util.~~ Public Utilities Code in 2011 and 2019, respectively: ~~Decision No. 11-05-048 (Sunrise Project) (available at: https://docs.cpuc.ca.gov/PublishedDocs/WORD_PDF/FINAL_DECISION/136241.PDF), and Decision No. 19-03-024 (Sycamore Project), available at: <https://docs.cpuc.ca.gov/PublishedDocs/Published/G000/M280/K049/280049415.PDF>~~ D.11-05-048 (Sunrise Section 851 Decision), 2011 Cal. PUC Lexis 302 (Cal. P.U.C. 2011); D.19-03-024 (Sycamore Section 851 Decision), 2019 Cal. PUC Lexis 154 (Cal. P.U.C. 2019). A third, substantially similar Citizens transmission investment in California involved a ~~non-jurisdictional, publicly-owned~~ non-jurisdictional, publicly-owned utility (Imperial Irrigation District), and thus did not require Commission approval.

known,⁴ supported the proposal, stating that “DRA does not know of any other investor in the electric industry such as Citizens, whose corporate goal is to engage in business ventures that generate revenue for the funding of social and charitable assistance programs for the elderly and the poor.”⁵

The Investment Program will build upon and significantly expand this record of success. ~~We estimate that it will yield~~ bringing more than \$~~400~~450 million in ~~benefits to disadvantaged communities and low income families in the PG&E service territory in Northern and Central California. If approved by the Commission, this will be major step in accomplishing the goal of Senate Bill 350~~⁶~~of promoting access to clean energy programs for disadvantaged communities and low income families.~~ expected direct bill-paying assistance to PG&E customers in need.

~~B.~~ B. Background ~~on~~ of Citizens

Citizens was formed during the ~~oil-price~~oil-price shocks of the late 1970s to provide ~~low-cost~~low-cost home heating oil to the poor and the elderly. Joseph P. Kennedy II, the eldest son of the late Senator Robert F. Kennedy, founded the company with the belief that profits from successful oil industry ventures could be used to write down the cost of fuel to vulnerable families having to choose between heating and eating and other basic needs. Citizens is structured as a ~~non-profit~~non-profit company that owns 100 percent of a ~~for-profit~~for-profit holding company, which in turn wholly owns several ~~for-profit~~for-profit

⁴ Pursuant to Section 309.5 of the ~~Pub. Util.~~Public Utilities Code, enacted as part of Senate Bill ~~(SB)~~ 854 (2018) (SB 854), the Commission’s independent ratepayer advocacy division, formerly named the ~~DRA~~Division of Ratepayer Advocates and later the Office of Ratepayer Advocates, is now known as Public Advocate’s Office of the Public Utilities Commission. Its statutory mandate is to “represent and advocate on behalf of the interests of public utility customers and subscribers within the jurisdiction of the commission” and “to obtain the lowest possible rate for service consistent with reliable and safe service levels.” (Cal. Pub. Util. Code § 309.5(a), as enacted by SB 854, Sec. 39.).

⁵ ~~CPUC Decision No. 11-05-048 (issued May 31, 2011) (Sunrise Project) (available on the CPUC website at: https://docs.cpuc.ca.gov/PublishedDocs/WORD_PDF/FINAL_DECISION/136241.PDF) at 12-13~~ D. 11-05-048 at 12-13 (Sunrise Section 851 Decision), 2011 Cal. PUC Lexis 302, at *18-19 (Cal. P.U.C. 2011).

⁶ ~~SB 350, the Clean Energy and Pollution Reduction Act of 2015, (de León, Chapter 547, 2015).~~

1 subsidiaries. Citizens relies on profits from these businesses to generate
2 revenues for charitable and social programs.

3 Following its success in the oil trading, exploration, and production fields,
4 Citizens went on to become a leading innovator in the electricity, natural gas,
5 and pharmaceutical drug industries, all the while using profits from its business
6 activities to support a wide array of charitable programs in the United States.
7 and abroad. Citizens' commercial activities in its first decade included crude oil
8 trading, oil exploration and production, electric power and natural gas marketing,
9 ~~mail-order~~[mail-order](#) pharmaceuticals, and environmental business consulting.
10 Citizens was granted the first authorization to market electricity ever issued to a
11 ~~non-utility~~[non-utility](#) company in the mid-1980s and brokered the first
12 independently marketed kilowatt hour of electricity in the United States on June
13 27, 1986.

14 Since its founding in 1979, Citizens has ~~launched~~[dedicated over \\$600](#)
15 [million in charitable donations towards its mission of making life's basic needs](#)
16 [more affordable. Citizens' charitable giving is funded through](#) a number of
17 innovative businesses and programs, including:⁷⁶

18 ~~1. 1979-1999:~~

19 1. 1979-1999

- 20 • Citizens Resources⁷⁶: One of the largest independent lifters of crude oil
21 from Angola, Nigeria, and Venezuela, with over \$6 billion in sales and daily
22 trading volumes of over 250,000 barrels a day.
- 23 • Citizens Gas Supply⁷⁶: A leading marketer of natural gas to Local
24 Distribution Companies after successfully challenging monopoly control of the
25 nation's natural gas pipelines, this Citizens company generated \$1.1 billion in
26 sales of natural gas.
- 27 • Citizens Conservation⁷⁶: A leading innovator in the energy conservation
28 field, achieving average energy savings of up to 40 percent through retrofits in
29 thousands of housing units across the U.S.

⁷⁶ The specific details on these activities may be found on Citizens' website at
~~www.citizensenergy.com~~www.citizensenergy.com.

1 • Citizens Medical~~:-~~. The nation's largest marketer of ~~mail-order~~mail-
2 order prescription drugs, facilitating annual sales of over \$3 billion and 40
3 percent savings over conventional delivery for consumers.

4 • Citizens Power & Light Corporation~~:-~~. After securing a landmark
5 decision from FERC⁸⁷ authorizing ~~non-traditional~~non-traditional utilities to
6 engage in power marketing, Citizens commenced its brokering of electric energy
7 at wholesale. It formed Citizens Power & Light to continue that work and closed
8 more than 30 major power sale contracts within a few years, achieving over
9 \$10.5 million in sales and becoming a nationally recognized leader in the field of
10 electric power marketing.

11 ~~2-~~2. **2000-Present:**

12 • Citizens Wind~~:-~~. Citizens Wind was Citizens' wind development
13 division. It developed 235 megawatts (MW) of operational wind projects in the
14 United States and Canada. Additionally, Citizens negotiated a partnership with
15 the first ~~utility-scale~~utility-scale offshore wind project to provide \$15 million of
16 energy assistance to ~~low-income~~low-income households living in coastal
17 communities impacted by the project.

18 • Citizens Solar~~:-~~. Citizens has developed, constructed, owns, and
19 operates a \$~~405~~415 million portfolio of solar generating assets with a capacity of
20 190 MWs. The ~~44~~42 Citizens Solar projects are ~~ground-mounted,~~
21 ~~utility-scale~~ground-mounted, utility-scale, distributed solar arrays in six states
22 (Massachusetts, New York, California, North Carolina, Georgia, and New
23 Jersey) and include both the largest ~~low-income~~low-income community solar
24 project in the United States in the Imperial Valley of California, and ~~seven~~eight
25 other projects specifically developed as ~~low-income~~low-income community solar
26 projects in the Northeast. Like its other ventures, Citizens Solar generates
27 profits to help fund the parent company's charitable mission.

28 • Citizens Storage and Microgrids~~:-~~. Citizens has developed, owns, and
29 operates a \$~~20~~30 million portfolio of battery energy storage systems ("BESS")
30 and microgrids, and is actively developing additional projects to increase the
31 energy resiliency of critical infrastructure. Currently, Citizens has ~~two~~three

⁸⁷ Citizens Energy Corp., 35 FERC ¶ 61,198 (1986).

1 BESS projects and one microgrid project in operation, totaling almost ~~30~~45
2 megawatt hours of energy capacity, and several additional projects in
3 construction.

4 • Citizens Energy Oil Heat Program~~:-~~. Created in response to the oil
5 crisis of the late 1970s, the Oil Heat Program has delivered millions of gallons of
6 discounted home heating oil to poor and elderly households in the Northeast.
7 From 2006 to 2016, in partnership with CITGO Petroleum, the Oil Heat Program
8 distributed over \$500 million of assistance to more than one million households.

9 It is important to emphasize that all of these Citizens business ventures
10 have been undertaken with one overarching goal in mind, and that is to provide
11 charitable assistance to ~~low-income~~low-income families and disadvantaged
12 communities. ~~To date, Citizens has funneled over \$600 million dollars in~~
13 ~~benefits to support charitable programs as innovative as the businesses that~~
14 ~~financed them, including social programs in the geographic regions where~~
15 ~~Citizens runs business operations.~~ to help make their basic energy needs more
16 affordable.

17 **C. Citizens' Operations in the Electricity Industry**

18 Citizens began its operations in the electricity industry with a program
19 launched in 1985 to buy power from utilities with surplus generating capacity,
20 resell the excess power to other utilities, and then use the profits to help
21 ~~low-income~~low-income families pay their electricity bills. Since then, Citizens
22 has become involved in electric transmission and energy generation projects.
23 To my knowledge, Citizens' business model is unique in the energy industry.

24 In California, the Citizens business model has enabled Citizens to invest in
25 needed upgrades to the ~~high-voltage~~high-voltage electric grid necessary to
26 achieve California's green energy transition, while investing its ~~after-tax~~after-tax
27 profits from these investments in direct, sustained programs of assistance to
28 ~~low-income~~low-income families and disadvantaged communities. As I will
29 describe below, the Commission has found that these investments by Citizens,
30 and the benefits they bring to ~~low-income~~low-income families and disadvantaged
31 communities, are helping to accomplish an important policy goal of California's
32 landmark Clean Energy and Pollution Reduction Act of 2015, known as SB 350,

1 in bringing the benefits of the State's green energy economy to ~~low-income~~low-
2 income families and disadvantaged communities.

3 Citizens continues to use its ingenuity to find and resolve, on a commercial
4 basis, impediments and bottlenecks in the electric power industry and to use the
5 profits it earns to further extend its assistance to disadvantaged energy
6 consumers in the United States. In late 2004, Citizens began to turn its attention
7 to the problem of transmission constraints in the newly disaggregated electric
8 industry, which impede the free flow of renewable and lower cost electricity to
9 consumers, much the way it did when it first investigated the once closed,
10 vertically integrated electric utility power marketing structure. In so doing,
11 Citizens found that there are significant opportunities for independent developers
12 in transmission projects to resolve transmission bottlenecks, promote the
13 development of renewable electric resources, and improve the performance of
14 electricity markets.

15 Citizens seeks to tackle transmission congestion through innovative
16 business and market relationships, while facilitating the delivery of renewable
17 energy (including mitigation of the cost of relatively expensive renewable
18 generation) to economically vulnerable customers, such as the poor and the
19 elderly. Citizens is accomplishing that objective through its investments in
20 transmission projects in California. These include the SDG&E Sunrise
21 Powerlink Project (Sunrise Project) and Sycamore to Penasquitos Transmission
22 Project (Sycamore Project), and the Imperial Irrigation District (IID) ~~S-Line~~S-Line
23 Transmission Line Upgrade Project (~~S-Line~~S-Line Project).⁹ As of December
24 31, ~~2023~~2024, Citizens has provided a total of ~~\$19.2~~20.4 million in direct
25 assistance to disadvantaged communities and ~~low-income~~low-income families
26 through its investments in both the Sunrise and the Sycamore Projects.

27 Citizens' efforts thus far have funded innovative charitable programs
28 addressing the impact of climate change on disadvantaged communities, with
29 the ~~after-tax~~after-tax profits from the Sunrise Project focusing on rooftop and
30 community solar programs, and the ~~after-tax~~after-tax profits from the Sycamore
31 Project focusing on the electrification of the transportation sector. Citizens'

⁹ ~~The S-Line Project is currently under construction and is expected to become operational in the second quarter of 2024.~~

1 involvement in the Sunrise, Sycamore, and ~~S-Line~~S-Line Projects is expected to
2 generate approximately \$77 million in ~~low-income~~low-income support over the
3 course of those leases. These are direct and quantifiable benefits that go above
4 and beyond the benefits generated by the transmission system upgrades
5 themselves.

6 ~~D.~~D. Citizens Sunrise Transmission LLC

7 Citizens' involvement in the Sunrise Project began in 2005 and culminated
8 in Citizens financing a \$86 million investment in the Sunrise Project. Through its
9 wholly owned subsidiary, Citizens Sunrise Transmission LLC (Citizens Sunrise),
10 Citizens financed 50 percent of the cost of the 500 kilovolts segment of the
11 Sunrise Project in Imperial County (~~the "Border-East~~Border-East Line") and
12 became a Participating Transmission Owner (PTO) within the California
13 Independent System Operator (CAISO). Citizens Sunrise turned its interest in
14 the Sunrise Project over to the CAISO's operational control and recovers its
15 costs through a ~~FERC-approved~~FERC-approved tariff. The Citizens Sunrise
16 arrangements were approved by this Commission in Decision No. 11-05-048,
17 and by FERC.⁴⁰⁸

18 Thanks to Citizens' participation, the Sunrise Project has achieved
19 significantly greater public benefits. Citizens contractually committed to spend
20 50% percent of its ~~after-tax~~after-tax profits from the Sunrise Project on programs
21 assisting ~~low-income~~low-income families in Imperial County, where the
22 ~~Border-East~~Border-East Line is located. Since the Sunrise Project became
23 operational in June of 2012, Citizens Sunrise's leasehold interest in the Sunrise
24 Project annually generates approximately \$1.5 million of assistance to
25 ~~low-income~~low-income residents of Imperial County. For the first five years of
26 the Sunrise Project, Citizens funded the installation of 581 rooftop solar systems
27 on ~~low-income~~low-income homes, at no cost to the homeowners, resulting in
28 more than \$7 million in ratepayer savings over the life of the systems, with an
29 installed capacity of more than 2.1 MWs. The program was highly respected
30 and appreciated by the community, local elected officials, and IID, which had
31 previously been unable to experience any material level of residential rooftop

⁴⁰⁸ Citizens Sunrise Transmission, LLC, 138 FERC ¶ 61,129 (2012).

1 solar in Imperial County. In 2019, in an effort to extend the benefits of
2 ~~low-cost~~low-cost solar energy to all 12,000 of IID's ~~low-income~~low-income
3 ratepayers, Citizens replaced the rooftop solar program with a 39 MWs
4 ~~low-income~~low-income community solar project, developed in partnership with
5 IID, which provides over \$4.5 million per year of electricity savings for the 23-
6 year life of the project.

7 ~~E.~~E. ~~Citizens Sycamore-Penasquitos~~Sycamore-Penasquitos
8 **Transmission LLC**

9 Citizens' involvement with the Sycamore Project began in 2013, when
10 Citizens signed a Letter of Intent with SDG&E to prepare a joint application to
11 the CAISO for consideration in the CAISO's competitive solicitation process for
12 the Sycamore Project. Citizens and SDG&E worked together and produced an
13 application that the CAISO found superior to the applications submitted by three
14 other parties. The CAISO's comparative analysis of the proposals submitted by
15 the four parties found SDG&E's and Citizens' bid to be superior and selected
16 SDG&E in conjunction with Citizens to develop the Sycamore Project.

17 Through its wholly owned subsidiary, Citizens
18 ~~Sycamore-Penasquitos~~Sycamore-Penasquitos Transmission LLC ("Citizens
19 Sycamore-"), Citizens financed \$27 million of the Sycamore Project in exchange
20 for a 30-year lease in a portion of the transfer capability associated with the
21 facilities it financed. SDG&E maintains ownership of the Sycamore Project and
22 Citizens' leased transfer capability will revert back to SDG&E upon the
23 termination of the 30-year lease term. The CPUC examined and approved
24 Citizens' involvement in the Sycamore Project in ~~Decision (D.) 19-03-024~~19-03-
25 024. Citizens Sycamore is a CAISO PTO, has turned operational control over its
26 interest in the Sycamore Project over to the CAISO, and has a
27 ~~FERC-approved~~FERC-approved transmission service tariff pursuant to which it
28 recovers its costs through CAISO's ~~high-voltage~~high-voltage transmission
29 access charge.

30 As in the Sunrise Project, Citizens is contractually committed to spend 50
31 percent of its ~~after-tax~~after-tax profits from its participation in the Sycamore
32 Project on programs assisting ~~low-income~~low-income ratepayers located in
33 SDG&E's service territory. Citizens' involvement generates approximately

1 \$450,000 a year in ratepayer assistance supporting the electrification of the
2 transportation sector. To date, Citizens has provided \$~~1.92.5~~ million of funding
3 towards the purchase of electric vehicles (EV) and associated charging stations
4 for multiple local ~~non-profit~~non-profit organizations. Citizens has purchased two
5 EV transit vans for a local ~~non-profit~~non-profit. Outdoor Outreach, that works to
6 reach the youth from San Diego's most vulnerable communities and eliminate
7 the barriers to accessing outdoor spaces in Southern California.

8 In 2022, Citizens allocated its funding to the purchase of several EVs and
9 charging stations for two ~~non-profit~~non-profit Native American Health Centers
10 dedicated to providing care to the Native American tribes in San Diego County.
11 Citizens' involvement allowed the purchase of several EVs to transport patients
12 and supplies, including EVs capable of transporting patients in wheelchairs.

13 ~~Most recently~~

14 In 2023, Citizens provided a fleet of six EV delivery vans to the San Diego
15 Meals on Wheels to provide critical food deliveries to vulnerable seniors.
16 Access to these EVs will help offset transportation costs for these organizations,
17 while giving disadvantaged communities access to a less polluting form of
18 transportation. Also in 2024, Citizens funded eight new EVs to Neighborhood
19 House Association, one of the largest multi-purpose human services
20 organizations in San Diego County serving vulnerable populations through a
21 range of programs such as equitable food security, mental health treatment, and
22 Head Start for children in low-income families. Most recently, Citizens
23 purchased four electric vans to support San Diego Canyonlands' equity-oriented
24 environmental work supporting underserved communities in San Diego County.

25 ~~F.F.~~ Citizens ~~S-Line~~S-Line Transmission LLC

26 ~~For its third project (currently under construction),~~On July 1, 2024, Citizens,
27 through its wholly owned subsidiary Citizens ~~S-Line~~S-Line Transmission LLC
28 (Citizens ~~S-Line~~), ~~is financing up to~~S-Line, financed \$40 million of ~~the~~ capital
29 costs to upgrade IID's ~~S-Line~~S-Line Transmission Line, in exchange for a lease
30 in the incremental transfer capability on the line created by the ~~S-Line~~S-Line

Project.⁹ Consistent with Citizens' mission and its transmission business model, Citizens has contractually agreed to dedicate 50% ~~percent~~ of its ~~after-tax~~~~after-tax~~ profits derived from its involvement with the ~~S-Line~~~~S-Line~~ Project to assist IID's ~~low-income~~~~low-income~~ ratepayers. Citizens anticipates this commitment will result in approximately \$600,000 of assistance per year to ~~low-income~~~~low-income~~ communities in Imperial County over the 40-year term of the lease.

~~The S-Line project is currently under construction and Citizens expects to close its financing for this project in the second quarter of 2024.~~¹⁴

As with the Sunrise and Sycamore Projects, Citizens S-Line has become a CAISO PTO, is fully regulated by FERC, and has a FERC-approved transmission service tariff pursuant to which it recovers its costs through CAISO's high-voltage transmission access charge.

~~G.~~G. Citizens' Involvement With and Financing of the Proposed Investment Program

On February 20, 2024, Citizens and PG&E entered into the DCOA, which establishes the terms for Citizens' involvement in the Investment Program. The DCOA was amended and restated on January 29, 2025, primarily to specify Citizens' commitment to direct bill-paying assistance. Under the DCOA, PG&E may present Citizens with up to five separate options to enter into Entitlements Leases to an identified group of PG&E ~~high-voltage~~~~high-voltage~~ transmission projects that meet specified eligibility requirements, for a total investment of up to \$1 billion. If the Parties close on a given option, the Parties will enter into a 30-year Entitlements Lease for the applicable group of projects. A Form of Entitlements Lease is included as Exhibit A to the DCOA (Entitlements Lease). The terms of the Investment Program are discussed in more detail in the

⁹ Since IID is a publicly owned utility not under the jurisdiction of this Commission, IID was not required to seek Commission approval of Citizens' involvement in the S-Line Project under Section 851 of the Pub. Util. Code. However, Citizens did receive FERC approval for its investment in the S-Line Project. *Citizens S-Line Transmission, LLC*, 178 FERC ¶ 61,067 (2022).

~~¹⁴ Since IID is a publicly owned utility not under the jurisdiction of this Commission, IID was not required to seek Commission approval of the Citizens involvement in the S-Line Project under Section 851 of the Pub. Util. Code. However, Citizens did receive FERC approval for its investment in the S-Line Project. *Citizens S-Line Transmission, LLC*, 178 FERC ¶ 61,067 (2022).~~

1 amended direct testimony of PG&E witness Michael Medeiros (Amended
2 Chapter 2).

3 Citizens has created a separate ~~for-profit~~for-profit subsidiary, Citizens
4 Pacific ~~Transmission-LLC~~, for the purpose of holding the leasehold interests
5 acquired by Citizens through its participation in the Investment Program.
6 Citizens Pacific ~~Transmission-LLC~~ is a Delaware ~~for-profit~~for-profit corporation
7 formed for the sole purpose of financing and managing Entitlements to the
8 applicable PG&E transmission projects pursuant to the Investment Program.
9 Citizens Pacific ~~Transmission-LLC~~ is a wholly owned subsidiary of Citizens
10 Enterprises Corporation, which itself is wholly owned by Citizens Energy
11 Corporation.

12 Citizens will finance the total prepaid rent payment due for each tranche of
13 projects in which it will acquire a leasehold interest to Entitlements by issuing
14 debt with a term of 30 years. Each tranche of investment will be financed
15 separately, will be subject to its own 30-~~y~~ear Entitlements Lease, and will be
16 associated with a specific, identified set of PG&E ~~high-voltage~~high-voltage
17 transmission projects. Annual debt service payments on the debt issued for a
18 particular investment tranche will be on a levelized basis over the lease period
19 associated with that tranche. The capital component of Citizens' rates will be
20 capped and ~~locked-in~~locked-in for the full 30-~~y~~ear term of each Entitlements
21 Lease, ~~providing rate stability~~.

22 The fixed and levelized rate structure employed by Citizens to recover its
23 capital costs, which was approved by this Commission and by FERC for
24 Citizens' prior transmission investments in California, and which we propose
25 again here for this proposed Investment Program, is both necessary and
26 beneficial from a public interest perspective, for three reasons.

27 First, as discussed in more detail in the direct testimony of Citizens ~~witness'~~
28 expert witnesses Ronald Kennedy, and Susan Tierney, the fixed and levelized
29 cost recovery promotes rate stability for customers, which both this Commission
30 and FERC, in the prior Citizens transmission investments in California, have
31 found to be a benefit to ratepayers.

32 ~~Citizens' involvement in the Investment Program will be structured similarly~~
33 ~~to its involvement in the Sunrise, Sycamore, and S-Line Projects, with certain~~

~~additional benefits that will allow Citizens to expand its support for disadvantaged communities and low income families. First, the Investment Program is structured as a series of up to five options to enter into Entitlements Leases, through which Citizens will have the opportunity to invest up to \$1 billion in eligible PG&E transmission projects. This will result in Citizens investing in a portfolio of PG&E projects, rather than a discrete portion of a single transmission line as in the prior Citizens transmission investments in the SDG&E and IID systems described above. Consistent with Citizens' leases in the Sunrise, Sycamore, and S-Line Projects, Citizens will not own, operate, or maintain any of the relevant transmission projects. Title to all projects in the Investment Program will remain with PG&E, as will the responsibility for maintaining the assets. Citizens will turn its leasehold interests in the Entitlements over to the CAISO's operational control, as it has done for all of its transmission investments in California.~~

Second, the fixed and levelized rate structure is essential to Citizens' ability to finance its participation in the Investment Program. Our ability to recover our capital costs through the fixed and levelized rate structure will allow our FERC-regulated utility subsidiary, Citizens Pacific, to match its debt payment obligations with its incoming revenue stream from the CAISO. In this regard, the fixed and levelized rate structure proposed here is similar to the rate structures Citizens used in the Sunrise and Sycamore Projects (both of which were approved by this Commission and FERC), and in the IID S-Line Project.

Third, from the perspective of our core charitable mission of helping disadvantaged communities and low-income families, the fixed and levelized rate structure will provide a steady, reliable, and sustainable stream of revenue to fund large-scale bill-paying assistance for PG&E customers in need. This benefit is further discussed in the amended testimony of former U.S. Representative Joseph P. Kennedy III, the President of Citizens Energy (Amended Chapter 7). We estimate that the total amount of this charitable bill-paying assistance for PG&E customers will exceed \$450 million over the full term of the proposed Investment Program (assuming a full \$1.0 billion total investment).

1 While Citizens' involvement in the Investment Program will be structured
2 similarly to its involvement in the Sunrise, Sycamore, and S-Line Projects, in this
3 case the parties have agreed to certain enhancements that will further benefit
4 customers.

5 ~~Second,~~ Citizens is committing to dedicate an escalating amount of its
6 ~~after-tax~~after-tax profits from the Investment Program to provide direct bill-
7 paying assistance to ~~disadvantaged communities and low-income families in the~~
8 ~~PG&E service territory. In~~PG&E customers in need. In our prior transmission
9 projects (Sunrise, Sycamore and S-Line), Citizens has committed to dedicating
10 50 percent of its net ~~after-tax~~after-tax profits to support disadvantaged
11 communities and ~~low-income~~low-income families in the project area. Here,
12 Citizens is committing to increasing that level of support with each \$200 million
13 invested under the Investment Program. Citizens will dedicate 50 percent of its
14 net ~~after-tax~~after-tax profits associated with the first \$200 million invested to
15 ~~energy-related-charitable~~direct bill-paying assistance programs ~~supporting~~
16 ~~disadvantaged communities and low-income families in the PG&E service~~
17 ~~area~~for PG&E customers in need. This commitment will increase to 60 percent
18 of net ~~after-tax~~after-tax profits associated with the second \$200 million invested,
19 70 percent of net ~~after-tax~~after-tax profits associated with the third \$200 million
20 invested, 80 percent of net ~~after-tax~~after-tax profits associated with the fourth
21 \$200 million invested, and 90 percent of net ~~after-tax~~after-tax profits associated
22 with the fifth \$200 million invested. Citizens estimates this commitment will yield
23 more than \$~~400~~450 million in direct bill-paying assistance to ~~disadvantaged~~
24 ~~communities and low-income~~ families in need in the PG&E service territory over
25 the course of the Investment Program, assuming a total investment of \$~~4~~1.0
26 billion. The significantly increased charitable giving commitment here is made
27 possible by the Investment Program's size and the efficiencies generated by its
28 ~~multi-project, multi-lease~~multi-project, multi-lease structure.

29 After receiving stakeholder feedback that stressed the importance of
30 ensuring affordable access to electricity for PG&E's customers, and taking into
31 consideration Governor Newsom's October 2024 Executive Order on customer
32 affordability, Citizens decided to commit its charitable giving associated with the

1 Investment Program exclusively to direct bill relief programs.¹⁰ To be clear,
2 Citizens has now contractually committed to direct all of its charitable
3 contributions under the Investment Program to providing direct bill-paying
4 assistance to PG&E customers in need. This commitment is reflected in Section
5 5.3.1 of the DCOA.

6 Citizens is aware of two existing customer bill-paying assistance programs
7 currently available to PG&E customers: The Relief for Energy Assistance
8 through Community Help program (REACH) and the Low-Income Home Energy
9 Assistance Program (LIHEAP). Citizens expects that it will work within one or
10 more of these existing ratepayer assistance programs, or perhaps other bill-
11 paying assistance programs that may exist or which may be developed in the
12 future. Citizens' overarching goal will be to direct its charitable dollars to bill-
13 paying assistance in the most effective, efficient, and user-friendly manner for
14 customers in need.

15 ~~Third~~ Finally, the structure of the Investment Program as a series of leases
16 by a single Citizens subsidiary, over ~~a 5-year~~ an approximately five-year period,
17 will minimize administrative costs. Moreover, Citizens has agreed to not seek
18 recovery in rates for its upfront administrative costs to develop the Investment
19 Program, or its ongoing administrative costs to manage its ~~CAISO~~ PTO status
20 and leasehold interest in the Entitlements (e.g., costs for making regular
21 regulatory filings). These beneficial aspects of the PG&E transaction, which are
22 unique compared with Citizens' prior transmission projects in California and
23 which provide additional protections for ratepayers, are made possible by the
24 size and structure of the Investment Program. In this instance, Citizens will
25 forego recovery ~~of any~~ from customers of its incremental costs ~~from ratepayers~~,
26 while still carrying out its charitable mission.

27 H. FERC and CAISO Oversight Over Citizens Pacific

¹⁰ For instance, the Center for Affordable Technology (CforAT) emphasized the vital importance of affordable electricity for disabled Californians, many of whom are low or moderate income. Further, The Utility Reform Network (TURN) highlighted the fact that many customers who have their electricity service cut-off due to arrearage ultimately never have it turned back on. Based on discussions with CforAT, TURN, and the California Public Advocates Office, Citizens believes that direct bill-paying assistance is the most effective way to assist such customers.

1 I want to emphasize that Citizens Pacific, the wholly owned subsidiary we
2 have formed that will enter into the proposed series of entitlements leases with
3 PG&E, will be a regulated public utility. This is true for every one of our
4 transmission investments in California – the Citizens-Sunrise investment, the
5 Citizens-Sycamore investment, and the Citizens S-Line investment. In each
6 instance, the Citizens subsidiary holding the leasehold interest (1) must be
7 approved by CAISO as a PTO under the CAISO Tariff, and (2) must submit to
8 comprehensive cost-of-service regulation by FERC as a “public utility” under the
9 Federal Power Act (FPA).

10 In this case, Citizens Pacific will make a series of FERC filings to obtain the
11 approvals necessary to enter into and finance each Entitlements Lease. ~~Within~~
12 ~~30 days of the filing of this Application~~On April 11, 2024, Citizens ~~will~~
13 ~~submit~~Pacific submitted to FERC a petition for declaratory order seeking FERC
14 approval of the incentive rate treatments and methodologies necessary for
15 Citizens to recover the costs associated with the Entitlements Leases.¹¹
16 Additionally, prior to the effective date of each Entitlements Lease, Citizens
17 Pacific will make two filings with FERC pursuant to ~~Federal Power Act (FPA)~~ §§
18 204 and 205. These Citizens FERC filings will be in addition to the joint
19 PG&E/Citizens FPA § 203 filing discussed in the direct testimony of PG&E
20 witness Michael Medeiros (Amended Chapter 2). The FPA § 204 filing will
21 request authorization for Citizens to issue the securities necessary to finance its
22 payment of prepaid rent for the applicable Entitlements Lease. Citizens’ FPA
23 § 205 filing will seek approval of the justness and reasonableness of Citizens’
24 transmission revenue requirement, CAISO PTO tariff (or revisions thereto), and
25 of the Entitlements Lease itself.

26 In connection with these FERC filings, Citizens Pacific on July 15, 2024
27 submitted an application to CAISO to become a PTO. The CAISO Board of
28 Governors voted unanimously to approve the application at its public meeting on
29 November 12, 2024.

¹¹ Citizens Pac. Transmission LLC, Docket No. EL 24-101-000, Petition for Declaratory Order of Citizens Pacific Transmission LLC to Authorize Rate Treatments for the Investment program with Pacific Gas and Electric Company (FERC filed Apr. 11, 2024).

1 At the Board of Governors meeting, both Board members and CAISO staff
2 spoke approvingly about the Citizens Pacific application, emphasizing three
3 important features. First, both Board Chair Jan Schori and CAISO staff
4 commented favorably about Citizens’ successful “track record” with its prior
5 transmission investments in California.¹² Second, Chair Schori said she
6 approved of the “portfolio” approach, whereby Citizens Pacific will invest in a
7 series of PG&E reliability-driven projects, as distinct from an individual
8 standalone project, which she described as “a more efficient approach.”¹³ Third,
9 Chair Schori and other Board members expressed strong support for the public
10 benefits Citizens will provide by using its after-tax profits to fund charitable
11 programs in PG&E’s service area, calling them a “win-win”¹⁴ and remarking that
12 they are “not normally something you hear come up in a transmission project
13 approval” and are “very encouraging.”¹⁵ Speaking to me directly at the Board
14 meeting, Chair Schori said: “You’re to be commended. That is terrific.”¹⁶

15 **H-I. Addressing Affordability and Advancing the Important Policy**
16 **Goal of SB 350 to Help Improve Life for the Residents of ~~Low-Income~~Low-**
17 **Income and Disadvantaged Communities**

18 Governor Newsom, in his Executive Order N-5-24 (issued October 30,
19 2024), has encouraged the Commission to strengthen its efforts to address the
20 affordability challenges faced by utility customers in California. As Governor

¹² CAISO November 12, 2024 Board of Governors General Session, dialogue between
Chair Schori and CAISO staff presenter, starting at 31:30, video available at:
<https://www.youtube.com/watch?v=ocxwxGyRbIQ>. In their presentation to the CAISO
Board, the CAISO staff stated (starting at 30:56) that the proposed Citizens investments
in the PG&E transmission system in this case “will support development of many of
PG&E’s transmission projects, which support California’s energy policy goals.”

¹³ Id., starting at 32:29 (statement of Chair Schori).

¹⁴ Id. at 37:06.

¹⁵ Id. at 38:56.

¹⁶ Id., starting at 35:20 (dialogue between Chair Schori and Citizens CEO Peter Smith).
After the unanimous vote was taken to approve the Citizens Pacific PTO application,
Chair Schori concluded the discussion by stating (starting at 38:55): “I would be very
interested – probably the rest of the Board as well – as this project moves along the
road, in getting an understanding as to what the community benefits distributions from
Citizens would be. It’s helpful for the Board to understand those kinds of values, which
to be frank are not normally something you hear come up in a transmission project
approval like this. So, that was very encouraging to hear.”

1 Newsom's Executive Order recognized, "it is essential that electric service
2 remains affordable, reliable, and safe for all Californians during our clean energy
3 transition."¹⁷ Under California law, the Commission is tasked with "ensur[ing]
4 that rates are sufficient ... to recover a just and reasonable amount of revenue
5 ... while observing the principle that electricity and gas services are necessities,
6 for which a low affordable rate is desirable."¹⁸ California law also provides that,
7 "recognizing that electricity is a basic necessity, and that all residents of the
8 state should be able to afford essential electricity and gas supplies, the
9 Commission shall ensure that low-income ratepayers are not jeopardized or
10 overburdened by monthly energy expenditures."¹⁹ Accordingly, the
11 Commission has explained that its "mission is to ensure that California investor-
12 owned utility (IOU) customers receive safe, reliable, affordable and clean utility
13 service at just and reasonable rates."²⁰ Concerns about affordability have
14 become particularly pressing since 2021, when "rate increases for all of the
15 three major electric IOUs bundled customers began to outpace inflation for the
16 first time, particularly affecting bundled residential customers."²¹

17 When Governor Newsom issued his major Executive Order last October on
18 the topic of affordability of utility rates in California, we at Citizens sat up and
19 took notice. At that point in time, PG&E's request for approval of the proposed

¹⁷ Cal. Exec. Dep't, Executive Order N-5-24 (Oct. 30, 2024).

¹⁸ Cal. Pub. Util. Code § 739(d)(2).

¹⁹ Id. § 382(b).

²⁰ CPUC, 2021/2022 Annual Affordability Report at 3 (Oct. 2023), <https://docs.cpuc.ca.gov/PublishedDocs/Efile/G000/M521/K479/521479752.PDF>; see R.18-07-006 at 2 (Order Instituting Rulemaking to Develop Methods to Assess the Affordability Impacts of Utility Rate Requests and Commission Proceedings), 2018 Cal. PUC Lexis 332, at *1 (Cal. P.U.C. 2018) ("Water, energy, and telecommunications services should be affordable."); CPUC, *Strategic Directives, Governance Process Policies, and Commission-Staff Linkage Policies* at 4, 7 (Feb. 27, 2020), <https://www.cpuc.ca.gov/-/media/cpuc-website/transparency/commissioner-committees/finance-and-administration/2021/strategic-directives-and-governance-policies.pdf> (explaining that the CPUC's strategic directives include "empower[ing] California through access to safe, clean, and affordable utility services and infrastructure" and "promot[ing] policies and rules that provide customers access to and affordable essential services for energy, communications, water and transportation").

²¹ CPUC, 2024 Senate Bill 695 Report at 11 (July 2024), <https://www.cpuc.ca.gov/-/media/cpuc-website/divisions/office-of-governmental-affairs-division/reports/2024/2024-sb-695-report.pdf>.

1 Citizens-PG&E Investment Program was pending before the Commission, but
2 had not yet been acted upon. In coordination with PG&E, we began to
3 conceptualize a large-scale bill-paying assistance program for PG&E customers,
4 as the best means for distributing the large amount of charitable dollars, which
5 we estimate will be over \$450 million, that the proposed Investment Program, if
6 approved, will generate over the 35-year term of the investment (assuming the
7 full \$1 billion investment). It seemed to us that a large-scale bill-paying
8 assistance initiative of this kind would be a significant and meaningful response
9 to the concerns Governor Newsom expressed in his Executive Order.

10 ~~The~~In addition, the Commission has both a statutory mandate under SB 350
11 and its own policy commitment “to help improve air quality and economic
12 conditions in communities identified as ‘disadvantaged.’”⁴²22 Likewise, the
13 Commission’s ESJ Action Plan recognizes “that some populations in California
14 face higher barriers to access to clean, safe, and affordable utility services” and
15 calls for the Commission to “[c]onsistently integrate equity and access
16 considerations throughout CPUC regulatory activities.”²³

17 At Citizens, we are proud of our record in partnering with the Commission to
18 accomplish these goals. The Investment Program for which PG&E seeks
19 approval in this case will enable Citizens to bring a significantly greater level of
20 assistance to disadvantaged communities.~~We believe in PG&E’s service~~
21 territory by providing direct bill-paying assistance to PG&E customers in need.
22 The Investment Program thus will advance the Commission’s goals under
23 SB 350, the ESJ Action Plan, the Governor’s Executive Order, and other state
24 and Commission policies on affordability. As such, it should be approved by the
25 Commission.

⁴² ²² The Commission’s programs and policy commitment to help disadvantaged communities are described on the Commission’s website at:
<https://www.cpuc.ca.gov/industries-and-topics/electrical-energy/infrastructure/disadvantaged-communities>
~~-https://www.cpuc.ca.gov/industries-and-topics/electrical-energy/infrastructure/disadvantaged-communities~~

²³ Environmental and Social Justice Action Plan, posted on the Commission’s website at:
<https://www.cpuc.ca.gov/news-and-updates/newsroom/environmental-and-social-justice-action-plan>.

1 In its decision approving the Citizens investment in SDG&E's Sycamore
2 Project (D.19-03-024), the Commission expressly recognized that Citizens'
3 commitment to devote 50 percent of its net ~~after-tax~~after-tax profits to fund
4 programs benefiting ~~low-income~~low-income residents of San Diego County
5 would help achieve SB 350's goal of helping disadvantaged communities. In
6 finding that the Citizens investment would "serve[] the public interest," the
7 Commission reasoned as follows:

8
9 Citizens pledges 50 percent of its ~~after-tax~~after-tax profits from the
10 [Sycamore Project] to support transportation electrification for
11 ~~low-income~~low-income families and disadvantaged communities in the San
12 Diego County, the same area where Segment B is located. Citizens
13 estimates that its annual contribution would be approximately \$400,000 per
14 year, for a total of \$12 million over the 30-year term of the lease. Citizens'
15 pledge not only benefits disadvantaged and ~~low-income~~low-income
16 communities in the San Diego County but also supports the state's
17 implementation of SB 350. SB 350 promotes clean energy programs such
18 as transportation electrification to achieve goals for
19 ~~greenhouse-gas~~greenhouse-gas reduction and encourages more access of
20 these programs for ~~low-income~~low-income and disadvantaged communities.
21 By supporting the electrification of transportation for ~~low-income~~low-income
22 and disadvantaged communities, Citizens' pledge supports two of SB 350's
23 key goals. (D.19-03-024, p. 20.)

24
25 In ~~the~~this case-~~at hand~~, the Investment Program will achieve a substantially
26 ~~larger levels of~~higher level of community benefits ~~for low-income ratepayers and~~
27 ~~disadvantaged communities~~ in PG&E's service territory in Northern and Central
28 California.

29 I want to emphasize that our prior investments in transmission projects in
30 California— = the Sunrise, Sycamore, and ~~S-Line~~S-Line Projects— = are
31 expected to yield very substantial benefits for ~~low-income~~low-income
32 communities, in the range of \$77 million over the 30-year or 40-year terms of the
33 subject leases. This will be a remarkable accomplishment.

1 Here, ~~the~~Citizens' proposed ~~series of Citizens~~ investments in PG&E's
2 transmission system will have the same public interest purpose,~~—~~ but will be at a
3 substantially higher investment value of up to \$~~4~~1.0 billion in total. ~~In this case,~~
4 ~~moreover~~Moreover, Citizens has agreed to forego recovery ~~in rates of certain of~~
5 Citizens' own incremental costs in rates in this transaction. The larger scale of
6 this proposed investment, and Citizens' contractual commitment to dedicate an
7 ~~ever-increasing~~ever-increasing portion of its ~~after-tax~~after-tax profits to
8 community benefits, ~~is~~can be expected to yield a total benefit of more than
9 \$~~400~~450 million ~~to low-income ratepayers and disadvantaged communities in~~
10 charitable benefits in PG&E's service territory, over an extended period of
11 approximately 35 years¹³~~and~~ ²⁴ (assuming a total investment by Citizens of \$~~4~~
12 ~~billion. This will be~~ 1.0 billion). All these benefits will be used to provide direct
13 bill-paying assistance to PG&E customers in need. This is an extraordinary ~~level~~
14 ~~of support for historically marginalized low-income and disadvantaged~~
15 ~~communities~~opportunity for the Commission to take meaningful action to
16 address affordability.

17 Just as the Commission found in its decisions approving Citizens'
18 investments in the Sunrise and Sycamore Projects (D.11-05-048 and
19 D.19-~~03-024~~03-024, respectively), the Commission in this case should find that
20 the proposed Investment Program is in the public interest. This series of
21 investments, totaling up to \$~~4~~1.0 billion, will bring very substantial benefits~~to~~
22 ~~disadvantaged communities and low-income families in PG&E's service territory~~
23 ~~in Northern and Central California over an expected 35-year period, including~~
24 over \$450 million in direct bill-paying assistance for PG&E customers in need.

¹³ ~~The estimated 35-year time frame for charitable assistance to disadvantaged communities and low-income families is based on the expected structure of five separate Entitlements Leases by Citizens, expected to be entered into over a five-year period. Each of the five Entitlements Leases will have its own 30-year term. The fifth and final Entitlements Lease is expected to extend to a date that is anticipated to be 35 years after the date on which the first Entitlements Lease begins.~~

²⁴ The estimated 35-year time frame for the charitable assistance Citizens will provide is based on the expected structure of five separate Entitlements Leases by Citizens, expected to be entered into over a five-year period. Each of the five Entitlements Leases will have its own 30-year term. The fifth and final Entitlements Lease is expected to extend to a date that is anticipated to be 35 years after the date on which the first Entitlements Lease begins.

1 The Commission should find that the proposed Investment Program should be
2 approved under Section 851 of the ~~Pub. Util.~~California Public Utilities Code.

3 This concludes my amended direct testimony.
4
5

PACIFIC GAS AND ELECTRIC COMPANY

AMENDED CHAPTER 6

CITIZENS ENERGY – ~~ECONOMIC BENEFITS~~CITIZENS RATE

MODEL

PACIFIC GAS AND ELECTRIC COMPANY

AMENDED CHAPTER 6

CITIZENS ENERGY – CITIZENS RATE MODEL

Table of Contents

<u>A. Introduction and Purpose of Testimony</u>	<u>6-1</u>
<u>B. Citizens’ Revenue Requirement and Rate Recovery</u>	<u>6-3</u>
<u>C. Customer Impacts and Rate Comparisons</u>	<u>6-4</u>
<u>D. Both this Commission and the FERC Have Approved and Validated Citizens’ Fixed and Levelized Rate Methodology</u>	<u>6-8</u>
<u>E. Citizens’ Fixed and Levelized Rate Structure Ensures Rate Stability, Predictable Costs, and Protection Against Market Volatility</u>	<u>6-10</u>
<u>F. Citizens’ Commitment to Direct Bill-Paying Assistance to PG&E Customers in Need</u>	<u>6-12</u>
 <u>Attachment 1- PG&E Representative Rate Model with the Base Case Capital Cost Assumptions</u>	
 <u>Attachment 2 – Citizens Capped Rate</u>	

PACIFIC GAS AND ELECTRIC COMPANY
AMENDED CHAPTER 6
CITIZENS ENERGY – CITIZENS RATE MODEL ~~PACIFIC GAS AND~~
~~ELECTRIC COMPANY~~
~~CHAPTER 6~~
~~CITIZENS ENERGY – ECONOMIC BENEFITS~~ AMENDED CHAPTER 6
CITIZENS ENERGY – CITIZENS RATE MODEL

A. Introduction and Purpose of Testimony

Q 1 Please state your name and business address.

A 1 My name is Ronald E. Kennedy. I am a Vice President in the Transmission Strategy Practice at MCR Performance Solutions (MCR), 155 N. Pfingsten Road, Suite 155, Deerfield, IL 60015.

Q 2 On whose behalf are you testifying?

A 2 I am testifying on behalf of Citizens Energy Corporation (together with its wholly owned subsidiary Citizens Pacific Transmission LLC, “Citizens”).

Q 3 Are you providing any exhibits to accompany your testimony?

A 3 Yes. I am providing the following three exhibits:

- Attachment 1: PG&E Representative Rate Model with the Base Case Capital Cost Assumptions; and
- Attachment 2: Citizens Capped Rate; and
- ~~Attachment 3: PG&E Representative Rate Model, Assuming Return on Equity Increases 2 Percent in Year 5.~~

Q 4 Please summarize your testimony.

A 4 ~~Citizens’ participation in the Pacific Gas and Electric Company (PG&E) Investment Program across all investment tranches will produce three major economic benefits. First, in each investment tranche, Citizens’ financing will provide capital that PG&E would otherwise need to raise itself, freeing up PG&E’s capital for other purposes. In addition, Citizens will fix these capital costs for the 30-year lease term of Citizens’ participation in each investment tranche. By fixing its capital cost recovery, Citizens will provide rate certainty for ratepayers and hedge against the risk of increasing capital costs that would otherwise be reflected in rates under traditional ratemaking~~

1 ~~methodology.~~ In my testimony, I explain the Citizens Rate Model and compare
2 it to PG&E's Representative Rate Model to illustrate the economic impacts
3 and customer benefits of the Investment Program.¹

4 I begin by describing the Citizens Rate Model, which calculates a fixed,
5 levelized capital cost recovery over the 30-year term of each Entitlements
6 Lease. I then evaluate the customer cost impacts and perform a rate
7 comparison between Citizens and PG&E. My analysis calculates the
8 comparable fixed, levelized capital-related Transmission Revenue
9 Requirement (TRR) for both Citizens (Citizens Base Case) and PG&E (PG&E
10 Base Case), factoring in their respective capital structures and costs of debt
11 and equity. Citizens reduces the return on equity component of its rate
12 methodology to ensure it does not charge more than the TRR produced by
13 PG&E's Representative Rate Model – the PG&E Base Case. This means
14 customers will not pay more than the PG&E Base Case as a result of the
15 Investment Program. Customers are shielded from market-fluctuations in
16 cost of equity, as Citizens' rate structure, unlike PG&E's, is fixed for the term
17 of each Entitlements Lease, which provides long-term rate stability.
18 Additionally, Citizens' involvement will not increase the cost of debt reflected
19 in customers' rates. This is because Citizens will finance its investment in the
20 projects using long-term, fixed-rate debt, similar to how PG&E would finance
21 its investments in projects like these. This reality is unaffected by the interest
22 rate environment.

23 Next, I discuss the regulatory validation of Citizens' rate methodology.
24 Both this Commission and the Federal Energy Regulatory Commission
25 (FERC) have examined and approved Citizens' fixed, levelized capital cost
26 recovery methodology in multiple projects, including the Sunrise Powerlink
27 Project ("Sunrise Project"), the Sycamore-Peñasquitos Project ("Sycamore
28 Project), and the S-Line Project.² Regulators consistently recognized

¹ The Investment Program contains up to five separate Entitlements Leases roughly
averaging \$200 million each.

² The S-Line Project is between Citizens and the Imperial Irrigation District, which is not
jurisdictional to this Commission. As a result, the S-Line Project was reviewed by
FERC but was not before this Commission.

1 Citizens' rate approach as providing rate stability, cost predictability, and
2 protection against market volatility.

3 I also highlight the long-term financial stability and protections for
4 customers built into the Investment Program. Citizens' use of a fixed and
5 levelized capital cost recovery mechanism ensures rate stability and
6 predictability over each 30-year Entitlements Lease term. Unlike PG&E's
7 traditional ratemaking model, where costs are front-loaded, Citizens evenly
8 distributes capital costs over the life of each Lease. This ensures customers
9 pay consistent rates regardless of whether the facilities are in their early
10 operational years or nearing the end of their depreciable life.

11 Additionally, Citizens' participation delivers significant community and
12 customer assistance benefits. Assuming full participation in the \$1 billion
13 Investment Program, Citizens expects to generate over \$450 million in
14 charitable contributions dedicated to direct bill-paying assistance for PG&E
15 customers in need. Starting with 50 percent of net after-tax profits from the
16 first \$200 million investment, Citizens escalates contributions with each
17 additional tranche, ultimately committing up to 90 percent of net after-tax
18 profits. Without the Investment Program, these contributions would not exist.

19 In conclusion, Citizens' participation in the Investment Program
20 generates substantial economic, financial, and social benefits. These include
21 over \$450 million in direct bill-paying assistance for PG&E customers in need,
22 long-term rate stability, and protection against market-driven cost increases –
23 and all without charging customers more for these projects than the PG&E
24 Representative Rate. Both this Commission and federal regulators have
25 repeatedly validated Citizens' approach, emphasizing its ability to promote
26 equitable cost distribution, financial stability, and predictable outcomes for
27 customers over the long term.

28 ~~Second, by Citizens implementing a fixed, levelized capital cost~~
29 ~~recovery mechanism in its annual Transmission Revenue Requirement~~
30 ~~(TRR), Citizens' participation ensures that ratepayers will bear the same~~
31 ~~capital costs for the projects regardless of whether they use the facilities in~~
32 ~~the early years of the facilities' life or when the facilities are near the end of~~
33 ~~their depreciable life. This differs from traditional TRR calculations where~~

1 the capital costs are greater in the beginning of an asset's depreciable life
2 and decline over time as the asset depreciates.

3 Third, Citizens will contribute an escalating portion of its net after-tax
4 project profits to charitable programs for disadvantaged communities and
5 low-income families in the PG&E service territory, starting with a
6 commitment to donate 50 percent of its net after-tax profits from the first
7 \$200 million invested under the Program. For this first \$200 million of
8 investment in the Program, this contribution is estimated to be about
9 \$2.0 million annually. Citizens has contractually committed to increase this
10 contribution share by 10 percent for each additional \$200 million investment
11 it makes in the Program. This contribution would not occur without Citizens'
12 participation in the Program. In addition, Citizens' participation will assist
13 this Commission in meeting its obligations under the Clean Energy and
14 Pollution Reduction Act of 2015 (Senate Bill (SB) 350). Under SB 350, the
15 Commission must, among other things, implement programs that promote
16 greater project penetration in disadvantaged communities.¹

17 Q 5—Please describe the analysis that you have performed in reference to these
18 benefits.

19 A 5—I have calculated the comparable fixed, levelized capital-related TRR for the
20 expected \$200 million first tranche of the Investment Program for both
21 Citizens and PG&E using their respective capital structures and costs of
22 debt and equity.²In the lease agreement between PG&E and Citizens,
23 Citizens will commit to include a fixed, levelized capital cost that is no
24 greater than what is calculated in the PG&E Representative Rate Model.
25 To accomplish this, Citizens reduces the equity component of return on rate
26 base of its Federal Energy Regulatory Commission (FERC)-approved rate
27 methodology (Citizens Rate Model) until the output equals the revenue
28 requirement produced by the PG&E Representative Rate Model. I explain

¹—Cal. Pub. Res. Code § 25943(d)(7).

²—I discuss below the assumptions that were used for the purpose of this calculation.

1 ~~the Citizens Rate Model and its inputs in more detail below.³ The total~~
2 ~~capital-related TRRs for PG&E and Citizens are calculated in Attachment 1~~
3 ~~and Attachment 2, respectively. In addition to the TRRs, I also include an~~
4 ~~estimate of Citizens' contribution of half of its net after-tax profits to energy~~
5 ~~programs for disadvantaged communities and low-income families in the net~~
6 ~~benefit that Citizens' \$200 million participation in the Program adds as~~
7 ~~compared to a scenario where PG&E does not lease Entitlements to the~~
8 ~~applicable projects to Citizens.~~

9 ~~Q 6 — Please describe how Citizens' financing of its share of the projects is likely~~
10 ~~to reduce the overall project costs.~~

11 ~~A 6 — The Investment Program is structured as a series of up to five separate~~
12 ~~30-year leases, covering an investment of no more than \$1 billion. For each~~
13 ~~lease, Citizens will lock in its capital costs, including its actual cost of debt in~~
14 ~~its annual TRR for the full 30-year term of Citizens' participation. While it is~~
15 ~~difficult to predict how capital markets and money costs will move over a~~
16 ~~horizon of 30 years, Citizens will provide a hedge to ratepayers through a~~
17 ~~fixed, levelized capital cost amount recovered in the TRR that protects~~
18 ~~ratepayers from market volatility. This cost certainty in a TRR is increasingly~~
19 ~~common in competitive bids submitted to the California Independent System~~
20 ~~Operator Corporation (CAISO)⁴ for projects awarded under FERC's~~
21 ~~Order 1000. This increasingly common aspect of competitive bids is~~
22 ~~indicative of its appeal to the CAISO acting as a steward of ratepayers'~~
23 ~~interests. Absent the fixed, levelized capital cost approach that Citizens will~~
24 ~~implement, ratepayers would be exposed to potential capital cost increases~~
25 ~~through a higher allowed Return on Equity (ROE) or higher debt financing~~
26 ~~costs included in TRR updates.~~

³ — My testimony focuses on capital cost recovery. For this transaction, the only operation and maintenance (O&M) costs and other expenses that Citizens will recover will be the share of O&M costs and other expenses that PG&E allocates to Citizens as "Additional Rent," as explained in Chapter 3.

⁴ — As part of the 2021-2022 Transmission Planning Process, CAISO awarded the Manning 500 kilovolt (kV) Substation Project, and the Collinsville 500 kV Substation Project to bidders who submitted binding annual levelized ARR caps for a period of 40 years.

1 ~~Q 7 Other than Citizens' fixed capital cost revenue requirements and~~
2 ~~contributions in support of disadvantaged communities and low-income~~
3 ~~families, are there additional consumer cost benefits attributable to Citizens'~~
4 ~~participation in the projects and Citizens' ratemaking approach for its~~
5 ~~investment in the projects?~~

6 ~~A 7 Yes. Another important ratepayer benefit gained from Citizens' fixed,~~
7 ~~levelized capital cost approach is that ratepayers will be charged the same~~
8 ~~capital costs in the Citizens' TRR for the entire 30-year length of Citizens'~~
9 ~~participation in each lease. This contrasts with traditional utility ratemaking,~~
10 ~~where the capital costs of a new project are front-loaded. In traditional utility~~
11 ~~ratemaking, the revenue requirements for new projects are greater in the~~
12 ~~early years as the return component of the revenue requirement is~~
13 ~~calculated on a less depreciated net plant balance. Over the years, the~~
14 ~~return component of the revenue requirement decreases as the net plant~~
15 ~~balance decreases. This means that users of the project in the early years~~
16 ~~pay more for the same service as those users that use the project towards~~
17 ~~the end of the project's depreciable life. Citizen's fixed, levelized cost of~~
18 ~~capital approach results in more equitable distribution of ratepayer benefits~~
19 ~~and costs over the life of the projects. After the termination of each lease,~~
20 ~~Citizens' interest in the projects will be turned over to PG&E at no cost to~~
21 ~~ratepayers as the net plant balance of Citizens' portion of any projects will~~
22 ~~be zero. The FERC has recognized the ratepayer benefit of a 30-year fixed,~~
23 ~~levelized recovery of capital requirements because it matches the benefits of~~
24 ~~a project over time with the cost recovery.⁵~~

25 ~~Q 8 Please describe the financial support, in addition to project financing, that~~
26 ~~Citizens will contribute to disadvantaged communities and low-income~~
27 ~~families as a result of its participation in the program.~~

28 ~~A 8 One of Citizens' unique features is its dedication to supporting charitable~~
29 ~~activities from the profits its business ventures earn. For the first~~
30 ~~\$200 million under the Investment Program, Citizens will contribute~~

⁵ ~~See Citizens Energy Corp., 162 FERC ¶ 61,161 at P 22 (2018); Citizens Energy Corp.,~~
~~129 FERC ¶ 61,242 at P 23 (2009); Morongo Transmission, LLC, 148 FERC ¶ 61,139~~
~~at P 20 (2014).~~

1 ~~50 percent of its net after-tax profits to support disadvantaged communities~~
2 ~~and low-income families in the PG&E service territory.~~

3 ~~The other half of Citizens' net after-tax profits will be used to support~~
4 ~~Citizens' continued charitable mission and pursuit of additional opportunities.~~

5 ~~Furthermore, through its involvement in the Program, Citizens plans to~~
6 ~~invest up to \$1 billion in up to five separate leases. Citizens has~~
7 ~~contractually committed to increase its contribution of net after-tax profits to~~
8 ~~support disadvantaged communities and low-income families in the PG&E~~
9 ~~service territory by 10 percent for each additional \$200 million in investment.~~
10 ~~In other words, Citizens will contribute: 50 percent of its net after-tax profits~~
11 ~~for the first \$200 million invested, 60 percent of the net after-tax profits from~~
12 ~~the second \$200 million invested, 70 percent of the net after-tax profits from~~
13 ~~the third \$200 million invested, 80 percent of the net after-tax profits from the~~
14 ~~fourth \$200 million invested, and 90 percent of the net after-tax profits from~~
15 ~~the fifth \$200 million invested.~~

16 ~~This commitment by Citizens directly addresses the intention of SB 350,~~
17 ~~which places specific emphasis on assisting those in disadvantaged~~
18 ~~communities. Under SB 350, the Commission must, among other things,~~
19 ~~implement programs that "[p]romote greater project penetration in~~
20 ~~disadvantaged communities."~~⁶

21 ~~Citizens' existing agreements with San Diego Gas & Electric Company~~
22 ~~in the Border East Line of the Sunrise Powerlink Project (Sunrise) and the~~
23 ~~Sycamore-Penasquitos Transmission Project are producing \$1.5 million~~
24 ~~and \$650,000, respectively, in annual contributions to disadvantaged~~
25 ~~communities and low-income families where these projects are located.~~
26 ~~Here, Citizens estimates that its anticipated \$200 million investment in the~~
27 ~~first tranche of projects pursuant to the Investment Program will generate~~
28 ~~approximately \$2.0 million in donations annually for the 30-year lifetime of its~~
29 ~~Entitlements Lease to those projects, which Citizens will contribute to~~
30 ~~disadvantaged communities and low-income families within the PG&E~~
31 ~~service area. This is a ratepayer benefit that would not occur without~~

⁶ ~~Cal. Pub. Res. Code § 25943(d)(7).~~

~~Citizens' participation in the Investment Program. As a result, Citizens' participation furthers the goals and requirement of SB 350.~~

~~Q 9 — Will Citizens' involvement likely result in added ratepayer costs over the life of the projects?~~

~~A 9 — No. Table 6-1 below, shows the results of the PG&E Representative Rate Model included in Attachment 1 using the capital costs assumed for PG&E. Table 6-1 also shows the comparable results for Citizens using Citizens' capital costs included in Attachment 2. I discuss below the assumptions that were used for the purpose of these calculations. As discussed below, the unadjusted, fixed, levelized Citizens' capital related TRR based on these assumptions is \$22,735,447. However, the lease terms between PG&E and Citizens stipulate that Citizens' capital cost TRR will be no greater than what is calculated in the PG&E Representative Rate Model. Accordingly, the Citizens cost of equity is adjusted downward from 10.45 percent to 9.02 percent to achieve a TRR equal to the TRR calculated in the PG&E Representative Rate Model. Additionally, Citizens is only recovering the transmission O&M and other expense costs billed to Citizens by PG&E; Citizens will not recover from customers its own incremental costs. As such, the overall TRRs are equal. Therefore, Citizens' involvement, taking into account Citizens' contribution of half of its net after-tax profits to energy programs for disadvantaged communities and low-income families, creates a tremendous benefit to ratepayers that would not exist absent Citizens' involvement (and would only increase in subsequent leases under the Program).~~

TABLE 6-1
~~PG&E AND CITIZENS - BASE CASE~~
~~REVENUE REQUIREMENT SUMMARY~~

(Deleted)

(Deleted)

Table - 1 PG&E and Citizens - Base Case Revenue Requirement Summary					
	PG&E NPV 55 Years Annual Levelized 30 years	Citizens NPV 55 Years Annual Levelized 30 years	Variance Higher / (Lower)		
					%
Capital Related Costs					
Cost of Entitlement	\$ 20,929,939	\$ 20,929,939	\$ 0		
Subtotal Capital Related Revenue Requirement	\$ 20,929,939	\$ 20,929,939	\$ 0		0.00%
Expense Related Costs					
O&M, A&G, & General & Common Plant	\$ -	\$ -	\$ -		
Incremental A&G Costs	\$ -	\$ -	\$ -		
Debt Service Costs (PG&E)	\$ -	\$ -	\$ -		
Subtotal Expense Related Costs	\$ -	\$ -	\$ -		0.00%
Total Revenue Requirement on All Costs	\$ 20,929,939	\$ 20,929,939	\$ 0		0.00%
Citizens Contribution to Low-Income Energy Programs	\$ -	\$ 2,000,000	\$ 2,000,000		

B. Citizens' Revenue Requirement and Rate Recovery

~~While the cost of capital for Citizens' participation in the projects will remain fixed for the 30 year term of its participation in each lease, the cost of capital included in the PG&E TRR may change as the PG&E company risk and capital market conditions change. In Table 6-2 below, the same comparison of Citizens' and PG&E's cost of capital and total capital-related TRR are calculated again, this time assuming that PG&E's ROE increased by 2 percent in year five of the Entitlements Lease to reflect PG&E's ROE being reset for a higher interest rate environment. Under this scenario, Citizen's cost of capital is \$992,450 per year less than that of PG&E's, and Citizens' total capital-related TRR is 4.51 percent less than PG&E's total capital-related TRR.~~

TABLE 6-2
PG&E AND CITIZENS — ASSUMED 2 PERCENT INCREASE IN RETURN ON EQUITY IN YEAR 5
REVENUE REQUIREMENT SUMMARY

(Deleted)

	PG&E NPV 55 Years Annual Levelized 30 years	Citizens NPV 55 Years Annual Levelized 30 years	Variance Higher / (Lower)	%
Capital Related Costs				
Cost of Entitlement	\$ 21,918,463	\$ 20,929,939	\$ (988,524)	
Subtotal Capital Related Revenue Requirement	\$ 21,918,463	\$ 20,929,939	\$ (988,524)	-4.51%
Expense Related Costs				
O&M, A&G, & General & Common Plant		\$ -	\$ -	
Incremental A&G Costs	\$ -	\$ -	\$ -	
Debt Service Costs (PG&E)		\$ -	\$ -	
Subtotal Expense Related Costs	\$ -	\$ -	\$ -	0.00%
Total Revenue Requirement on All Costs	\$ 21,918,463	\$ 20,929,939	\$ (988,524)	-4.51%
Citizens Contribution to Low-Income Energy Programs	\$ -	\$ 2,000,000	\$ 2,000,000	

~~The comparisons of capital costs and TRRs are dependent on the assumptions made over a 30-year period. Citizens' ratemaking approach of a fixed, levelized capital cost for the term of Citizens' participation provides an advantage of rate stability that, as mentioned earlier, has been attractive to the CAISO.~~

Q ~~405~~ Please explain how the Citizens ~~rate model~~Rate Model calculates Citizens' TRR for each ~~entitlements lease~~Entitlements Lease.

A ~~405~~ The Citizens Rate Model calculates a levelized, fixed TRR ~~for~~ Citizens' designed to provide a predictable and stable capital ~~requirements~~ for cost recovery over the 30-~~year~~ term ~~offor~~ each ~~lease based on inputs that are~~Entitlements Lease. This calculation uses inputs finalized at the time of ~~the lease~~ execution ~~of each lease~~. The capital requirements fixed rate ~~component of the TRR will include, including~~ return on rate base, amortization of the capitalized lease and capped financing costs, and income taxes. The model sums the net present value (NPV) of ~~these the~~ annual TRRs ~~are summed up~~ to calculate an aggregate ~~net present value of~~NPV for the 30-~~years of TRRs~~ year period. A levelized annual TRR is ~~calculated to sum to the total project TRR~~. This levelized amount will be Citizens' then derived to establish a fixed capital cost for the entire term of the ~~30-year period of the lease~~Entitlements Lease.

Like its prior transactions, Citizens proposes to use a hypothetical capital structure of 50 percent debt and 50 percent equity to calculate the cost of capital that will be used to ~~calculate~~determine Citizens' return on rate base.

1 ~~This~~As a result, my analysis assumes a hypothetical capital structure ~~is based~~
2 ~~on the assumption~~comprised of equal ~~amounts~~contributions of debt and
3 equity capital. The cost of debt would be Citizens' actual cost of debt in
4 obtaining ~~the~~ permanent financing ~~necessary~~ to pay the prepaid rent due to
5 PG&E at lease execution, which for ~~this assumed~~the first \$200 million
6 investment is assumed to be ~~6.45~~5.73 percent. Citizens proposes to use a
7 proxy for its cost of equity capital. Citizens anticipates it will use PG&E's
8 current ROE approved in a final and ~~non-appealable~~non-appealable FERC
9 order at the time of the execution of ~~each~~the applicable Entitlements Lease as
10 a proxy for its cost of equity, subject to FERC approval that such ROE is just
11 and reasonable for Citizens' use. At this time, the ROE for PG&E in the most
12 recent final and non-appealable FERC order ~~that is final and non-appealable~~
13 is 10.45 percent.

14 Citizens' rate base will be the capitalized ~~lease~~ cost of the
15 Entitlements Lease plus financing costs not to exceed ~~4~~one percent of the
16 lease cost, less accumulated capitalized lease and development amortization
17 costs, plus accumulated deferred income taxes. The assumed value of the
18 first capitalized ~~lease~~Entitlements Lease plus ~~4~~one percent financing costs is
19 \$202 million. ~~The~~Citizens' accumulated deferred income taxes ~~for Citizens~~
20 ~~are created by the difference in timing between the 30-year straight-line~~
21 ~~amortization of~~result from differences in how the capitalized lease ~~for book~~
22 ~~purposes and the amortization of the capitalized lease for~~is amortized for
23 financial reporting versus income tax purposes under Section 467 of the
24 United States Internal Revenue Code. The Citizens Rate Model uses the
25 same Federal and State income tax rates ~~as were~~ used in ~~the~~ PG&E's
26 Representative Rate Model³ for ~~the purposes of calculation of~~calculating both
27 ~~ADIT~~deferred taxes and income taxes. The Citizens Rate Model is run as
28 described above to calculate an unadjusted fixed, levelized Citizens
29 ~~capital-related'~~ capital-related TRR for illustrative purposes. ~~—the Citizens~~
30 Base Case.

³ The Representative Rate Model in the Entitlements Lease generates the approximate PG&E rate at the time the applicable Entitlements Lease is executed ("PG&E Representative Rate").

1 Q 6 What are the results of the Citizens Base Case scenario when the Citizens
2 Rate Model is run without any adjustments or caps?

3 A 6 The Citizens Base Case, i.e. the unadjusted, fixed, levelized Citizens
4 capital-related' capital-related TRR based on these assumptions, is
5 \$22,735,447. The Citizens TRR is adjusted as described below to produce a
6 Citizens Rate no higher than the PG&E Representative Rate, 22,027,018. It
7 does not reflect any of the adjustments or caps contractually agreed upon by
8 the parties as part of the Investment Program.

9 C. Customer Impacts and Rate Comparisons

10 Q 7 How does your analysis evaluate the economic impacts of Citizens'
11 participation in the first tranche of the Investment Program?

12 A 7 I have calculated the fixed, levelized capital-related TRR for both Citizens
13 (Citizens Base Case) and PG&E (PG&E Base Case) to compare and
14 evaluate the economic impacts of Citizens' participation in the first \$200
15 million tranche of the Investment Program. I based my calculations on each
16 party's respective capital structures and costs of debt and equity.⁴

17 Q 8 How does the Citizens Base Case compare to PG&E's Base Case?

18 A 8 Using the stated assumptions, Citizens Base Case TRR—the unadjusted,
19 fixed, levelized Citizens' capital-related TRR—is \$22,027,018, while the
20 PG&E Base Case TRR from the PG&E Representative Rate Model, using a
21 5.91 percent cost of debt,⁵ is \$20,436,208. Table 6-1 below shows the PG&E
22 Base Case, which is fully calculated in Attachment 1. Table 6-1 also shows
23 the Citizens Base Case using Citizens' capital costs.

⁴ All future leases will use the same methodology (with inputs updated as of that time),
and as a result my analysis here will apply equally to Leases 2 through 5.

⁵ For the cost of debt, both Citizens and PG&E would finance investment in these
projects using fixed rate long-term debt. As PG&E witness Divya Raman testifies,
PG&E expects it would issue debt at 5.91%, which is higher than the 5.73% rate at
which Citizens expects to finance the first lease.

TABLE 6-1
PG&E AND CITIZENS – BASE CASE
INITIAL REVENUE REQUIREMENT SUMMARY

(Added)	PG&E Annual Levelized 30 years	Citizens Annual Levelized 30 years	Variance Higher / (Lower)	%
Return on Equity	10.45%	10.45%		
Capital Related Costs				
Cost of Entitlement	\$ 20,436,208	\$ 22,027,018	\$ 1,590,810	
Subtotal Capital Related Revenue Requirement	\$ 20,436,208	\$ 22,027,018	\$ 1,590,810	7.78%
Expense Related Costs				
Citizens Administrative & Regulatory Costs	\$ -	\$ -	\$ -	
Subtotal Expense Related Costs	\$ -	\$ -	\$ -	0.00%
Total Revenue Requirement on All Costs	\$ 20,436,208	\$ 22,027,018	\$ 1,590,810	7.78%
Citizens Contribution to Direct Bill Assistance	\$ -	\$ 2,049,151	\$ 2,049,151	

Q 9 Why is Citizens' Base Case TRR higher than PG&E's, despite having a lower cost of debt?

A. 9 Even though Citizens' expected cost of debt is lower than PG&E's, Citizens Rate Model produces a higher Base Case TRR because Citizens recovers the amortization of the prepaid Entitlements Lease cost over the 30-year life of the Lease compared to PG&E's depreciation of the asset over a 55-year useful life.

Q 10 Will customers pay the higher Citizens Base Case TRR, and therefore, a higher rate for electric service?

A 10 No. In each Entitlements Lease between PG&E and Citizens, Citizens will commit to recover a fixed, levelized capital cost that is no greater than what is calculated in the PG&E Representative Rate Model attached to that Entitlements Lease. The PG&E Representative Rate Model is specifically designed to ensure that customers do not pay more than an approximation of the rate PG&E could charge at the time of execution of the Entitlements Lease for the portion of the projects subject to Citizens' leasehold interests. This contractual customer protection is consistent with the prior Citizens Sunrise and Sycamore transactions approved by this Commission and FERC.

Q ~~11~~11 How does ~~Citizens use the results of~~ the PG&E ~~representative rate model in the calculations of~~ Representative Rate Model limit the rate Citizens' ~~rate model~~ actually charges customers?

A ~~11~~ ~~As stated previously, under the terms of the Entitlements Leases, Citizens will agree to recover a capital-related TRR that will be no greater than what is calculated in the PG&E Representative Rate Model. Therefore,~~ 11 Citizens uses the fixed, levelized TRR calculated in the PG&E Representative Rate Model ~~as~~ the target result for PG&E Base Case—as a cap on the Citizens' TRR. To accomplish this, Citizens reduces the ROE component of the return on rate base in its FERC-approved rate methodology (Citizens Rate Model) until the output equals the TRR produced by the PG&E Representative Rate Model. ~~The cost of equity~~ By reducing the ROE in the Citizens Rate Model ~~is calculated to result in,~~ Citizens ensures it charges a fixed, levelized ~~capital-related~~ capital-related TRR ~~equal to no greater than~~ the TRR from the PG&E Representative Rate Model. In the results for the Citizens Capped Rate Model included in Attachment 2 and ~~Tables 6-1 and Table~~ Table 6-2, ~~the~~ Citizens reduces its cost of equity ~~that is used is what is necessary to calculate a fixed, levelized capital-related TRR that is no greater than what is~~ from 10.45 percent to 9.18 percent to match the overall capital-related TRR calculated in the PG&E Representative Rate Model. ~~In this case the Citizens cost of equity is adjusted downward from 10.45 percent to 9.02 percent to achieve the capital-related TRR equal to the TRR calculated in~~ Citizens will repeat this alignment process at the execution of each Entitlements Lease, ensuring that its final TRR for each Lease is no higher than the TRR produced by the PG&E Representative Rate Model. ~~The process of calculating a fixed, levelized Citizens capital-related TRR not to exceed the TRR in then-applicable PG&E Representative Rate Model will be performed at the time of the execution of the first Entitlements Lease and each subsequent lease.~~ attached to each Lease.

Additionally, Citizens is only recovering the transmission O&M and other expense costs billed to Citizens by PG&E; Citizens will not recover from customers its own incremental costs. This is in contrast to the past projects that Citizens has entered into where Citizens also recovered its upfront

1 development and ongoing administrative and regulatory costs in its TRR and
2 is a benefit directly linked to the size and multi lease scope of the Investment
3 Program. As such, the overall TRRs of PG&E and Citizens are equal, as
4 shown in Table 6-2.

TABLE 6-2
PG&E AND CITIZENS
ADJUSTED REVENUE REQUIREMENT SUMMARY

(Added)	PG&E	Citizens	Variance	
	Annual Levelized 30 years	Annual Levelized 30 years	Higher / (Lower)	%
Return on Equity	10.45%	9.18%		
Capital Related Costs				
Cost of Entitlement	\$ 20,436,208	\$ 20,436,208	\$ (0)	
Subtotal Capital Related Revenue Requirement	\$ 20,436,208	\$ 20,436,208	\$ (0)	0.00%
Expense Related Costs				
Citizens Administrative & Regulatory Costs	\$ -	\$ -	\$ -	
Subtotal Expense Related Costs	\$ -	\$ -	\$ -	0.00%
Total Revenue Requirement on All Costs	\$ 20,436,208	\$ 20,436,208	\$ (0)	0.00%
Citizens Contribution to Direct Bill Assistance	\$ -	\$ 2,049,151	\$ 2,049,151	

5 Q 12 How would the financing and cost recovery for the transmission projects in
6 the Investment Program differ if Citizens was not involved?

7 A 12 The transmission projects included in the Investment Program will be built
8 and financed in the near-term regardless of Citizens' participation. If Citizens
9 were not involved, PG&E would still develop and put these projects into
10 service.⁶ Accordingly, PG&E would recover the costs of these assets through
11 its transmission rates, and customers would bear these costs.

12 From a debt cost perspective, customers will pay rates that reflect
13 current interest rate conditions whether PG&E or Citizens finances the
14 projects. As explained by PG&E witness Divya Raman, PG&E will finance
15 these projects using long-term, fixed-rate debt at prevailing market rates, like
16 Citizens.

17 While the cost of equity for PG&E and Citizens may differ over the 30-
18 year term of each Entitlements Lease, and future ROEs cannot be predicted
19 with certainty, historically authorized ROEs for investor-owned utilities,
20 including PG&E, have stayed within a relatively narrow range.⁷ Therefore,

⁶ See Amended Testimony of Divya Raman (Amended Chapter 3), Section E.

⁷ See Testimony of Susan F. Tierney (Chapter 8), Section C.3.

1 even though Citizens' ROE in the projects will remain fixed for the 30-year
2 term of its participation in each Lease, and PG&E's ROE may change slightly
3 as regulatory and capital market conditions evolve, any difference is not
4 expected to be significant in the long run and overcome by the value of long-
5 term rate stability.

6 Q 13 Will the Investment Program result in added customer costs over the life of
7 the projects?

8 A 13 No, it should not. It is unlikely that the Investment Program adversely impacts
9 customer rates; but it will certainly provide meaningful direct bill-paying relief
10 to customers in need and long-term rate stability.

11 The Citizens' TRR is adjusted as described below to produce a
12 Citizens Rate no higher than the PG&E Representative Rate. The Citizens
13 Rate Model aligns Citizens' TRR with the PG&E Representative Rate Model
14 to ensure parity between the two rates for customers. This method was used
15 in the prior SDG&E transactions and was designed so that Citizens'
16 participation does not add costs for customers.

17 While small fluctuations (both up and down) in PG&E's ROE could
18 occur during the term of the Entitlements Leases and therefore impact a
19 portion of PG&E's rate, as Citizens' expert witness Susan F. Tierney explains,
20 ROEs have typically stayed within a relatively narrow range and are among
21 the lowest they have been since 1990. Thus, the fixed ROE component of
22 Citizens' rate is unlikely to expose customers to adverse rate impacts and it
23 provides customers the benefit of long-term ROE stability for a portion of the
24 applicable projects.

25 **D. Both this Commission and the FERC Have Approved and Validated**
26 **Citizens' Fixed and Levelized Rate Methodology**

27 Q ~~12~~14 Has the Commission examined this representative rate model and
28 fixed, levelized TRR approach before?

29 A ~~12~~14 Yes. Both this Commission and FERC have previously reviewed and
30 approved Citizens' fixed, levelized TRR approach in multiple projects.

31 Citizens used this fixed, levelized TRR approach ~~for its cost recovery for in~~
32 both the Sunrise and Sycamore ~~Penasquitos Transmission Projects.~~

1 Projects, where this Commission explicitly recognized the rate stability and
2 cost certainty benefits of Citizens' approach.

3 In the Commission's decision ~~granting approval to lease Entitlements~~
4 ~~to approving Citizens' participation in~~ the Sunrise Project ~~to Citizens~~, the
5 Commission stated that the provision for levelized capital cost recovery over
6 the 30-year term of the ~~lease~~Entitlements Lease (compared to conventional
7 ratemaking) provides a net benefit to ~~ratepayers~~customers, because
8 ~~ratepayers~~customers are paying a constant amount for the lease period that
9 will not increase with money- costs.⁷⁸

10 The Commission reaffirmed that this approach is beneficial to
11 ~~ratepayers~~customers in its decision to grant approval to lease Entitlements to
12 the Sycamore ~~Penasquitos Transmission~~ Project.⁸⁹ The approach proposed
13 by Citizens for the PG&E Program is the same approach previously seen and
14 approved twice ~~before~~ by the Commission.

15 In approving Citizens' participation in the Sunrise Project, the
16 Commission found value in the fixed nature of the Citizens' rate structure,
17 holding:

18 "We concur with SDG&E that capital costs 30 years into
19 the future are unknown. Thus, we do not attempt to forecast the
20 future performance of capital markets over the next 30 years.
21 ... Accordingly, since we are not prescient, we do not know the
22 ratepayer benefit of the rate stability provisions of the
23 [transaction], but we do find value in the fact that the cost
24 component is capped and provides certainty to a key
25 component of potential costs to customers. In a sense, this is
26 'insurance' against future higher costs. We find, therefore, that
27 this provision of the [transaction] is not harmful to the public or

⁷⁸ See ~~CPUC Decision (D.)~~ 11-05-048 at 18-19 (~~issued May 26, 2011~~) (available at: https://docs.cpuc.ca.gov/PublishedDocs/WORD_PDF/FINAL_DECISION/136214.PDF Sunrise Section 851 Decision), 2011 Cal. PUC Lexis 302, at *26-28 (Cal. P.U.C. 2011).

⁸⁹ See ~~CPUC~~ D.19-03-024 at 19-20 (~~issued April 5, 2019~~) (available at: <https://docs.cpuc.ca.gov/PublishedDocs/Published/G000/M280/K049/280049415.PDF> Sycamore Section 851 Decision), 2019 Cal. PUC Lexis 154, at *27-28 (Cal. P.U.C. 2019).

1 to customers, and only the passage of time will clearly tell us
2 whether it was a benefit.”¹⁰

3 The Commission further held that the levelized nature of the Citizens’
4 rate “provides a net benefit” to customers as compared to traditional
5 ratemaking because “it is a benefit to the [customers] of today to not have to
6 pay the front-ended costs.”¹¹

7 In approving Citizens’ participation in the Sycamore Project, the
8 Commission acknowledged the potential for capital market conditions to
9 change in the future, but held that “[r]egardless, Citizens’ fixed capital costs
10 provide rate stability to [customers]. They also protect [customers] from
11 changes in money costs caused by fluctuations in the market. Furthermore,
12 the rate stability and protection from market fluctuations provide tangible
13 benefits to [customers].”¹²

14 FERC has approved Citizens’ use of a fixed, levelized capital cost rate
15 methodology three times: for Citizens Sunrise Transmission LLC in 2009,
16 Citizens Sycamore-Penasquitos Transmission LLC in 2018, and Citizens S-
17 Line Transmission LLC in 2022.¹³ The fixed, levelized capital cost rate
18 methodology was also approved by FERC in 2014 for the Morongo
19 Transmission line.¹⁴ In each of these Orders FERC found the use of 30-year
20 levelized fixed rate of recovery of capital requirements reasonable.¹⁵

¹⁰ D.11-05-048 at 16-17 (Sunrise Section 851 Decision), 2011 Cal. PUC Lexis 302, at *24-26 (Cal. P.U.C. 2011).

¹¹ D.11-05-048 at 18 (Sunrise Section 851 Decision), 2011 Cal. PUC Lexis 302, at *27 (Cal. P.U.C. 2011).

¹² D.19-03-024 at 18 (Sycamore Section 851 Decision), 2019 Cal. PUC Lexis 154, at *22 (Cal. P.U.C. 2019).

¹³ *Citizens Energy Corp.*, 129 FERC ¶ 61,242 (2009) (Sunrise Powerlink Declaratory Order), *Citizens Energy Corp.*, 162 FERC ¶ 61,161 (2018) (Sycamore-Penasquitos Declaratory Order); *Citizens S-Line Transmission LLC*, 175 FERC ¶ 61,046 (2021) (S-Line Declaratory Order).

¹⁴ *Morongo Transmission LLC*, 148 FERC ¶ 61,139 (2014).

¹⁵ *Citizens Energy Corp.*, 129 FERC ¶ 61,242 at PP 22-23 (2009); *Citizens Energy Corp.*, 162 FERC ¶ 61,161 at P 22 (2018); *Citizens S-Line Transmission LLC*, 175 FERC ¶ 61,046 at P 24 (2021); and *Morongo Transmission LLC*, 148 FERC ¶ 61,139 at PP 19-20 (2014).

1 E. Citizens' Fixed and Levelized Rate Structure Ensures Rate Stability,
2 Predictable Costs, and Protection Against Market Volatility

3 Q 15 What customer benefits are generated by Citizens' participation in the
4 Investment Program?

5 A 15 My analysis concludes that Citizens' participation in the Investment Program
6 will generate substantial and measurable customer benefits. These include
7 direct bill-paying assistance for PG&E customers in need, long-term rate
8 stability, and protection against market volatility and potential increases in
9 capital costs. Each of these benefits is directly tied to Citizens' use of a fixed
10 and levelized capital cost recovery and are delivered without burdening
11 customers with adverse rate impacts.

12 Q 16 How does Citizens' fixed capital cost revenue requirement provide rate
13 stability?

14 A 16 An important customer benefit gained from Citizens' fixed, levelized capital
15 cost approach is that customers will be charged the same capital costs in the
16 Citizens' TRR for the entire 30-year length of Citizens' participation in each
17 Entitlements Lease. This contrasts with traditional utility ratemaking, where
18 the capital costs of a new project are frontloaded.

19 In traditional utility ratemaking, revenue requirements for new projects
20 are higher in the early years because the utility earns a return on the
21 undepreciated value of the project. At the start, when the project is newly
22 built, the net plant balance (essentially the project's book value after
23 depreciation) is at its highest, so the return is also highest. Over time, as the
24 project depreciates and the net plant balance decreases, the return earned on
25 that balance also decreases. As a result, customers in the early years of a
26 project's life pay higher costs for the same service compared to customers
27 using the project later, when the remaining value of the asset is lower and the
28 return collected by the utility has declined.

29 Citizen's fixed, levelized cost of capital approach results in a more
30 equitable distribution of costs and benefits for customers over the life of the
31 projects. At the end of each 30-year lease term, Citizens will transfer its
32 interest in the projects to PG&E at no cost to customers as the net plant
33 balance of Citizens' portion of any projects will have been fully amortized.

1 FERC has recognized the customer benefit of this approach, noting
2 that a fixed, levelized recovery of capital requirements aligns the financial
3 benefits of a project with its cost recovery over time.¹⁶

4 Citizens' fixed and levelized rate structure also ensures a steady and
5 predictable revenue stream, which directly supports Citizens' ability to make
6 consistent charitable donations throughout the 30-year period of each
7 Entitlements Lease.¹⁷ This structure aligns Citizens' revenue with its debt
8 service obligations, creating financial predictability and stability. As a result,
9 Citizens can reliably commit a significant portion of its net after-tax profits to
10 direct bill-paying assistance for PG&E customers in need without concern for
11 revenue fluctuations, discussed below.

12 **F. Citizens' Commitment to Direct Bill-Paying Assistance to PG&E Customers**
13 **in Need**

14 **Q 17** Please describe the financial support that Citizens will contribute to direct bill-
15 paying assistance for PG&E customers in need as a result of its participation
16 in the Investment Program.

17 **A 17** One of Citizens' unique features is its dedication to supporting charitable
18 activities by sharing the profits its business ventures earn. For this
19 transaction, Citizens has committed to dedicating an escalating portion of its
20 net after-tax profits to direct bill-paying assistance for PG&E customers in
21 need.¹⁸ For the first \$200 million invested under the Investment Program,
22 Citizens will contribute 50 percent of its net after-tax profits towards this
23 assistance.

24 Additionally, Citizens has contractually committed to increase its
25 contribution by 10 percentage points for each subsequent \$200 million
26 investment:

- 27
 - 50 percent of its net after-tax profits for the first \$200 million invested.

¹⁶ See *Citizens Energy Corp.*, 162 FERC ¶ 61,161 at P 22 (2018); *Citizens Energy Corp.*, 129 FERC ¶ 61,242 at P 23 (2009); *Morongo Transmission, LLC*, 148 FERC ¶ 61,139 at P 20 (2014).

¹⁷ See Amended Testimony of Peter Smith (Amended Chapter 5), Section G.

¹⁸ This commitment is reflected in Section 5.3.1 of the Form of Entitlements Lease.

- 60 percent of the net after-tax profits from the second \$200 million invested,
- 70 percent of the net after-tax profits from the third \$200 million invested,
- 80 percent of the net after-tax profits from the fourth \$200 million invested, and
- 90 percent of the net after-tax profits from the fifth \$200 million invested.

I estimate that the total Citizens' charitable contribution over the life of the Investment Program will exceed \$450 million as shown in Table 6-4.

TABLE 6-3
CITIZENS CHARITABLE GIVING BY LEASE

<u>Each \$200 Million Investment</u> <u>(1)</u>	<u>First Annual Charitable Contribution</u> <u>(2)</u>	<u>Last Annual Charitable Contribution</u> <u>(3)</u>	<u>Average Annual Charitable Contribution</u> <u>(4)</u>	<u>Total Charitable Contributions</u> <u>(5)</u>
<u>1</u>	<u>\$2,156,129</u>	<u>\$1,803,689</u>	<u>\$2,049,151</u>	<u>\$61,474,528</u>
<u>2</u>	<u>\$2,674,355</u>	<u>\$2,237,205</u>	<u>\$2,541,664</u>	<u>\$76,249,928</u>
<u>3</u>	<u>\$3,228,644</u>	<u>\$2,700,890</u>	<u>\$3,068,452</u>	<u>\$92,053,546</u>
<u>4</u>	<u>\$3,822,896</u>	<u>\$3,198,006</u>	<u>\$3,633,219</u>	<u>\$108,996,582</u>
<u>5</u>	<u>\$4,461,595</u>	<u>\$3,732,304</u>	<u>\$4,240,229</u>	<u>\$127,206,869</u>
<u>Total</u>			<u>\$15,532,715</u>	<u>\$465,981,454</u>

Citizens' existing agreements with San Diego Gas & Electric Company for the Sunrise Project and the Sycamore Project currently generate \$1.5 million and \$650,000 annually, respectively, in contributions to disadvantaged communities and low-income families in those project areas.

For the Investment Program, assuming a debt cost of 5.73 percent, Citizens estimates that its anticipated \$200 million investment in the first

1 tranche of projects pursuant to the Investment Program will generate an
2 estimated average of \$2.0 million annually in direct bill-paying assistance for
3 each year of the 30-year lease term. These contributions will benefit PG&E
4 customers, including those in disadvantaged communities and low-income
5 families within the PG&E service area. The estimated average annual
6 contributions will increase with each subsequent \$200 million investment:

- 7 • \$2.5 million annually for the second \$200 million invested;
- 8 • an annual average of just over \$3 million for the third \$200 million;
- 9 • an annual average of just over \$3.6 million for the fourth \$200 million
10 invested; and
- 11 • an annual average of just over \$4.2 million for the fifth \$200 million
12 invested.

13 These contributions represent a direct and tangible customer benefit
14 that would not occur without Citizens' participation in the Investment Program.
15 As a result, Citizens' participation delivers clear, measurable financial benefits
16 to PG&E customers in need. And as I explained above, does so without
17 burdening customers with adverse rate impacts.

18 Q 18 What would be the impact on PG&E customers and communities without
19 Citizens' participation in the Investment Program?

20 A 18 The key difference is that, without Citizens' participation, PG&E customers
21 and communities would not benefit from the more than \$450 million in direct
22 bill-paying assistance that Citizens plans to contribute, assuming a full \$1.0
23 billion investment. This contribution provides a net benefit that would not
24 exist in a scenario where PG&E does not lease Entitlements to the applicable
25 projects to Citizens. And does so without burdening customers with adverse
26 rate impacts.

27 Q ~~13~~19 Does this complete your prepared ~~direct~~amended testimony?

28 A ~~13~~19 Yes, it does.

PACIFIC GAS AND ELECTRIC COMPANY

AMENDED CHAPTER 6

ATTACHMENT 1

**PG&E REPRESENTATIVE RATE MODEL WITH
THE BASE CASE CAPITAL COST ASSUMPTIONS**

Attachment 1 - PG&E Representative Rate Model with the Base Case Capital Cost Assumptions

Model Inputs	
PG&E Cost of Debt	6.475.91%
PG&E Cost of Preferred Equity	5.52%
Cost of Entitlement	202,000,000

Calculation of Debt Cost as Input to Model		
The Moody's Baa Utility Bond Index	5.54%	The Moody's Baa Utility Bond Index
Adjustment to Bond Index	0.03%	Preferred Equity
Total Debt Cost Per Model	6.475.91%	Common Equity
Calculation of WACC		
Adjustment to Bond Index	0.937%	Total Debt Cost
Per Model	5.91%	

Base Case

Base Case

Calculation of WACC		
Debt	Capital Ratio	Cost
Preferred Equity	49.75%	6.475.91%
Common Equity	0.50%	5.52%
	49.75%	10.45%
		WACC
		3.22%2.94%

8.458.17%

Revenue Requirement	Total	Year-1	Year-2	Year-3	Year-4	Year-5	Year-6	Year-7	Year-8	Year-9	Year-10	Year-11-55
44,563	43,012	41,474	39,949	785,354				8,394,213	8,101,964	7,812,320	3,672,727	165,272,727
								3,672,727	3,672,727	3,672,727	3,672,727	147,933,992

PG&E Representative Rate

~~20,929,939~~ 20,436,208

PACIFIC GAS AND ELECTRIC COMPANY

AMENDED CHAPTER 6

ATTACHMENT 2

CITIZENS CAPPED RATE

Attachment 2 - Citizens Capped Rate

Year Return on Rate Base		Amortization	Income Taxes	Capital Cost Revenue Requirement	Capital Cost Revenue Requirement Net Present Value
1	<u>\$15,403,494</u>	<u>14,842,924</u>	<u>\$6,733,333</u>	<u>\$3,489,797</u>	<u>\$25,626,624</u>
2	<u>\$14,960,207</u>	<u>14,415,657</u>	<u>\$6,733,333</u>	<u>\$3,389,366</u>	<u>\$22,430,748</u>
3	<u>\$14,513,581</u>	<u>13,985,174</u>	<u>\$6,733,333</u>	<u>\$3,288,179</u>	<u>\$20,365,616</u>
4	<u>\$14,063,448</u>	<u>13,551,314</u>	<u>\$6,733,333</u>	<u>\$3,186,198</u>	<u>\$18,478,083</u>
5	<u>\$13,609,633</u>	<u>13,113,908</u>	<u>\$6,733,333</u>	<u>\$3,083,382</u>	<u>\$16,753,375</u>
6	<u>\$13,151,953</u>	<u>12,672,779</u>	<u>\$6,733,333</u>	<u>\$2,979,690</u>	<u>\$15,177,926</u>
7	<u>\$12,690,214</u>	<u>12,227,741</u>	<u>\$6,733,333</u>	<u>\$2,875,079</u>	<u>\$13,739,271</u>
8	<u>\$12,224,212</u>	<u>11,778,599</u>	<u>\$6,733,333</u>	<u>\$2,769,503</u>	<u>\$12,425,968</u>
9	<u>\$11,753,734</u>	<u>11,325,149</u>	<u>\$6,733,333</u>	<u>\$2,662,912</u>	<u>\$11,227,509</u>
10	<u>\$11,278,558</u>	<u>10,867,176</u>	<u>\$6,733,333</u>	<u>\$2,555,256</u>	<u>\$10,134,247</u>
11	<u>\$10,798,447</u>	<u>10,404,453</u>	<u>\$6,733,333</u>	<u>\$2,446,483</u>	<u>\$9,137,325</u>
12	<u>\$10,313,156</u>	<u>9,936,743</u>	<u>\$6,733,333</u>	<u>\$2,336,536</u>	<u>\$8,228,617</u>
13	<u>\$9,822,424</u>	<u>9,463,799</u>	<u>\$6,733,333</u>	<u>\$2,263,825</u>	<u>\$7,400,662</u>
14	<u>\$9,325,980</u>	<u>8,985,358</u>	<u>\$6,733,333</u>	<u>\$2,142,883</u>	<u>\$6,646,616</u>
15	<u>\$8,823,539</u>	<u>8,501,146</u>	<u>\$6,733,333</u>	<u>\$1,999,050</u>	<u>\$5,960,199</u>
16	<u>\$8,314,800</u>	<u>8,010,875</u>	<u>\$6,733,333</u>	<u>\$1,883,791</u>	<u>\$5,335,650</u>
17	<u>\$7,799,448</u>	<u>7,514,243</u>	<u>\$6,733,333</u>	<u>\$1,767,033</u>	<u>\$4,767,686</u>
18	<u>\$7,277,152</u>	<u>7,010,933</u>	<u>\$6,733,333</u>	<u>\$1,648,703</u>	<u>\$4,251,460</u>
19	<u>\$6,747,566</u>	<u>6,500,611</u>	<u>\$6,733,333</u>	<u>\$1,528,720</u>	<u>\$3,782,533</u>
20	<u>\$6,210,325</u>	<u>5,982,926</u>	<u>\$6,733,333</u>	<u>\$1,407,004</u>	<u>\$3,356,825</u>
21	<u>\$5,665,046</u>	<u>5,457,512</u>	<u>\$6,733,333</u>	<u>\$1,283,466</u>	<u>\$2,970,608</u>
22	<u>\$5,111,326</u>	<u>4,923,984</u>	<u>\$6,733,333</u>	<u>\$1,158,016</u>	<u>\$2,620,459</u>
23	<u>\$4,548,745</u>	<u>4,381,935</u>	<u>\$6,733,333</u>	<u>\$1,030,558</u>	<u>\$2,303,242</u>
24	<u>\$3,976,858</u>	<u>3,830,940</u>	<u>\$6,733,333</u>	<u>\$900,992</u>	<u>\$2,016,086</u>
25	<u>\$3,395,200</u>	<u>3,270,554</u>	<u>\$6,733,333</u>	<u>\$769,212</u>	<u>\$1,756,358</u>
26	<u>\$2,803,283</u>	<u>2,700,308</u>	<u>\$6,733,333</u>	<u>\$635,108</u>	<u>\$1,521,651</u>
27	<u>\$2,200,594</u>	<u>2,119,709</u>	<u>\$6,733,333</u>	<u>\$498,564</u>	<u>\$1,309,757</u>
28	<u>\$1,586,593</u>	<u>1,528,240</u>	<u>\$6,733,333</u>	<u>\$359,457</u>	<u>\$1,118,657</u>
29	<u>\$960,716</u>	<u>925,360</u>	<u>\$6,733,333</u>	<u>\$217,659</u>	<u>\$946,504</u>
30	<u>\$322,368</u>	<u>310,499</u>	<u>\$6,733,333</u>	<u>\$73,035</u>	<u>\$791,605</u>
				Total NPV	<u>\$241,644,803</u>
				Levelized Annual Amount	<u>\$20,929,939</u>

Calculation of WACC

Ratio	Cost	Weighted Cost	Long Term Debt	50.00%
6.455.73%	3.232.87%			
Common Equity	50.00%	9.01969.18%		4.519%
WACC				7.737.45%

6-Atch02-1

~~PACIFIC GAS AND ELECTRIC COMPANY~~
~~CHAPTER 6~~
~~ATTACHMENT 3~~
~~PG&E REPRESENTATIVE RATE MODEL,~~
~~ASSUMING RETURN ON EQUITY INCREASES 2 PERCENT~~
~~IN YEAR 5~~

Calculation of Debt Cost as Input to Model

The Moody's Baa Utility Bond Index		5.54%	Attachment 3—PG&E Representative Rate Model, Assuming Return-on-Equity Increases 2 Percent in Year 5											
Adjustment to Bond Index		0.93%												
Total Debt Cost Per Model		<div><div></div><div>6.47%</div></div>												
Calculation of WACC		<div><div>Capital Ratio</div><div>Cost</div><div>WACC</div></div>												
			<div>Preferred Equity</div> <div>0.50%</div> <div>5.52%</div> <div>0.03%</div>											
			<div>Common Equity</div> <div>49.75%</div> <div>10.45%</div> <div>5.20%</div>											
			49.75% 6.47% 3.22% ROE increases to 2.0% in Year 5											
			<div>8.45%</div>											
Revenue Requirement		Total	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Year 11	55
Depreciation Expense		202,000,000	3,672,727	3,672,727	3,672,727	3,672,727	3,672,727	3,672,727	3,672,727	3,672,727	3,672,727	3,672,727	3,672,727	
		3,672,727	3,672,727	165,272,727										
Return on Common Equity		274,680,400	10,369,102	10,046,847	9,678,695	9,331,521	10,726,428	10,355,962	10,000,712	9,652,533				
		9,307,456	8,965,274	176,245,870										

Atch

03-1

<u>Model Inputs</u>	Return-on-Preferred-Equity	1,257,603	55,048	53,337	51,382	49,539	47,797
PG&E-Cost-of-Debt	6.47%	46,146	44,563	43,012	41,474	39,949	785,354
PG&E-Cost-of-Preferred	5.52%	Return-on-Debt	146,666,579	6,419,832	6,220,314	5,992,380	5,777,434
Equity		5,197,157	5,016,216	4,836,887	4,659,062	91,591,227	5,574,296
Cost-of-Entitlement	202,000,000						5,381,773
3,345,355		Income Taxes	96,182,731	4,116,817	3,990,933	3,847,120	3,711,501
3,231,193			3,005,851	60,770,773	3,583,306	3,461,836	
Property Taxes							
Total Revenue							
Requirement	720,787,313	24,633,527	23,984,158	23,242,723	23,604,554	22,918,444	22,260,516
Net Present							
Value	23,654,906	21,237,744	18,978,083	16,973,398	16,388,813	14,673,243	13,142,121
Levelized							
Annual							
Amount (30							
yrs)							
PG&E-Representative-Rate							

236,737,
698

21,918,
463

21,918, 463

~~Application: 24-03-009~~

~~Exhibit No.: _____~~

~~Witness: Joseph P. Kennedy III~~

~~Application of Pacific Gas and Electric
Company (U-39-E) for Approval Under
Public Utilities Code Section 851 to
Lease Entitlements to Transmission
Projects to Citizens Pacific Transmission
LLC~~

~~Application 24-03-009
(Filed March 12, 2024)~~

~~**SUPPLEMENTAL TESTIMONY OF
JOSEPH P. KENNEDY III**~~

PACIFIC GAS AND ELECTRIC COMPANY

AMENDED CHAPTER 7

CITIZENS ENERGY ~~CORPORATION~~ CITIZENS'

CHARITABLE GIVING

~~BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA
AUGUST 9, 2024~~

TABLE OF CONTENTS

I.	INTRODUCTION: PURPOSE AND SUMMARY OF THIS SUPPLEMENTAL <u>AMENDED</u> TESTIMONY	1
II.	WITNESS QUALIFICATIONS	34
III.	CITIZENS' RECORD TO DATE OF CHARITABLE GIVING IN CALIFORNIA	6
IV.	DISTRIBUTING THE CHARITABLE BENEFITS FROM THE PG&E INVESTMENT PROGRAM	9 <u>10</u>
A.	Citizens' Commitment to Community and Stakeholder Engagement 9 <u>Direct Bill-Paying Assistance to PG&E Customers in Need of Such Assistance</u>	9 <u>10</u>
B.	An Illustrative Showing of the Magnitude and Pace of Citizens' Charitable Giving <u>Direct Bill-Paying Assistance</u> , If The Proposed PG&E Investment Program Is Approved <u>12</u> <u>11</u>	12 <u>11</u>
C.	Citizens Needs The Opportunity To Work With <u>Supporting Disadvantaged</u> Communities and Stakeholders <u>15</u> <u>Supporting Historically Marginalized</u> Low-Income Families <u>Is Populations</u> D. <u>is</u> Our Mission <u>18</u> <u>14</u>	15 <u>14</u>

1 **I. INTRODUCTION: PURPOSE AND SUMMARY OF**
2 **THIS ~~SUPPLEMENTAL~~AMENDED TESTIMONY**

3 My name is Joseph P. Kennedy III. I am the President of Citizens Energy
4 Corporation (“Citizens”).

5 Citizens, a charitable organization founded in 1979 by my father, Joseph
6 P. Kennedy II, has distributed over the course of its history more than \$600
7 million in charitable benefits to disadvantaged communities and low-income
8 families throughout the United States.

9 In prior testimony in this proceeding,¹ I provided specific information
10 about Citizens’ record of charitable giving in Southern California, using the
11 after-tax profits from our prior investments in two different San Diego Gas &
12 Electric Company (“SDG&E”) transmission projects (both of which were
13 approved by this Commission and by the Federal Energy Regulatory
14 Commission (“FERC”)). Finally, I described our plans for deciding how to
15 distribute the substantial charitable benefits (estimated to be more than \$450
16 million) from the proposed Citizens-PG&E transmission investment (“PG&E
17 Investment Program”) in the PG&E service territory, if this investment is
18 approved by the Commission.

¹ In August 2024, with permission of the Assigned Administrative Law Judge, I
provided written “Supplemental Testimony” in this proceeding. The amended
version of my “supplemental” testimony is being provided in support of the
amended Application in this proceeding.

1 In the intervening months since August 2024, I have become aware that
2 Governor Newsom and this Commission are keenly focused on ameliorating
3 what many have described as an affordability “crisis” facing utility customers in
4 California, including the customers of PG&E. In response to these concerns
5 about affordability, Citizens has decided to commit its charitable giving from the
6 proposed Citizens-PG&E investment exclusively to bill-paying assistance for
7 PG&E residential customers in need of such assistance. In this amended
8 testimony, I will describe these plans.

9 The purpose of this ~~supplemental~~amended testimony is to provide
10 information describing how Citizens, a charitable corporation, carries out its
11 philanthropic work in providing financial assistance to disadvantaged
12 communities and low-income families, using the after-tax profits from our
13 various business enterprises. My particular focus in this testimony is our
14 charitable spending using the after-tax profits from Citizens’ investments in
15 high-voltage electric transmission projects in California. This includes prior
16 transmission investments by Citizens approved by this Commission and by ~~the~~
17 ~~Federal Energy Regulatory Commission (“FERC”)~~,₂ as well as the proposed
18 investments in the ~~Pacific Gas and Electric Company (“PG&E”)~~ transmission
19 system that are the subject of the amended Application in this case ~~“(PG&E~~
20 ~~Investment Program”)~~₁.

21 In this testimony, I describe in general terms Citizens’ 45-year history of
22 providing charitable support to disadvantaged communities and low-income

1 families throughout the United States and abroad. I then provide details about
2 Citizens' record of charitable giving, to date, using the after-tax profits from its
3 investments in two ~~San Diego Gas & Electric Company ("SDG&E")~~ projects in
4 southern California: -(1) the Sunrise Power Link Project ("Sunrise Project") and
5 (2) the Sycamore-Peñasquitos Transmission Project ("Sycamore Project"). The
6 Commission approved Citizens' investments in these SDG&E projects in
7 Decision 11-05-048 ("*Citizens Sunrise Decision*") and Decision 19-03-024
8 ("*Citizens Sycamore Decision*"), respectively. In both cases, Citizens committed
9 to devote 50% of its after-tax profits to charitable giving benefitting
10 disadvantaged communities and low-income families in the geographic areas
11 where the transmission projects were constructed (*i.e.*, in Imperial County in the
12 case of the Sunrise Project, and in San Diego County in the case of the Sycamore
13 Project).

14 Finally, I will describe our ~~plans for distributing proposal~~ to ~~disadvantaged~~
15 ~~communities and low-income families provide direct bill-paying assistance to~~
16 ~~PG&E customers in PG&E's service territory need, using~~ the after-tax profits
17 from our proposed investment in the PG&E transmission system, as proposed in
18 ~~this~~ ~~the amended~~ Application.

19 Peter Smith, the Chief Executive Officer of Citizens, has provided
20 testimony estimating that if the total investment of up to \$1 billion is authorized
21 by the Commission and consummated as planned by PG&E and Citizens, the
22 total amount of charitable contributions from this transaction will ~~be greater~~

1 ~~than \$400~~exceed \$450 million over the 30-plus-year duration of the proposed
2 investment.

3 The proposed PG&E Investment Program uses essentially the same
4 business model as our investments in the Sunrise and Sycamore Projects, both of
5 which were approved by the Commission and by FERC. Here, Citizens and
6 PG&E have ~~taken that same proven business model, and have~~ worked diligently
7 to provide additional ratepayer benefits, and a significantly higher level of
8 charitable benefits for families in need, including those in disadvantaged
9 communities ~~and low income families~~.

10 By way of comparison, our investments in the Sunrise and Sycamore
11 ~~projects~~Projects are on track to yield approximately \$60 million in benefits to
12 disadvantaged communities and low-income families over the 30-~~year~~ span of
13 our investments. We are certainly proud of this record. But the proposed PG&E
14 Investment Program, with an expected yield of over ~~\$400~~\$450 million in
15 ~~community benefits, direct bill-paying assistance~~ will greatly exceed what we
16 have been accomplishing with our prior transmission investments.

17 ~~We understand, therefore, that there is considerable interest in Citizens'~~
18 ~~plans for distributing these funds in PG&E's service territory. We will be~~
19 ~~looking forward in the months ahead to continuing our engagement with the~~
20 ~~communities that stand to benefit, and, if the proposed investment is approved~~
21 ~~by the Commission, for decades beyond.~~

1 **II. WITNESS QUALIFICATIONS**

2 Citizens Energy was founded by my father, former U.S. Representative
3 Joseph P. Kennedy II, 45 years ago, with a mission to help low-income families
4 meet basic needs. He understood that a reliable and sustainable source of
5 revenue was critical to meet that mission. So, rather than depending on
6 charitable donations, he created a unique company that invests in for-profit
7 enterprises in the energy sector and then uses the after-tax profits to support the
8 charitable work of our non-profit parent.

9 Over its 45-year history, Citizens has provided over \$600 million in
10 charitable benefits to disadvantaged communities and low-income families in the
11 U.S. and abroad, using profits from dozens of successful businesses.

12 ~~I am~~For the past three years, I have been honored to serve as the
13 President of Citizens Energy. In that capacity, my primary responsibility is to
14 advance commercial and policy initiatives that align with the company's mission
15 of service to our community. I remain focused on supporting the transition to a
16 clean energy economy, using successful investments in renewable energy to
17 generate profits to lower the cost of the energy transition for struggling
18 households.

19 Prior to my work at Citizens, I served for four terms as a member of the
20 U.S. House of Representatives for the Fourth District of Massachusetts, which
21 stretched from the affluent suburbs of Boston to the post-industrial communities
22 on the South Coast of Massachusetts. I was a member of the House Energy and

1 Commerce Committee and a member of its Sub-Committee on Energy for several
2 years. Throughout my time in office, my top priority was economic opportunity
3 for working families. I authored several pieces of legislation in Washington
4 aimed at improving access to the modern economy, including the Perkins
5 Modernization Act, STEM Gateways Act, and the Revitalize American
6 Manufacturing and Innovation Act.

7 Before being elected to Congress, I served as an assistant district
8 attorney, a legal aid volunteer, and a volunteer in the Peace Corps.

9 Since leaving Congress, besides my work at Citizens, I founded a
10 non-profit social justice organization known as Groundwork Project. With a
11 focus on Appalachia, the Deep South, and the Plains, Groundwork Project is the
12 sole national pro-democracy and social justice organization singularly focused on
13 supporting frontline organizers on the most crucial fronts to expand civil rights,
14 equality, and democracy ~~itself~~. We work with partners on the ground to resource
15 local organizers, support statewide infrastructure, shift civic narratives, and
16 develop local leaders. ~~The regions where Groundworks is focused face the~~
17 ~~highest rates of poverty, incarceration, illness and oppression anywhere in the~~
18 ~~country. They have been forced to endure the dire consequences of our nation's~~
19 ~~failure to protect justice and equity for all.~~

20 In addition, I ~~have~~had the honor of serving President Biden as his Special
21 Envoy to Northern Ireland for Economic Affairs. In that role, I ~~have~~ focused my
22 work on leveraging business partnerships and investments to help spread the

1 “peace dividend” of the Belfast/Good Friday Agreement of 1998. I ~~work~~worked
2 closely with elected officials, civil society leaders, and business executives to
3 build opportunities that address social divisions, increase confidence in the
4 political process, and spur economic development across post-conflict
5 communities.

6 **III. CITIZENS’ RECORD TO DATE OF CHARITABLE**
7 **GIVING IN CALIFORNIA**

8 The philanthropic work for which Citizens is most widely known
9 throughout the United States, and the very heart of the Citizens mission, is
10 providing direct assistance with home energy costs for disadvantaged
11 communities and low-income families.

12 From its inception, Citizens has been helping the poor and elderly to pay
13 for essential heating and cooling in their homes. To date, Citizens has provided
14 ~~approximately~~over \$600 million in charitable assistance of this kind, most
15 notably providing free deliveries of home heating oil to hundreds of thousands of
16 low-income families in the Northeast U.S. struggling to stay warm.

17 Here in California, with this Commission’s approval, Citizens has
18 invested in high-voltage transmission projects, and has used the after-tax profits
19 to fund a variety of charitable projects serving disadvantaged communities and
20 low-income families in the areas where the projects are located.

21 In Imperial County, one of the poorest counties in California, Citizens has
22 used the after-tax profits from its ~~\$988~~6 million investment in the Sunrise

1 Project in 2012 to distribute approximately \$17.~~49~~ million as of ~~July 1~~December
2 31, 2024, in assistance to disadvantaged communities and low-income families,
3 an average of approximately \$1.4 million per year. Initially, from 2013 until
4 2018, Citizens funded \$9.2 million to install residential rooftop solar systems on
5 Imperial Valley low-income homes, at no cost to the homeowners. Citizens
6 completed a total of 581 rooftop installations. Between 2019 and 2020, Citizens
7 provided approximately \$2 million in direct grants to 87 non-profit organizations
8 and public schools in Imperial County for energy efficiency measures and other
9 critical needs. In 2019, Citizens completed the development of a community
10 solar project that now provides clean power to 12,000 low-income families at
11 substantially reduced cost, saving each of them approximately \$350 per year on
12 their electricity bills for the next 23 years~~-,~~ thereby directly addressing
13 affordability for the local utility's most economically vulnerable customers.
14 Citizens accomplishes this by purchasing one-third of the output of the
15 community solar project, and then ~~we donated~~donating the power at no cost to IID
16 for distribution to IID's low-income customers, through a virtual net-metering
17 arrangement. To date, Citizens has spent \$5.8 million on this program.

18 In 2023, in response to community needs, Citizens also funded \$350,000 of
19 grants to repair damaged streetlights in low-income neighborhoods in the city of
20 Calexico, and to aid flood relief victims in the city of Niland after devastating
21 storms caused irrigation canals to spill over their banks.

1 In San Diego County, meanwhile, beginning in 2020, Citizens has been
2 using the after-tax profits from its investment in the Sycamore Project to bring
3 the benefits of transportation electrification to disadvantaged communities and
4 low-income families- to address an important policy goal under SB 350. As of the
5 end of calendar year ~~2023, we have~~2024, Citizens has invested
6 ~~approximately over~~ \$2.5 million in electric vehicles and charging infrastructure
7 serving disadvantaged communities in San Diego County. We have helped to
8 fund electric vehicle purchases by ~~five~~six San Diego County non-profit
9 community service organizations (Outdoor Outreach, the Indian Health Council
10 in Valley Center, the Southern Indian Health Council in Alpine, Meals on
11 Wheels of San Diego County, ~~and~~ the Neighborhood House Association, and San
12 Diego Canyonlands).

13 When the Commission in D.19-03-024 authorized the Citizens-Sycamore
14 investment, it required SDG&E to submit an informational report to the Energy
15 Division every year, documenting Citizens' charitable contributions. These
16 annual reports are available to the Commission staff and to the general public.
17 They give the Commission and interested parties clear visibility into the
18 charitable contributions Citizens is making.

19 We are proud of our work in Imperial and San Diego Counties. Using the
20 after-tax profits from our investments in the Sunrise and Sycamore
21 ~~projects~~Projects, we are addressing affordability while also bringing the benefits
22 of the clean energy transition to marginalized and often-overlooked communities

1 and low-income families in these areas. These community benefits will continue
2 to flow, in a sustainable manner, over the full 30-year terms of the project leases.

3 Our experience in Imperial County offers a good illustration of how
4 Citizens responds to community and stakeholder input, in deciding how to
5 distribute charitable benefits among disadvantaged communities and low-
6 income families. Our program of installing rooftop solar arrays on the homes of
7 low-income families was well received when it was introduced in 2013. But we
8 came to realize, through consultations with the community, elected officials, and
9 our utility partner (~~IID~~the Imperial Irrigation District), and through our own
10 assessment, that investing in a community solar project would enable us to
11 ~~provide~~better address affordability by providing deeply discounted renewable
12 energy to a much larger universe of low-income households. So, we pivoted~~ed~~
13 ~~the community solar model. We are now, and now are~~ providing this benefit to
14 12,000 low-income utility customers. Each of these low-income customers,
15 regardless of their type of housing (e.g., rental apartment, condominium,
16 townhome, or single family home) gains access to emission-free solar energy, at a
17 savings of \$350 per year on each customer's electric bill.

18 This evolution of our program of charitable assistance in Imperial County
19 is a good example of the emphasis Citizens places on being responsive to
20 community needs. ~~The same flexibility is necessary in the PG&E Investment~~
21 ~~Program, to ensure that the input of stakeholders and communities in the PG&E~~
22 ~~service territory is fully considered.~~

1 IV. DISTRIBUTING THE CHARITABLE BENEFITS FROM
2 THE PG&E INVESTMENT PROGRAM

3 A. Citizens' Commitment to ~~Community and~~
4 ~~Stakeholder Engagement~~Direct Bill-Paying Assistance
5 to PG&E Customers in Need of Such Assistance

6 Over the years, Citizens has consistently engaged with community
7 leaders, non-profit community organizations, elected officials, its utility
8 partners, and other key stakeholders, in deciding how to distribute its charitable
9 assistance to disadvantaged communities and low-income families.

10 Our commitment to community and affordability is at the core of Citizens'
11 45-year history and mission, and we will bring this same philosophy to our work
12 in PG&E's service area. ~~That territory is substantial, encompassing some 16~~
13 ~~million people across 48 counties, with diverse demographic and socio-economic~~
14 ~~backgrounds and environmental and community needs. The area contains some~~
15 ~~of the most affluent communities in the nation yet is also home to dozens of~~
16 ~~communities designated as disadvantaged by Cal EPA pursuant to Senate Bill~~
17 ~~535 (De León, Statutes of 2012). It includes the Pacific Coast, National and~~
18 ~~State Parks, Indigenous communities, California's Central Valley and~~
19 ~~agricultural heart of America, the Sacramento River and Delta, the foothills of~~
20 ~~the Sierra Nevada, dozens of elected officials, and hundreds of community-based~~
21 ~~organizations. As diverse as the needs of these communities may be, the one~~
22 ~~thing we know for certain is that they will change over the 30-plus year lifetime~~
23 ~~of the proposed PG&E Investment Program.~~Since the initial filing of the
24 Application, Citizens has been actively listening to feedback from policymakers

1 and stakeholders, and the message is clear: affordability is the number one
2 concern. In response to these concerns, Citizens is now committing to dedicate
3 its charitable donations emanating from the proposed PG&E Investment
4 Program (expected to exceed \$450 million, assuming a full \$1 billion
5 investment), exclusively toward direct bill-paying assistance for PG&E
6 customers in need. This commitment is reflected in Section 5.3.1 of the DCOA.
7 As Citizens CEO Pete Smith has testified, Citizens will continue to work with
8 Commission staff, community members, intervenors, and other stakeholders to
9 identify the most efficient, effective and user-friendly method of delivering this
10 bill-paying assistance to PG&E customers.

11 ~~Such a broad and complex network of communities necessitates early and~~
12 ~~active engagement, which is why we already begun discussions with key~~
13 ~~community stakeholders in PG&E's service territory. These include elected~~
14 ~~officials, philanthropic leaders and non-profit organizations, as we seek to~~
15 ~~familiarize them with the proposed PG&E Investment Program, answer initial~~
16 ~~questions, and begin a process for continued dialogue. In the coming weeks, we~~
17 ~~plan to bring on additional personnel, based in California, to develop a strategic~~
18 ~~plan, coordinate outreach, and continue our conversations with key~~
19 ~~stakeholders.~~

20 ~~I understand the interest and questions about which individuals,~~
21 ~~communities and organizations may benefit from the substantial charitable~~
22 ~~distributions that our PG&E investment program will generate, and which types~~

1 of assistance to provide. But we think it would be a mistake to attempt, at this
2 early date, to specify the particular use, programs, area or organizations that
3 may benefit. I am mindful that, given the Commission approval process, we are
4 roughly two years away from the point where any funds could be deployed.
5 Many of these communities have not yet had the opportunity to become involved
6 in the stakeholder process. These communities deserve the time to listen, learn,
7 understand, question and engage with this process.

8 My experience, both at home and abroad, as an elected official and
9 diplomat, all counsels towards consistent engagement rather than a rushed
10 process.

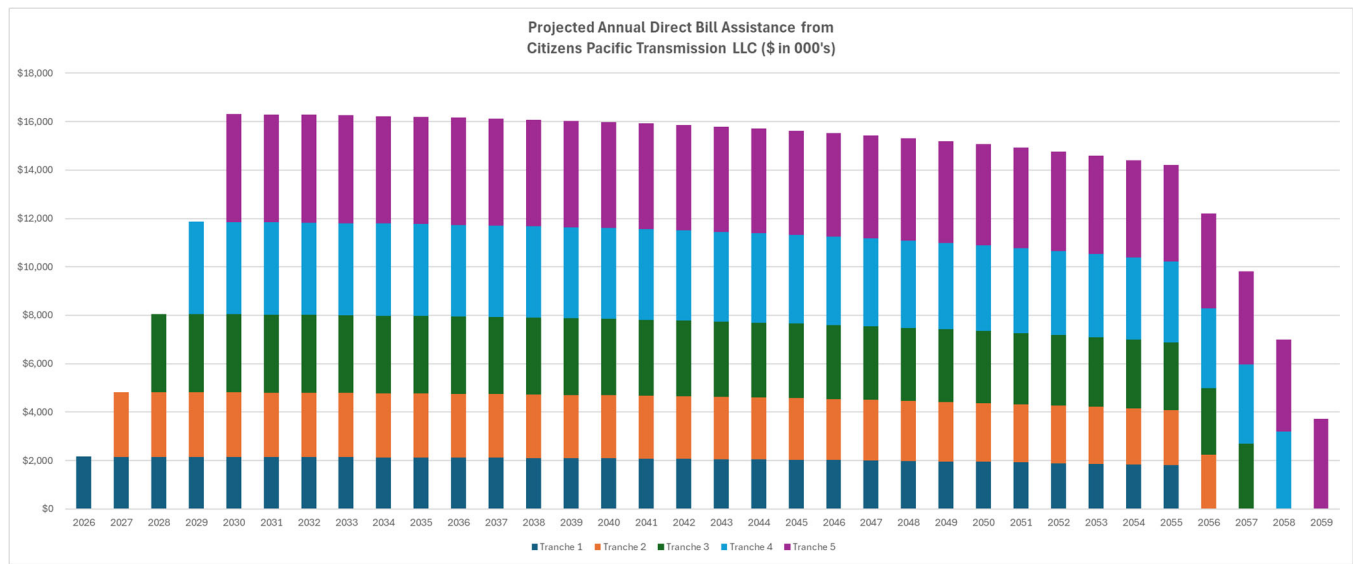
11 We hope to receive a final Commission decision approving the PG&E
12 Investment Program by no later than mid-2025. In the meantime, Citizens has
13 already begun to engage in good faith with the affected communities,
14 stakeholders, elected officials, and PG&E, our utility partner.

15 My particular goal is to maximize the social justice impact of our
16 charitable spending. As Citizens' President, I am committed to seek out
17 community projects that can leverage the funds they receive from Citizens to
18 obtain additional financing from other sources, such as state and federal funds
19 and other philanthropic organizations. These types of projects take time to come
20 to fruition and, given that the proposed PG&E investment program has yet to be
21 approved, it would be premature to attempt to identify any such opportunities at
22 this early stage. I hope that the Commission appreciates the potential for

Citizens' investment to catalyze other funding into the region, but obviously this will take time to develop.

B. An Illustrative Showing of the Magnitude and Pace of Citizens' ~~Charitable Giving~~ Direct Bill-Paying Assistance, If The Proposed PG&E Investment Program Is Approved

Below is a chart depicting the ~~charitable giving~~ direct bill-paying assistance Citizens will undertake if the proposed PG&E Investment Program is approved by the Commission. It assumes, for illustrative purposes, that Citizens is afforded the opportunity to invest the full \$1 billion as proposed, in five equal tranches of \$200 million each over five years, commencing in ~~2025~~2026.



The chart illustrates three noteworthy aspects of the Citizens charitable giving under the proposed PG&E Investment Program.

First, the sheer scale of what Citizens will contribute to ~~disadvantaged communities and low-income families~~ address affordability for PG&E customers in need – estimated to be over \$~~400~~450 million – is extraordinary. By leveraging

1 a known, proven business model, which the Commission has reviewed and
2 approved on two prior occasions (*Citizens-Sunrise Decision* (D.11-05-048) and
3 *Citizens-Sycamore Decision* (D.19-03-024)), we will be scaling this model to
4 provide charitable contributions dedicated to direct bill-paying assistance at a
5 level exceeding anything done heretofore substantially higher than the charitable
6 benefits we have been able to generate from our prior transmission investments
7 in the United States-California.

8 Second, the pace of Citizens' ~~charitable~~ giving to direct bill-paying
9 assistance for PG&E customers in need will ramp up quickly over ~~time~~ the initial
10 five years of the Investment Program. As explained in the Application, Citizens
11 has proposed to contribute 50% of its after-tax profits from the first \$200
12 invested, 60% from the next \$200 million, 70% from the third \$200 million, 80%
13 from the fourth \$200 million, and 90% from the fifth \$200 million. Our
14 contributions will increase from approximately \$2.1 million in ~~Year One~~ year one
15 to a peak of over \$16.3 million per year for several years beginning in year five.
16 (As the chart shows, in the latter years of the 30-~~plus~~-year period, our level of
17 after-tax profits for charitable giving will begin to taper off -as Citizens
18 completes its capital recovery.) Once ~~they scale~~ Citizens' giving scales up, the
19 magnitude of ~~these benefits~~ this direct bill-paying assistance for ~~disadvantaged~~
20 ~~communities and low-income families~~ PG&E customers in ~~PG&E's service~~
21 ~~territory~~ need will be truly extraordinary. The scale of the assistance will make a
22 significant contribution to advance the statutory and policy goals of the

Commission to help disadvantaged communities and marginalized populations.
It also will be responsive, in a very meaningful way, to concerns from Governor
Newsom and other state officials about customer affordability.

Third, the fixed and levelized nature of the transmission rate that
Citizens has proposed at FERC (which FERC previously approved for the
~~Citizens~~ Sunrise Project and ~~Citizens~~ Sycamore Project investments) will allow
for stable and sustainable ~~charitable contributions by Citizens in the source of~~
~~revenue for bill-paying assistance to PG&E service territory customers in need.~~
Using a fixed and levelized rate structure provides more predictable after-tax
profits, ~~which enables Citizens to make long term plans and commitments for.~~
This, in turn, will provide much-needed funding to help vulnerable PG&E
customers who are struggling to pay their utility bills.

The importance of the fixed and levelized rate structure in helping
Citizens accomplish its charitable ~~giving, in collaboration with our community~~
~~partners. The benefit of this approach~~mission is illustrated by Citizens'
involvement in the Sunrise ~~project~~Project, which I described above. The
predictability that comes from the FERC-approved fixed and levelized rate for
the ~~Citizens~~ Sunrise ~~investment~~Project enabled Citizens to make a long-term
commitment to purchasing a third of the output from the Citizens Imperial Solar
community solar project. Thanks to the levelized rate, we were able to come up
with an innovative rate structure, in collaboration with IID, the local utility,
that has delivered not only clean energy but also a \$350/year bill reduction for

1 each of IID's 12,000 low-income rate payers *for a total of 23 years – extending for*
2 *another 18 years from now.* Thus, Citizens has been able to leverage its annual
3 charitable contribution of approximately \$1.4 million, from its after-tax profits,
4 into approximately \$4.2 million in direct bill savings to low-income ratepayers in
5 the Imperial Valley.

6 If the PG&E Investment Program is approved, Citizens will bring this
7 same ~~innovative mindset to identify opportunities to leverage its charitable~~
8 ~~distributions in PG&E's service territory in ways that will amplify the benefits~~
9 ~~stability of support, on an even larger scale, for low-income bill-paying assistance~~
10 ~~for PG&E ratepayers.~~ customers in need. The fixed and levelized cost recovery
11 model helps ensure that ~~community~~ the affordability benefits Citizens will bring
12 to PG&E's customers are sustainable over time; they do not peak in the early
13 years and then abruptly decline.

14 C. ~~Citizens Needs The Opportunity To Work~~
15 ~~With Supporting Disadvantaged~~ **Communities and**
16 ~~Stakeholders~~

17 ~~Investing in a community without consistent community engagement~~
18 ~~perpetuates power disparities, fails to maximize the potential for community~~
19 ~~enhancement and does not result in community benefit. For PG&E, Citizens or~~
20 ~~any community leader, advocate, or advocacy organization to attempt to dictate~~
21 ~~how an unprecedented amount of community benefits should be spent, years~~
22 ~~before the funds become available, and before engaging in a comprehensive~~
23 ~~stakeholder process, would undermine the fundamental promise of this project.~~

1 ~~The ramping up of our charitable giving over time in this case, which I~~
2 ~~described above, is another reason why consistent community engagement is~~
3 ~~critical—and why limiting or designating benefits at this early stage would be~~
4 ~~counterproductive. The impact of a roughly \$2 million distribution of charitable~~
5 ~~benefits in 2026 across the PG&E service area pales in comparison to what can~~
6 ~~be achieved with over \$16 million *per year* a few years later. The opportunity to~~
7 ~~create a meaningful impact for disadvantaged communities is truly~~
8 ~~extraordinary, but we need the time and scope to plan for it accordingly, even~~
9 ~~though we have already begun.~~

10 ~~Citizens has already had conversations with local, state and federal~~
11 ~~officials and members of their staffs, non-profit leaders and foundations. We~~
12 ~~have explained the benefits of our model, our track record of success, and the~~
13 ~~impact we have created. We have sought guidance and advice, and have started~~
14 ~~to explore areas of potential collaboration. We will continue to do so while this~~
15 ~~case is pending before the Commission. It is our hope that the Commission will~~
16 ~~move this case forward expeditiously, and render its final decision by mid-2025~~
17 ~~at the latest, so that we can begin deploying the community benefit as quickly~~
18 ~~thereafter as possible.~~

19 ~~Some parties have suggested that the Commission should actively~~
20 ~~supervise how Citizens distributes its charitable assistance to disadvantaged~~
21 ~~communities and low income families in PG&E's service territory. Respectfully,~~

1 ~~we do not believe that this is necessary or advisable, nor is it supported by any~~
2 ~~past case precedents.~~

3 ~~First, the Commission did not impose any such requirement in connection~~
4 ~~with the prior Citizens investments in the Sunrise and Sycamore Projects,~~
5 ~~presumably because the Commission was aware of the accountability and public~~
6 ~~scrutiny to which Citizens is subject.~~

7 ~~We agree that an annual reporting requirement by Citizens' partner~~
8 ~~utility, of the type imposed in the *Citizens Sycamore* transaction (D.19-03-024),~~
9 ~~provides an appropriate model for Commission oversight and stakeholder~~
10 ~~information. These annual reports give the Commission and interested parties~~
11 ~~timely and complete information about Citizens' performance in carrying out its~~
12 ~~contractual obligation to fund charitable benefits to disadvantaged communities~~
13 ~~and low-income families.~~

14 ~~Second, Citizens' 45-year history of supporting charitable activities should~~
15 ~~allay any concerns that Citizens will not honor its commitment. Moreover, even~~
16 ~~in the unlikely event that Citizens were to fall short of its contractual obligations~~
17 ~~to fund charitable benefits to disadvantaged communities and low-income~~
18 ~~families—something which has never happened during our 45-year history,~~
19 ~~which is contrary to our core mission, and which would jeopardize our entire~~
20 ~~future—then PG&E, our Commission-regulated utility company partner, could~~
21 ~~seek appropriate legal relief.~~

1 ~~Finally, while it would be misguided to dictate how a company should use~~
2 ~~its after-tax profits, I do understand the concern about how such a substantial~~
3 ~~sum of money may be deployed. It is yet another reason why communication~~
4 ~~and engagement with local community stakeholders is critical. We do not expect~~
5 ~~to be able to meet all the requests for funding, or to be able to satisfy every need~~
6 ~~across PG&E's service territory, but we know that community members know~~
7 ~~their communities best and can help us allocate funds appropriately if we follow~~
8 ~~their lead. The Citizens team must demonstrate engagement, constant and clear~~
9 ~~communication, responsiveness and respect. We are looking forward to the~~
10 ~~opportunity over the weeks, months and years ahead to do just that.~~

11 **D. — Supporting Historically Marginalized Low-Income**
12 **Families Populations Is Our Mission.**

13 Citizens Energy was founded over 45 years ago to help low-income
14 families meet their basic needs. We are proud of our record of service to the
15 poor, whether they be in Africa, South America, or across the United States.
16 Over the years, Citizens has reinvested over \$600 million to assist low-income
17 families, and to this day we continue to ~~support~~help roughly 120 homeless
18 shelters and food pantries pay their heating bills every winter. Our Boston-
19 based staff engage in monthly service projects at churches, community centers,
20 food pantries, and other social service organizations across Massachusetts.

21 We look forward to exploring the best ways to ~~support disadvantaged~~
22 ~~communities and low-income families across~~implement the large-scale bill-

1 ~~paying assistance we have proposed here for PG&E service territory customers~~
2 ~~in need.~~ Indeed, ~~that~~charitable giving of this type is ~~the reason~~ why we are
3 participating in ~~this project.~~ ~~That assistance could come in a variety of ways:~~
4 ~~through direct support to low-income ratepayers, like we've done several times~~
5 ~~in California, or through innovative methods to maximize the impact for the~~
6 ~~poor, perhaps through collaborating with other foundations, state programs and~~
7 ~~federal government initiatives~~proposed Investment Program.

8 The Commission can be confident that, if it approves the proposed PG&E
9 Investment Program, Citizens will provide substantial, ongoing benefits for
10 PG&~~E's low-income~~E customers in need of bill-paying assistance.

11 We respectfully urge the Commission to approve PG&E's application at
12 the earliest reasonable date.

13 * * * * *

14 This concludes my ~~supplemental~~amended testimony on behalf of Citizens
15 Energy.

PACIFIC GAS AND ELECTRIC COMPANY

CHAPTER 8

CITIZENS ENERGY – CITIZENS' PUBLIC INTEREST ANALYSIS

PACIFIC GAS AND ELECTRIC COMPANY

CHAPTER 8

CITIZENS ENERGY – CITIZENS’ PUBLIC INTEREST ANALYSIS

Table of Contents

<u>A. Purpose and Summary of Testimony</u>	<u>8-1</u>
<u>B. Standard of Review</u>	<u>8-4</u>
<u>C. The Proposed Investment Program Will Provide Significant, Affirmative Public Benefits</u>	<u>8-5</u>
<u>1. Economic benefits to PG&E’s customers most in need of bill-paying assistance through Citizens’ provision of 30 years of substantial, incremental charitable funding.....</u>	<u>8-5</u>
<u>2. Citizens’ commitment to use its after-tax profits to fund bill-paying assistance for PG&E customers over the full 30-year terms of the proposed transmission leases in the context of the Commission’s statutory and policy obligations to disadvantaged communities and historically marginalized and low-income populations.....</u>	<u>8-12</u>
<u>3. Benefits to PG&E customers from long-term rate stability and a hedge (or insurance policy) against changes in the cost of PG&E’s equity over the 30-year life of each Lease</u>	<u>8-17</u>
<u>4. Economic benefits to customers associated with greater rate certainty and improved cost incurrence and intergenerational equity, consistent with long-standing ratemaking principles.....</u>	<u>8-24</u>
<u>D. Summary and Conclusion: In My Opinion, the Proposed Investment Program is Not Adverse to the Public Interest</u>	<u>8-25</u>
<u>Attachment SFT-1</u>	
<u>Attachment SFT</u>	

PACIFIC GAS AND ELECTRIC COMPANY
CHAPTER 8
CITIZENS ENERGY – CITIZENS’ PUBLIC INTEREST ANALYSIS

A. Purpose and Summary of Testimony

The purpose of my testimony is to evaluate the public interest and economic impacts of the proposal by Pacific Gas and Electric Company (“PG&E”) in its Amended Application¹ to lease entitlements (“Entitlements Leases”) to certain of its transmission assets to Citizens Energy Corporation (“Citizens”).² I was engaged by Citizens to assess these impacts and provide my expert perspective.

Based on my expert analysis, I conclude that the proposed Investment Program will result in net positive public benefits and is consistent with the public interest.

My opinions are informed by insights I gained from my experience as a state utility regulator. From 1988 until 1991, I served as a Commissioner on the Massachusetts Department of Public Utilities – this Commission’s counterpart in the Commonwealth of Massachusetts – and participated actively in the National Association of Regulatory Utility Commissioners (“NARUC”). In recognition of my work, I received NARUC’S Mary Kilmarx Award for Good Governance, Clean Energy and the Environment in 2014.

In addition to my service as a state utility commissioner, I have a long history of public service in other government agencies, both federal and state. For example, I served as the Assistant Secretary for Policy at the U.S. Department of Energy (“DOE”). For

¹ PG&E filed its original Application for Approval Under Public Utilities Code Section 851 to Lease Entitlements to Transmission Projects to Citizens Energy Corporation (“Application”) on March 12, 2024, amended on January 31, 2025 (“Amended Application”). The PG&E Amended Application addresses a proposed Investment Program between PG&E and Citizens, the terms of which are laid out in the Development, Coordination and Option Agreement (“DCOA” or “Agreement”) between PG&E and Citizens, executed on February 20, 2024 and amended and restated on January 29, 2025.

² Citizens has or will have subsidiary companies involved in this transaction. See Amended Testimony of Peter F. Smith (Amended Chapter 5) (“Smith Amended Testimony”) (Section G).

decades, I have been an expert analyst of economic, technological, regulatory, public policy, environmental, and other trends affecting the electric industry. I have never previously worked for Citizens but have long been familiar with Citizens' non-profit/organizational model and the important philanthropic components of Citizens' mission and work. This awareness is informed by my many years of work in government agencies involved in energy, environmental, and utility activities in Massachusetts, where Citizens is headquartered. I was raised in Southern California, taught at the University of California at Irvine, and have a Ph.D. and a Master's degree in regional planning from Cornell University.

My testimony makes several key points and explains how the proposed Investment Program offers affirmative benefits for PG&E's customers and the broader public.

First, over approximately 30 years, Citizens will provide substantial, sustained charitable funding (totaling more than an estimated \$450 million in contributions, assuming full implementation of the Investment Program) for direct bill-paying assistance programs that would not otherwise occur, directly benefitting PG&E's customers most in need of assistance in paying their bills. Second, the Investment Program supports the Commission's statutory and policy goals to remedy historical inequities affecting disadvantaged communities and low-income and marginalized populations, thereby helping to mitigate California's affordability challenge.³ Third, the Investment Program benefits customers by

³ As I explain below, because of the substantial and positive public benefits Citizens will bring to disadvantaged communities and historically marginalized low-income populations, which would not occur in the absence of the proposed Investment Program, this proposal will help fulfill the Commission's obligations under several distinct but related statutory and policy goals, including: (1) the Legislature's statutory mandate under Senate Bill 350 ("SB 350") to ensure that disadvantaged communities obtain a fair share of the benefits of California's clean energy transition; (2) the Commission's statutory mandate under California Public Utility Code § 739 to observe "the principle that electricity and gas services are necessities, for which a low affordable rate is desirable;" (3) the Commission's focus on addressing the needs of underserved communities and historically marginalized populations under the Commission's Environmental and Social Justice Action Plan ("ESJ Action Plan"); and (4) Governor Newsom's commitment to ameliorate the affordability challenge facing California ratepayers, as expressed in the Governor's October 2024 Executive Order N-5-24.

providing long-term rate stability through fixed and levelized cost recovery, shielding customers from fluctuations in PG&E's cost of equity over the 30-year life of each lease, serving as a hedge against future volatility, and offering long-term predictable rates on a portion of the costs for the applicable projects. Additionally, Citizens' financing approach aligns closely with PG&E's own debt-raising practices, meaning customers will not be disadvantaged by Citizens' debt costs. And fourth, customers served by the leased transmission assets will benefit from greater rate certainty, enhanced cost allocation, and improved intergenerational equity – aligning with established ratemaking principles.

These benefits are reinforced by critical customer protections embedded in the proposed Investment Program: (a) no double recovery of costs for the specific portion of the transmission assets covered by the leases under the proposed Investment Program; (b) Citizens will not recover in rates the incremental costs it will incur to undertake the proposed Investment Program; (c) PG&E has not provided any guarantee to Citizens that it will actually recover its costs to participate in any leases undertaken under the proposed Investment Program; and (d) the leases will involve only transmission assets that are planned to go into service in the near-term and for which there will be no change in regulatory oversight or in the planning, development, siting, permitting, construction, operation, maintenance, physical control, or ownership.

I understand that under Section 851 of the California Public Utilities Code ("Section 851"), PG&E must show the proposed Investment Program is not adverse to the public interest. In my opinion, the proposed Investment Program will provide substantial benefits to customers and to the general public and therefore is not adverse to the public interest. In fact, with its higher level of public benefit and stronger ratepayer protections, the proposed Investment Program compares favorably to two other similar leasing transactions previously

approved by the Commission.

I provide two attachments to this testimony: Attachment SFT-1 is a set of maps showing the geographic distribution of various populations, demographic characteristics and services in California. Attachment SFT-2 is my CV.

B. Standard of Review

I understand that the Commission will seek to determine whether the proposed Investment Program is not adverse to the public interest.⁴ In my professional judgment, the structure of the proposed Investment Program will readily allow the Commission to conclude with full confidence that the proposal meets this standard and will provide affirmative benefits to PG&E's customers.

I have reviewed prior Commission orders on similar transactions. The Commission's orders in D.11-05-048 (the Sunrise Decision)⁵ and D.19-03-024 (the Sycamore Decision)⁶ stated that, in reviewing applications under Section 851, the "Commission has a long-standing policy to apply the standard of 'not adverse to the public interest' ... [and to] 'foster and encourage transactions ... where the transaction is also 'in the public interest.'"⁷ These two orders involved Citizens' leasing of transmission entitlements from San Diego Gas & Electric Company ("SDG&E") under terms that are substantially similar to those proposed in the Amended Application of PG&E. In all of these transactions, Citizens has committed to

⁴ I understand that The Utility Reform Network ("TURN") has indicated that the appropriate standard is "whether the transaction will serve the public interest." Protest of the Utility Reform Network, Docket A.24-03-009 at 2-3 (Cal. P.U.C. Apr. 15, 2024). In my opinion, even if this standard were applicable, the Investment Program would readily meet this standard.

⁵ D.11-05-048 (Sunrise Decision), 2011 Cal. PUC Lexis 302 (Cal. P.U.C. 2011). This decision relates to Citizens' lease agreement with respect to the Sunrise Powerlink Transmission Project ("Sunrise Transmission Project").

⁶ D.19-03-024 at 9 (Sycamore Decision), 2019 Cal. PUC Lexis 154, at *13 (Cal. P.U.C. 2019), quoting D.09-07-035 at 13 (Application of Pacific Gas and Electric Company and Lamar Central Outdoor), 2009 Cal. PUC LEXIS 360, at *19 (Cal. P.U.C. 2009).

⁷ D.19-03-024 at 9 (Sycamore Decision), 2019 Cal. PUC Lexis 154, at *12 (Cal. P.U.C. 2019).

dedicate a major portion of its after-tax profits to provide substantial, ongoing charitable assistance, directly benefiting low-income customers, disadvantaged communities, and historically marginalized low-income populations.

The Commission's prior orders have informed my understanding of the Commission's standard of review to be applied here and the types of considerations relevant to these public interest tests. I address these considerations here.

C. The Proposed Investment Program Will Provide Significant, Affirmative Public Benefits

1. Economic benefits to PG&E's customers most in need of bill-paying assistance through Citizens' provision of 30 years of substantial, incremental charitable funding

From a public-benefit perspective, one of the most innovative and beneficial features of the proposed Investment Program is Citizens' binding commitment to devote an increasing percentage of its after-tax profits from the Entitlements Leases with PG&E to fund direct bill-paying assistance for PG&E customers in need. Citizens' charitable funding will increase from 50% of net after-tax profits for the first \$200-million tranche of investment, to 90% of net after-tax profits for the fifth \$200-million investment.⁸ This element of the proposed Investment Program (which Citizens' expert witness Mr. Ronald E. Kennedy estimates will amount to over \$450 million⁹) will directly help address energy affordability challenges faced by PG&E customers who have difficulty paying their bills.

Affordability is a key concern of the Commission, Governor Gavin Newsom,¹⁰ other

⁸ The Agreement provides that the percentage of Citizens' after-tax profits that will be used for expenditures on low-income households and/or disadvantaged communities are: (1) 50% of the net after-tax profits from the first \$200 million invested; (2) 60% of the net after-tax profits from the next \$200 million invested; (3) 70% of the net after-tax profits from the next \$200 million invested; (4) 80% of the net after-tax profits from the next \$200 million invested; and (5) 90% of the net after-tax profits from the final \$200 million invested. See Amended Application, Section II.B.9 Key Features of the Investment Program.

⁹ Mr. R. Kennedy's estimate assumes that PG&E and Citizens enter into all five leases. Further information about his assumptions are in his testimony. See Amended Testimony of Ronald Kennedy (Amended Chapter 6) ("R. Kennedy Amended Testimony") (Section F).

¹⁰ Governor Gavin Newsom, Executive Order N-5-24 (Oct. 30, 2024), <https://www.gov.ca.gov/wp-content/uploads/2024/10/energy-EO-10-30-24.pdf>.

public officials, consumer advocates, and low-income families in California. California will miss out on Citizens' charitable contributions aimed at addressing affordability challenges if the proposed Investment Program is not approved. If approved, the Investment Program will provide concrete, quantifiable, and incremental benefits for PG&E customers.

The Commission's prior decisions approving the Citizens-Sunrise and Citizens-Sycamore transactions provide a benchmark to assess the public interest benefits of this transaction. Citizens' charitable giving in the Citizens-Sunrise and Citizens-Sycamore transactions has yielded approximately \$30 million in public benefits from the Sunrise transaction¹¹ and approximately \$12 million in public benefits from the Sycamore transaction,¹² based on Citizens' pledge of providing 50% of after-tax profits in each of those transactions. Those amounts are far more modest than the public benefits Citizens will contribute if PG&E's proposed Investment Program is approved.

The percentage of after-tax profits that Citizens has promised to distribute to PG&E customers in need of assistance is far more substantial *here* (i.e., 50% for the first \$200 million invested, increasing by 10 percentage points with each subsequent \$200 million investment up to 90% for the fifth \$200 million invested – producing over an estimated \$450 million in benefits over a 35-year period). Further, in contrast to the Sunrise and Sycamore transactions, both of which the Commission and FERC approved to allow Citizens' request to recoup its relatively modest incremental costs in rates, *here* Citizens has agreed to recover its incremental costs from project profits and to forego any recovery of these costs from customers. In these important respects, the proposed Investment Program compares

¹¹ Citizens dedicated 50% of its after-tax profits from the lease to programs serving low-income families in Imperial County, estimated \$1 million per year for 30 years. This does not include indirect benefits such as increased employment opportunities, tax base contributions, and support for renewable energy development. See D.11-05-048 at 12 (Sunrise Decision), 2011 Cal. PUC Lexis 302, at *18 (Cal. P.U.C. 2011).

¹² Citizens dedicated 50% of its after-tax profits from the lease to support transportation electrification for low-income ratepayers and disadvantaged communities in San Diego County, estimated for a total of \$12 million over the 30-year lease term. See D.19-03-024 at 7 (Sycamore Decision), 2019 Cal. PUC Lexis 154, at *9 (Cal. P.U.C. 2019).

very well from a public-interest perspective to the Citizens-Sunrise and Citizens-Sycamore transactions the Commission previously approved.

Moreover, Citizens' annual charitable contributions will be material when examined in the context of other California programs that provide bill-paying assistance to utility customers. For example, the value of Citizens' after-tax charitable contributions is estimated to be \$2.2 million in the first year, rising year-by-year so that by 2030 the contribution would be approximately \$16.3 million per year.¹³ Over the 30-year lives of the five leases, these investments are estimated to add up to over \$450 million in total.

By way of comparison, in 2024, PG&E reported that some of its customers in need "received more than \$50 million in total financial assistance" from the Relief for Energy Assistance through Community Help ("REACH") program.¹⁴ The REACH program has been in place for several decades and uses charitable contributions from a variety of sources to fund assistance to help "low-income families keep their utility services turned on in times of hardship."¹⁵ Prior years' funding for the REACH program was much lower than in 2024, ranging between around \$0.9 million to \$2 million a year in 2019-2023.¹⁶

Figure 1 below shows the relative size of the incremental bill-paying assistance to PG&E customers in need that Citizens' charitable contributions are estimated to provide (if approved and implemented) compared to annual funding levels in the REACH program

¹³ This assumes that PG&E and Citizens enter into leases for all five tranches, with one \$200 million tranche per year after Commission approval. See the testimony of Citizens' witness Mr. Joseph P. Kennedy III, showing an illustrative estimate of over \$450 million in after-tax charitable contributions by Citizens and the basis for an estimated \$16.3 million in charitable contributions in 2030. See Amended Testimony of Joseph P. Kennedy III (Amended Chapter 7, Section IV).

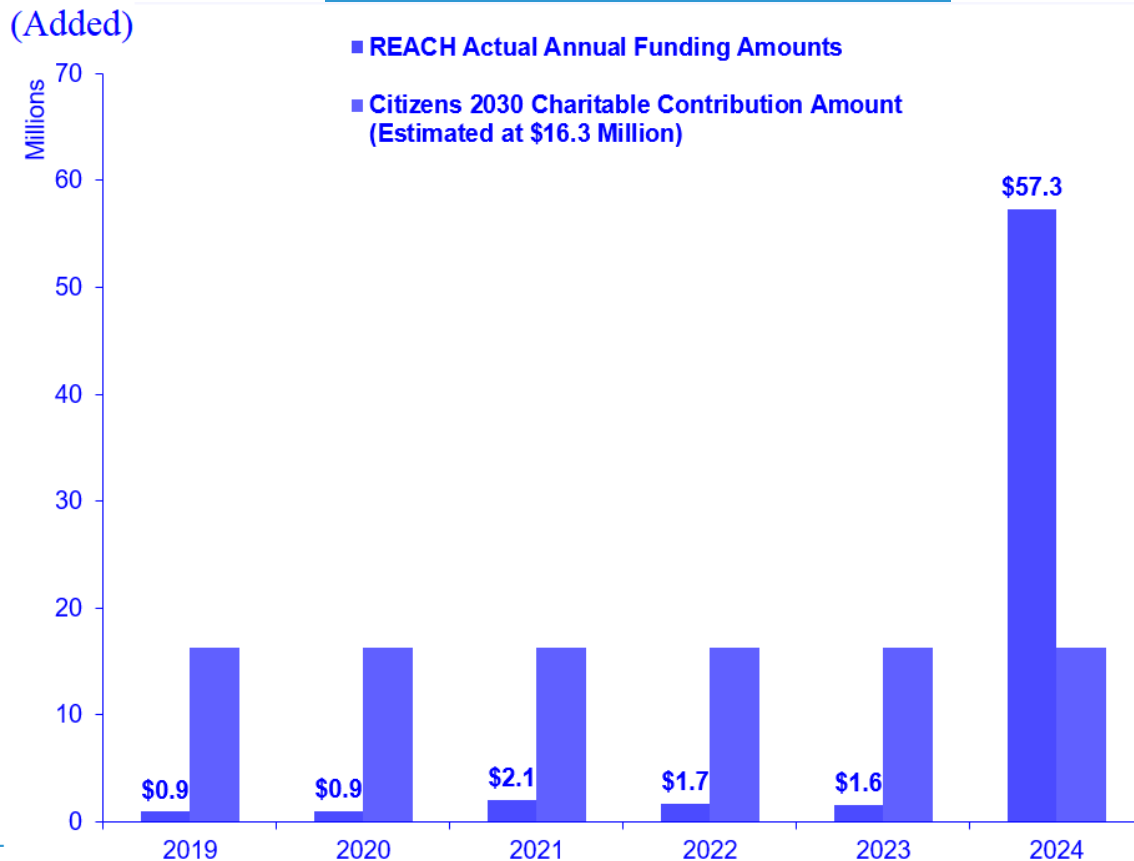
¹⁴ PG&E, "PG&E Provides Over \$50 Million in Bill Support to Customers Through REACH Program in 2024, Additional CARE & FERA Discounts Available to Qualifying Customers," *PR Newswire* (Nov. 25, 2024) (hereafter "PG&E November 25, 2024 Newswire"), <https://www.prnewswire.com/news-releases/pg-e-provides-over-50-million-in-bill-support-to-customers-through-reach-program-in-2024-additional-care-fera-discounts-available-to-qualifying-customers-302315703.html>.

¹⁵ PG&E, "Relief for Energy Assistance through Community Help (REACH)," <https://www.pge.com/en/account/billing-and-assistance/financial-assistance/relief-for-energy-assistance-through-community-help.html> (accessed Jan. 24, 2025).

¹⁶ Actual REACH funding amounts were: \$0.92 million in 2019; \$0.95 million in 2020; \$2.07 million in 2021; \$1.73 million in 2022; \$1.61 million in 2023; \$57.29 million in 2024. These data were provided by PG&E at my request.

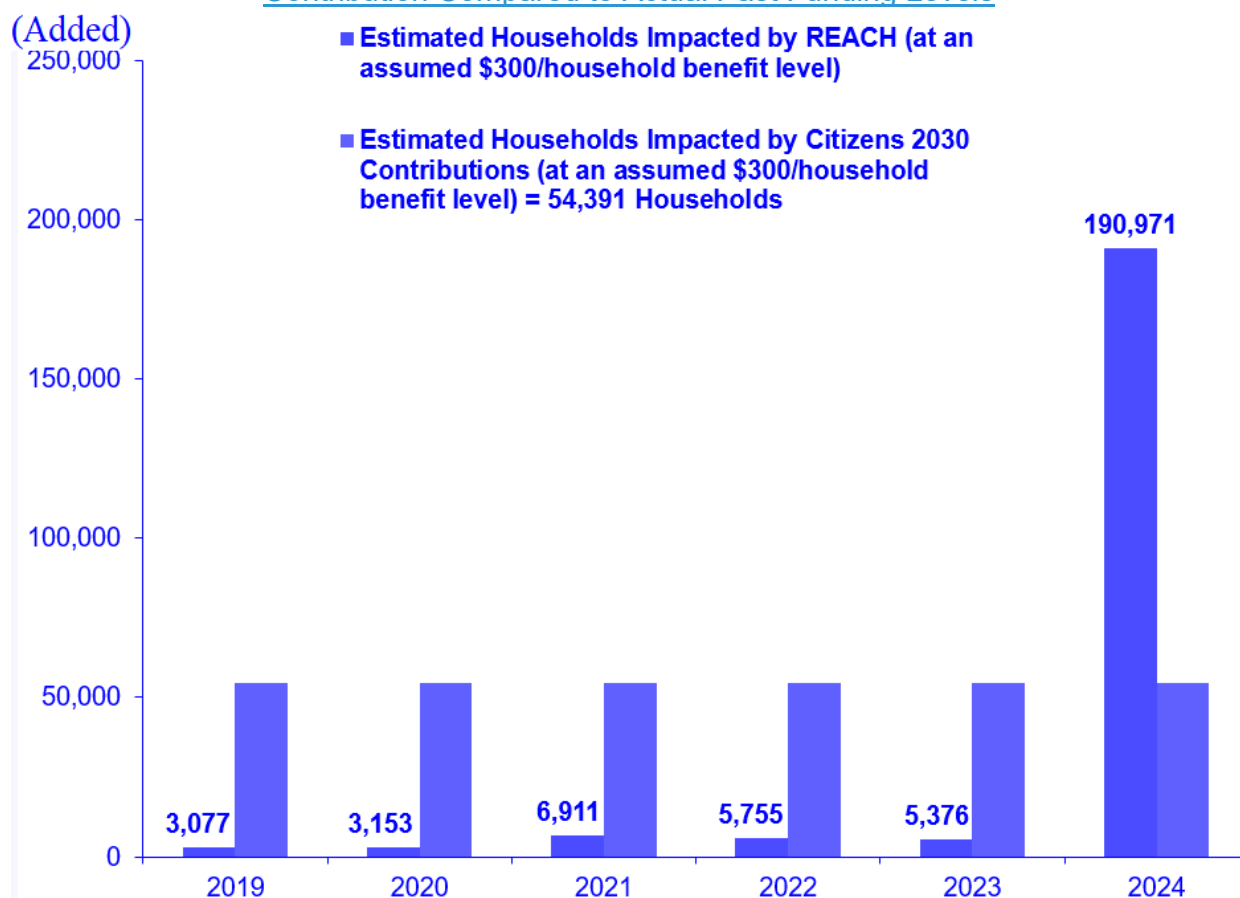
from 2019 through 2024. Figure 2 shows the estimated number of households that could be supported with Citizens' contributions – i.e., more than 54,000 households as of 2030 – compared to the estimated number of recipients in those recent years of REACH program funding, based on a consistent assumed funding level of \$300 per household. These figures illustrate that Citizens' contribution is significantly larger than the amounts that have been available in the REACH program in most recent years and can provide meaningful incremental assistance to PG&E customers in need; the figures are not intended to predict future REACH funding levels or to suggest that Citizens' funding would supplant or replace other sources of assistance.

Figure 1: Citizens' Estimated Charitable Contribution (Million \$) Compared to Actual Past REACH Program Funding Levels (2019-2024)



Source: REACH program funding by year (2019-2024) was provided by PG&E at my request.

Figure 2: Estimated Number of Households That Could Be Funded by Citizens' Charitable Contribution Compared to Actual Past Funding Levels



Source: REACH program funding by year (2019-2024) was provided by PG&E at my request.

As seen in these two figures, the estimated average \$16 million per year in bill-paying assistance that Citizens has committed to provide (assuming a \$1 billion investment) is clearly material from a customer perspective, considering the REACH program's historical funding levels. Notably, the REACH program temporarily ran out of funds as of September 2024 and assistance to customers had to be suspended for the remainder of 2024. PG&E informed customers that it expected "to re-open the REACH program" in January 2025 "at the standard benefit level of up to \$300 per household a year."¹⁷ That the REACH assistance program had to be suspended for the last quarter of 2024 shows that the need for customer assistance is greater than what the existing REACH program can serve.

¹⁷ PG&E November 25, 2024 Newswire.

In 2030, at the assumed benefit level of \$300 per household per year, Citizens' charitable contributions would provide more than 54,000 *additional* households with bill-paying assistance.

Citizens CEO Peter Smith mentions in his testimony that Citizens intends to work within REACH and/or other existing bill-paying assistance programs (e.g., the Low Income Home Energy Assistance Program ("LIHEAP")) to distribute Citizens' charitable dollars towards bill-paying assistance for PG&E customers in need.¹⁸ I describe the REACH program here only to illustrate that the bill-paying assistance Citizens will provide will be material in scope and will help a substantial number of PG&E customers over a sustained period of time. I am not proposing that Citizens use the REACH program (as distinct from other programs Mr. Smith discusses) for the purpose of distributing its charitable dollars to PG&E customers in need of bill-paying assistance or that Citizens' charitable dollars would replace any other funding the REACH program receives.

Another way to assess the benefit of Citizens' charitable contributions is to consider its size relative to the value of the support provided to PG&E's low-income customers through the California Alternate Rates for Energy ("CARE") program. CARE provides a discount of 30-35% to qualified households on their monthly PG&E electricity bills.¹⁹ During

¹⁸ Smith Amended Testimony (Section G). The LIHEAP program is federally funded, administered by state agencies (i.e., in California by the Department of Community Services and Development), and provides assistance to low-income and other eligible populations for paying energy bills and installing energy efficiency measures and other weatherization actions in their homes. See CPUC, "Paying My Energy Bills," <https://www.csd.ca.gov/Pages/Assistance-PayingMyEnergyBills.aspx> (accessed Jan. 24, 2025); PG&E, "Low Income Home Energy Assistance Program (LIHEAP)," <https://www.pge.com/en/account/billing-and-assistance/financial-assistance/low-income-home-energy-assistance-program.html> (accessed Jan. 24, 2025). The AMP program is a debt-forgiveness program for eligible low-income customers behind in paying their energy bills and is funded by other PG&E customers as part of PG&E's cost of providing service. See PG&E, "Arrearage Management Plan (AMP)," <https://www.pge.com/en/account/billing-and-assistance/financial-assistance/arrearage-management-plan-amp.html> (accessed Jan. 24, 2025).

¹⁹ CPUC, "CARE/FERA Program," <https://www.cpuc.ca.gov/industries-and-topics/electrical-energy/electric-costs/care-fera-program> (accessed Jan. 16, 2025). PG&E's electric rates show CARE customers received a 34.985% discount off of their total bundled charges in 2024. See PG&E, "Residential Incl TOU (OCT 1, 2024 – December 31, 2024) Electric Rates," <https://www.pge.com/tariffs/en/rate-information/electric-rates.html#accordion-a84c67dc1e-item-e10eec0cc5> (accessed Jan. 15, 2025).

2023, a PG&E residential electricity customer supported by CARE received an average monthly benefit of \$52.78 (or about \$633 over the full year).²⁰ Using these assumptions, if the proposed Investment Program were approved and PG&E and Citizens entered into all five leases by 2030, Citizens' average charitable contribution (at an estimated \$16.3 million a year) would be equivalent to providing full CARE-level assistance for over 25,500 PG&E customers annually as of 2030.²¹

Citizens' charitable contributions from the leases would provide incremental and meaningful assistance to PG&E's customers most in need of bill-payment aid. The PG&E transmission projects eligible to be included in the proposed Investment Program will be built, go into service, and have costs recovered from customers, *with or without* Citizens' involvement. Thus, the only real decision for the Commission to consider is whether these costs will be recovered through PG&E's rates or through Citizens' rates. However, the more than \$450 million in direct bill-paying assistance for PG&E customers will be unlocked only if the Commission approves the proposed Investment Program. When this public benefit is coupled with the rate stability that will be provided for customers (discussed below), the proposed Investment Program will affirmatively *advance* the public interest in the critically important area of affordability for PG&E's residential electricity customers most in need.

²⁰ PG&E, "Energy Savings Assistance (ESA), California Alternate Rates for Energy (CARE), and Family Electric Rate Assistance ("FERA") Programs 2023 Annual Report," at 75 (Cal. P.U.C. May 1, 2024) https://iob.cpuc.ca.gov/wp-content/uploads/sites/14/2024/06/A.19-11-003_PGE-ESA-CARE-2023-Annual-Report_5-1-2024.pdf (hereinafter "PG&E, 2023 Annual Report").

²¹ This illustrative calculation is based on the following assumptions: Citizens' 2030 charitable contribution of \$16.3 million divided by residential customer's annual CARE benefit of \$633.36. This comparison is not meant to suggest that a charitable contribution from Citizens (and associated with the proposed Investment Program) would literally fund CARE discounts for PG&E customers because such discounts are funded by other customers through a surcharge on electricity customers' bills; rather, it is intended to provide a reference point for the sizeable and positive contribution that Citizens would be providing to support energy affordability and low-income customers' ability to pay their electricity bills.

2. Citizens' commitment to use its after-tax profits to fund bill-paying assistance for PG&E customers over the full 30-year terms of the proposed transmission leases in the context of the Commission's statutory and policy obligations to disadvantaged communities and historically marginalized and low-income populations

This Commission is unquestionably a leader among state public utility commissions in the United States in focusing attention on the needs of disadvantaged communities and historically marginalized and low-income populations. This Commission also has increasingly emphasized the critical importance of customer affordability, even as the Commission has led the nation in promoting the transition to a clean and sustainable energy system.²² Likewise, California Governor Gavin Newsom has made customer affordability a centerpiece of his energy policy, as evidenced by his October 2024 Executive Order N-5-24. The proposed Investment Program advances these policy goals.

Citizens' commitment to charitable giving, using the after-tax profits from its proposed investment, will help accomplish the Commission's statutory mandate under SB 350 to bring the benefits of California's clean energy transition to disadvantaged communities.

In its Sycamore Decision, which approved Citizens' investment in SDG&E's Sycamore Transmission Project and which included a commitment by Citizens to contribute 50% of its after-tax profits to charitable giving programs in San Diego County, the Commission found that the proposal "will benefit disadvantaged communities and low-

²² For example, the Commission has continuously demonstrated that its "mission is to ensure that California investor-owned utility (IOU) customers receive safe, reliable, affordable and clean utility service at just and reasonable rates." See CPUC, 2021/2022 Annual Affordability Report, at 3 (Oct. 2023), <https://docs.cpuc.ca.gov/PublishedDocs/Efile/G000/M521/K479/521479752.PDF>. In addition, the CPUC's strategic directives include "empower[ing] California through access to safe, clean, and affordable utility services and infrastructure" and "promot[ing] policies and rules that provide customers access to and affordable essential services for energy, communications, water and transportation." CPUC, "Strategic Directives, Governance Process Policies, and Commission-Staff Linkage Policies," at 4, 7 (updated Feb. 27, 2020), https://www.cpuc.ca.gov/-/media/cpuc-website/files/uploadedfiles/cpuc_public_website/content/about_us/mission_and_values/strategic-directives-and-governance-policies.

income families in San Diego County and advance Senate Bill 350's goal of increasing access of clean energy programs for disadvantaged and low-income communities."²³

The same will be true if the Commission approves the proposed Investment Program, with its extraordinary level of customer benefits (estimated to amount to over \$450 million). This is an order-of-magnitude greater than the public benefits produced by the earlier Citizens-Sycamore investment, and it will be devoted entirely to providing bill-paying assistance to PG&E customers most in need.

Use of Citizens' charitable contributions to assist PG&E's electricity customers in need will help address energy affordability issues in disadvantaged communities and historically marginalized and low-income populations in California. There is significant overlap in the location of (a) PG&E's low-income customers, (b) low-income communities in PG&E's service territory, and (c) disadvantaged communities in PG&E's service territory. Attachment SFT-1 shows several maps that indicate the geographic areas of California with Disadvantaged Communities (Figure 1-A), Low-Income Communities (Figure 1-B), Electric Areas of Affordability Concern (Figure 1-C), PG&E's Electricity Service Area (Figure 1-D), California Electricity Climate Zones (Figure 1-E), and California Counties with a majority of residents that are Hispanic (Figure 1-F).

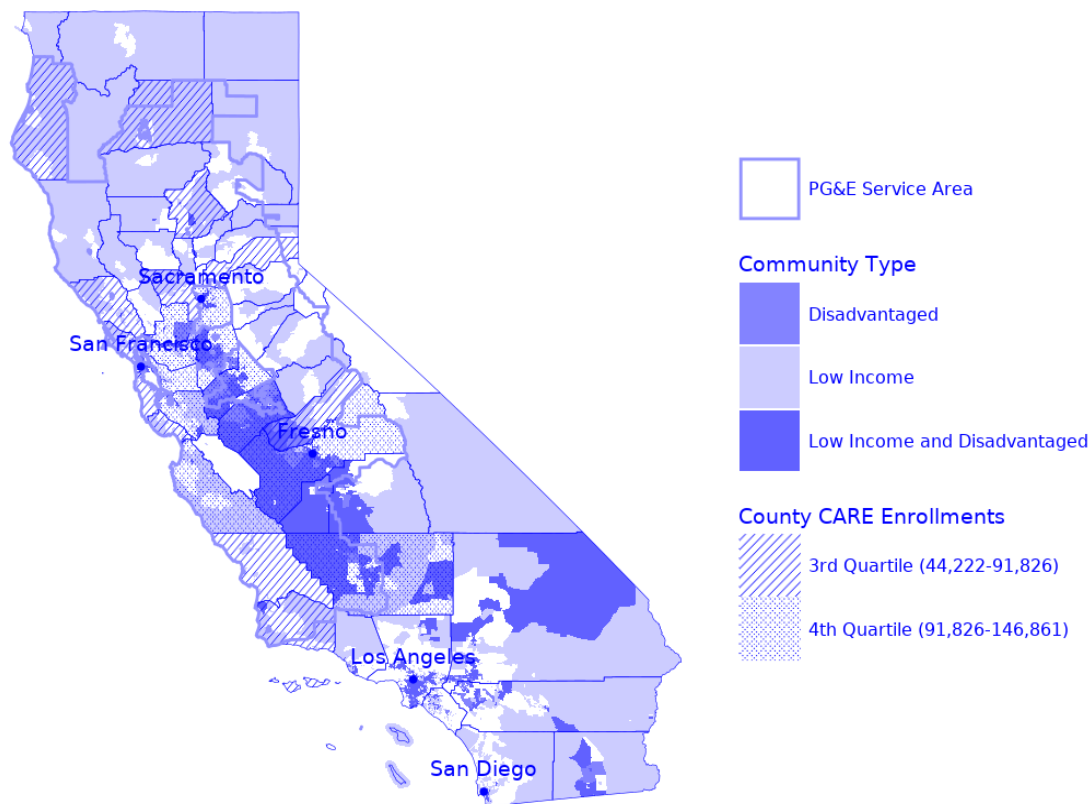
Attachment SFT-1 Figure 1-G shows a map of California that overlays geographic information on Disadvantaged Communities, Low-Income Communities, and counties with high numbers of residential customers eligible for PG&E's CARE program (based on those customers' low household income). Figure 1-G is reproduced below as Figure 3. Over half of all of PG&E's low-income residential customers that are eligible for the CARE program

²³ D.19-03-024 at 24, Finding of Facts 10 (Sycamore Decision), 2019 Cal. PUC Lexis 154, at *34 (Cal. P.U.C. 2019).

reside in the electricity climate zones in California's Central Valley (Attachment SFT-1 Figure 1-E). This area overlaps with portions of PG&E's service territory where there are Electricity Areas of Affordability Concern, Disadvantaged Communities and Low-Income Communities, and counties with Hispanics (Latinos) as the majority population group. As shown in Figure 3, 24 of the 52 counties in PG&E's service territory have more than the median number of low-income households participating in the CARE program (44,000+) with many of these counties located in the Central Valley.

Figure 3: California Composite Map of Disadvantaged Communities, Low-Income Communities, and PG&E Service Area with Counties Having High Numbers of Electricity CARE Customers

(Added)

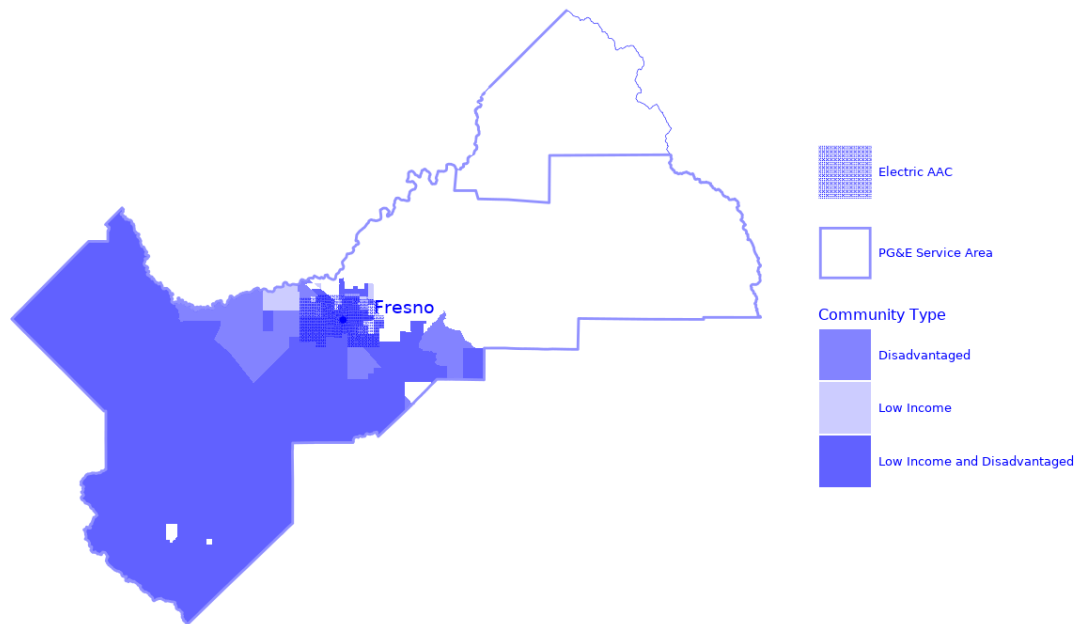


Sources: See Attachment SFT-1.

Fresno County offers a good example of such demographic characteristics. There are nearly 147,000 PG&E customers in Fresno County who participated in the CARE

program in 2023.²⁴ Fresno County also has Low-Income Communities, Disadvantaged Communities, and Electric Areas of Affordability Concerns (“AAC”), as shown in Figure 4 below, as well as a majority Hispanic (Latino) population.

Figure 4: Fresno County – Map of Disadvantaged Communities, Low-Income Communities, and PG&E Service Area with Electric Areas of Affordability Concerns (Added)



Note that Hispanics (Latinos) make up approximately 55% of Fresno County’s population according to US Census data, but this fact is not highlighted in the Figure itself because this characteristic affects the entire county. Sources: See Attachment SFT-1.

Because of the high degree of overlap between PG&E customers in need of assistance – the customers that Citizens has pledged to assist through its charitable contributions from the proposed Investment Program – and the communities in PG&E’s service area that are disadvantaged, low-income, struggling with affordability challenges, and consisting of historically marginalized minority (in particular, Latino people, in the case

²⁴ Another roughly 18,000 households in Fresno County are estimated eligible for the FERA program (which has household income eligibility requirements just slightly higher than the CARE program). See PG&E, 2023 Annual Report, at 152, 168.

of Fresno County), I am confident that the monetary benefits from Citizens' commitments will flow predominantly to these deserving communities. This will further advance this Commission's goal of redressing historical injustices in these communities.

The public benefits that will result from the proposed Investment Program will help fulfill the Commission's obligation under SB 350 to bring to low-income customers and disadvantaged communities in PG&E's service territory a fair share of the benefits of California's transition to a clean-energy economy. The proposal is explicitly aligned with California's goals for an equitable and affordable clean energy economy.

The proposed Investment Program also will advance in a meaningful way the policy goals of the Commission's Environmental and Social Justice ("ESJ") Action Plan. As the Commission emphasized when it adopted and later updated the ESJ Action Plan:

The CPUC is tasked with serving all Californians, and to do so equitably while reaching the state's climate goals, it must acknowledge that some populations in California face higher barriers to access to clean, safe, and affordable utility services. To fulfill its mission, the CPUC acknowledges it must focus resources on communities that have been underserved, as this plan outlines. Additionally, the CPUC acknowledges that its decisions have the potential to perpetuate and exacerbate existing disparities in ESJ communities. As such, the ESJ Plan serves as an ongoing commitment to mitigate and eliminate harms to these communities. As the CPUC fulfills the goals and objectives listed in this ESJ Action Plan and improves its ability to serve ESJ communities, it will become even more transparent, accessible, and effective for all the communities it serves.²⁵

Continuing to assess the cumulative impact of rates on households and *working to mitigate these impacts on the most burdened households will remain a priority in all actions the CPUC takes.*²⁶

Here, the substantial charitable funding that Citizens will provide to support bill-paying assistance for PG&E customers in need (estimated to total over \$450 million) is a

²⁵ CPUC, ESJ Action Plan, version 2.0 at 9 (Apr. 7, 2022), <https://www.cpuc.ca.gov/-/media/cpuc-website/divisions/news-and-outreach/documents/news-office/key-issues/esj/esj-action-plan-v2jw.pdf>.

²⁶ *Id.* at 22 (emphasis added).

significant step towards meeting the goals of the Commission's ESJ Policy. This assistance will help many at-risk customers avoid having their PG&E service terminated for non-payment. The ESJ Policy is designed to protect these customers.

A third important policy goal the proposed Investment Program will help to achieve is affordability for California electricity consumers, which has become particularly pronounced over the last few years as rate increases have begun to outpace inflation.²⁷ The large amount of bill-paying assistance Citizens will provide to PG&E customers in need (estimated to be over \$450 million, assuming a total investment of \$1 billion) is a material amount that will make a real difference from the perspective of customer affordability.

In my view, the Commission should approve the proposed Investment Program given that it will generate an estimated \$450 million in direct bill-paying assistance for PG&E customers in need, advance the goals of SB 350 and the Commission's ESJ Policy by bringing a greater share of the benefits of California's clean energy economy to disadvantaged communities and historically marginalized and low-income populations, and will help ameliorate the affordability challenge facing California ratepayers.

3. Benefits to PG&E customers from long-term rate stability and a hedge (or insurance policy) against changes in the cost of PG&E's equity over the 30-year life of each Lease

The Entitlements Leases under the proposed Investment Program also will benefit customers by creating greater certainty and stability in the cost of capital for the applicable PG&E transmission projects. By using a fixed and levelized rate structure, Citizens' \$1 billion total potential investment in these projects offers long-term rate stability and a critical hedge against market fluctuations, ensuring predictable costs for customers.

²⁷ The 2024 SB 695 report noted "rate increases for all of the three major electric IOUs... began to outpace inflation for the first time [in 2021]." See CPUC, "2024 Senate Bill 695 Report," at 11 (July 2024), <https://www.cpuc.ca.gov/-/media/cpuc-website/divisions/office-of-governmental-affairs-division/reports/2024/2024-sb-695-report.pdf>.

This Commission and FERC have previously recognized that Citizens’ fixed and levelized rate structure is beneficial for customers as it serves as an effective hedge against increases in the cost of capital over time. In its Sycamore Decision, the Commission found that “Citizens’ fixed capital costs provide rate stability to ratepayers,” that it “protect[s] ratepayers from changes in money costs caused by fluctuations in the market,” and that “the rate stability and protection from market fluctuations provide tangible benefits to ratepayers.”²⁸ The Commission made a similar finding in its Sunrise Decision.²⁹ FERC likewise determined that Citizens’ fixed and levelized recovery of its capital costs “is expected to benefit consumers by providing rate stability and protection against potential capital cost increases over time.”³⁰ Citizens’ fixed and levelized cost recovery in the proposed PG&E Investment Program, which is consistent with the method used in the precedent leasing transactions, warrants a similar conclusion that it serves customers’ interests from a public interest perspective.

First, there will be no discernible impact on customers related to the cost of debt (i.e., interest rates for borrowed money) for customers under the proposed Investment Program. The actual cost of debt for Citizens and the cost of debt for PG&E will be closely matched for the projects included in the Entitlements Leases. PG&E witnesses Ms. Jennifer Nelson (Chapter 9) and Ms. Divya Raman (Chapter 3) explain why.

Also, as Ms. Nelson explains, utility companies operate pursuant to public service obligations which require them to undertake capital investments with regulatory approval to satisfy demand and other electric-system requirements, regardless of market conditions, including the interest-rate environment. Given expectations about the central roles of the electric system and grid modernization in the transition to a decarbonized energy system in California, as well as expected load growth, PG&E will need to take on significant new

²⁸ D.19-03-024 at 16 (Sycamore Decision), 2019 Cal. PUC Lexis 154, at *22 (Cal. P.U.C. 2019).

²⁹ D.11-05-048 at 18-19 (Sunrise Decision), 2011 Cal. PUC Lexis 302, at *26-28 (Cal. P.U.C. 2011).

³⁰ *Citizens S-Line Transmission LLC*, 175 FERC ¶ 61,046 at P 25 (2021).

capital commitments on a timely basis – even when capital costs may be relatively elevated. This means that PG&E cannot time its investments to capital market conditions and wait for some ideal interest rate (which may never come) to issue new debt or to undertake transactions. As Ms. Raman explains, absent Citizens’ involvement, PG&E would finance the long-life transmission projects, like those included in the Investment Program, by issuing long-term, fixed-rate debt at prevailing market rates – which mirrors how Citizens will finance its investment in the projects. Consequently, customer rates will reflect the then-current interest-rate environment, with or without Citizens’ involvement. Concerns that the proposed Investment Program might allow Citizens to set rates at a time of relatively elevated debt costs overlook the reality that PG&E would also issue fixed-rate debt at prevailing rates to finance these projects even if Citizens were not involved.

Notwithstanding the fact that customers will not be disadvantaged by Citizens’ cost of debt relative to PG&E’s, it is important to remember that interest rates have historically gone up and down over time, underscoring the importance of maintaining a long-term perspective when evaluating debt costs. Figure 5 provides an overview of the 30+ year trend in corporate bond rates.³¹ Notably, during the past 15 years, interest rates have been “exceptionally low”,³² especially during the Great Recession (2007-2009), the subsequent slow economic recovery period (through 2015), and the pandemic (2020-2021). Even in current market conditions, interest rates remain well below the highest rates seen in the past 30 years.

³¹ Corporate bonds are issued by firms as a means to borrow money at a particular interest rate over a specific period of time, and typically have higher default risk relative to treasury bonds and thus have higher interest rates.

³² John Weinberg, “The Great Recession and Its Aftermath,” Federal Reserve History (Nov. 22, 2013), <https://www.federalreservehistory.org/essays/great-recession-and-its-aftermath>.

Figure 5: Monthly Interest Rate for Key Debt Instrument (Corporate Bonds), 1990-2024



Source: Moody's, Moody's Seasoned Baa Corporate Bond Yield [BAA], retrieved from FRED, Federal Reserve Bank of St. Louis; <https://fred.stlouisfed.org/series/BAA>, accessed January 11, 2025.

While historical patterns provide important context, it is not possible to know what interest rates will look like in the future. Although various financial observers and analysts have opined about potential changes in interest rates in the next few years,³³ economic and political developments will continue to drive fluctuations, making meaningful predictions unreliable – including any prediction that current interest rates will decline any time soon.³⁴

³³ Federal Open Market Committee, "FOMC Projections Materials," Accessible Version (Sept. 18, 2024), <https://www.federalreserve.gov/monetarypolicy/fomcprohtml20240918.htm>.

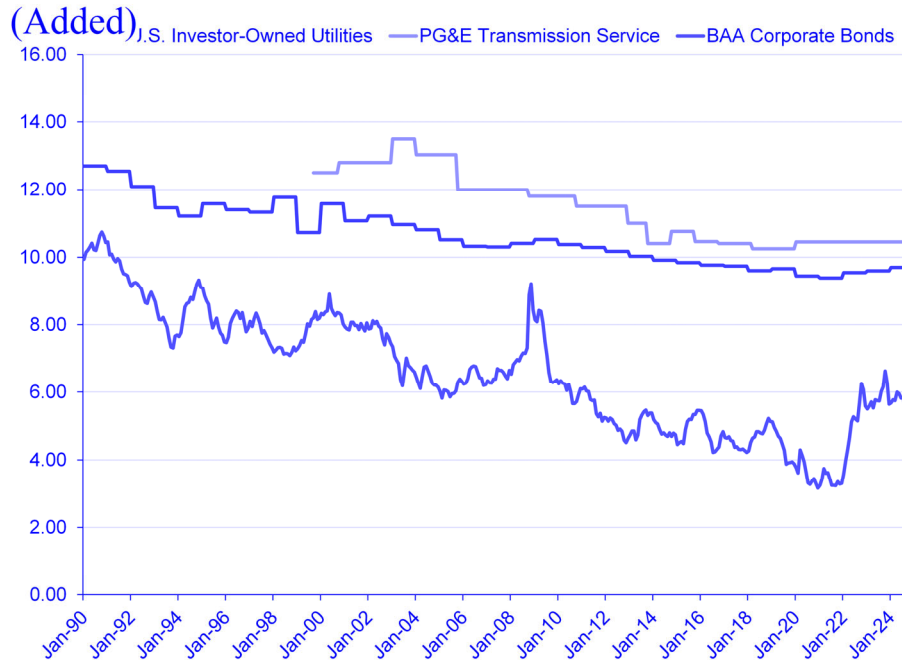
³⁴ Recent media reports have described this state of uncertainty about future economic outlooks for the next few years (in which not just inflation rates but also other factors – like monetary policy, consumer spending, trade dynamics, global economic conditions – can affect interest rates). See Colby Smith, "The Fed is About to Hit Pause on Rate Cuts," *New York Times* (Jan. 28, 2025), [2025/01/28/business/fed-rate-cut-pause-why.html](https://www.nytimes.com/2025/01/28/business/fed-rate-cut-pause-why.html); Colby Smith, "What to Watch at the Federal Reserve's First Meeting of 2025," *New York Times* (Jan. 29, 2025), <https://www.nytimes.com/2025/01/29/business/economy/federal-reserve-what-to-watch.html>; Rebecca Patterson, "Trump's Plans Are Making Your Life More Expensive," *New York Times* (Jan. 29, 2025), <https://www.nytimes.com/2025/01/29/opinion/trump-inflation-bonds-debt-yield.html>. See also: Ben Casselman, "Inflation Sped Up in December, a Fresh Challenge for the Fed," *New York Times* (Jan. 15, 2025), <https://www.nytimes.com/2025/01/15/business/inflation-december-economy.html>; Paul Kiernan, "Jobs Growth Tops Expectations: Report Put Further Fed Rate Cut in Doubt," *Wall Street Journal* (Jan. 11, 2025), <https://www.wsj.com/public/resources/documents/rWqo5EmqdWd3eSEHjY5X-WSJNewsPaper-1-11-2025.pdf>.

Second, Citizens' fixed return on equity (i.e., its FERC-authorized ROE) provides valuable long-term rate stability to customers. While Citizens' ROE for each Lease will be fixed for the full 30-year term of the applicable Lease, PG&E's ROE (and that of other investor-owned utilities) will float with market and regulatory conditions over this period. As Figure 6 illustrates, historical trends show that authorized ROEs for investor-owned utilities, including PG&E, have stayed within a relatively narrow range, and PG&E's current authorized ROE is among the lowest it has been since 1990.³⁵ I expect this stability to continue going forward and, taking a long-view, do not think it is likely that PG&E's ROE will materially decline.³⁶ Accordingly, Citizens' fixed and locked-in ROE is not likely to expose customers to adverse rate impacts. However, customers (and the Commission) can be certain that they are getting the benefit of a hedge against fluctuations in PG&E's ROE over the lease terms, which provides meaningful long-term rate stability.

³⁵ Moreover, allowed ROEs have varied significantly less over time than interest rates for corporate bonds.

³⁶ While ROEs are significantly less volatile than interest rates, and PG&E's current ROE is near a historical low, attempting to predict with any degree of certainty what a utility's ROE will be ten, twenty or thirty years down the road is not realistic or reliable. Accordingly, a hedge is a valuable instrument here.

Figure 6: Historical Trends in Long-Term Debt Compared to Allowed Returns on Equity for U.S. Investor-Owned Utilities and PG&E Transmission Service



Sources:

[1] U.S. Investor-Owned Utility Average ROE: Data from S&P Global Intelligence, Regulatory Research Associates, Major Energy Rate Case Decisions in US, through October 31, 2024.

[2] PG&E Transmission Service ROE: Data from PG&E Transmission Owner Rate Cases at FERC.

[3] BAA Corporate Bonds: Data from Moody's, Moody's Seasoned Baa Corporate Bond Yield [BAA], retrieved from FRED, Federal Reserve Bank of St. Louis; <https://fred.stlouisfed.org/series/BAA>, accessed January 11, 2025.

Third, by fixing the ROE over the 30-year period of each Lease, the proposed Investment Program protects customers from the impact of future volatility in the allowed return on the capital needed to finance new transmission investment. Because the structure of the transaction involves spreading a total \$1 billion investment across up to five tranches, each investment tranche will have its own fixed, levelized rate reflecting market conditions when that lease is executed. This ensures that any future shifts in capital costs are captured in the rates for subsequent leases. Essentially, this structure provides customers with the benefit of diversification and avoids the risks of “putting all eggs in one basket.”

Buying a hedge now has inherent value, even if future outcomes might seem more or less favorable in hindsight. The benefit lies in mitigating uncertainty, not merely in outperforming alternative scenarios.

Even if future conditions end up making the hedge less advantageous than

expected, its limited application to a small fraction of the CAISO transmission system ensures that any potential downside for ratepayers remains minimal. CAISO's total high-voltage transmission annual revenue requirement is \$2.804 billion as of January 1, 2025.³⁷ The annual revenue requirement for all five Citizens-PG&E leases is estimated to peak at approximately \$100 million in 2030 with a gradual reduction thereafter over the 30-year lives of the five leases.³⁸ Even assuming (unrealistically) that CAISO's revenue requirement remains static, Citizens' maximum revenue requirement would account for less than 3.5% of the total. In fact, the CAISO transmission asset base grew by over \$522 million over the past five years,³⁹ and is likely to continue increasing over the time of the proposed Investment Program. Importantly, regardless of Citizens' participation, PG&E would still develop these assets to meet system needs, and the associated costs would be recovered through the CAISO revenue requirement. The Investment Program simply provides a more predictable and stable cost structure for a small portion of these necessary projects, providing customers with the benefits and protections of diversification.

The locked-in portion of the revenue requirement is analogous to a small annuity within a diverse investment portfolio. While the ROE for the majority of CAISO transmission assets will fluctuate with the market, the fixed-rate structure of the leases provides stability and predictability for a small subset. With Citizens' involvement, a small portion of those assets will have a fixed cost of equity, insulated from market fluctuations. This approach reflects a common and prudent risk-mitigation strategy.

³⁷ California ISO, "High Voltage Access Charge Rates Effective Jan 01, 2025" (Jan. 13, 2025), <https://www.caiso.com/documents/high-voltage-access-charge-rates-effective-jan-01-2025.pdf>.

³⁸ The estimated \$100 million annual revenue requirement in 2030 is based on the unadjusted, fixed, levelized Citizens' capital TRR of \$22,027,018 for the first lease. See R. Kennedy Amended Testimony (Section B).

³⁹ CAISO's total high-voltage transmission annual revenue requirement as of January 1, 2019, was \$2.283 billion. See California ISO, "High Voltage Access Charge Rates Effective Jan 01, 2019" (Mar. 21, 2019), <https://www.caiso.com/library/high-voltage-access-charge-rates-effective-2019>.

4. Economic benefits to customers associated with greater rate certainty and improved cost incurrence and intergenerational equity, consistent with long-standing ratemaking principles

The proposed Investment Program will provide greater rate certainty and improved cost allocation and intergenerational equity for customers served by the affected transmission assets over the multi-decadal lives of the leases, which is consistent with long-standing utility ratemaking principles of rate stability and predictability.⁴⁰

The five Entitlements Leases support these rate-stability and predictability outcomes in two ways: first, by locking-in the return on equity (as described above); and second, by levelizing the payments that recover the costs of these assets over 30 years.

Under normal ratemaking, the revenue requirements for the return on investment are calculated based on the undepreciated amount of investment in rate base times the allowed return in any year. This front-end loads the dollar levels of return on investment because most of the investment has not yet been depreciated at the beginning of the investment-recovery period. Levelization of the cost recovery for an investment flattens and smooths the timing of recovery so that customers that use the asset in different years pay a consistent amount for both return of (i.e., depreciation) and on (i.e., allowed return) investment.

Thus, the proposed Investment Program's approach is consistent with the principles of rate stability and predictability, along with intergenerational equity and fairness. This was the conclusion of the Commission when it determined that a similar cost-recovery methodology for Citizens' investment in the Sunrise Transmission Project was net beneficial

⁴⁰ James Bonbright, *Principles of Public Utility Rates*, Powell Goldstein LLP, first published by Columbia University Press in 1961, <https://www.raponline.org/wp-content/uploads/2023/09/powellgoldstein-bonbright-principlesofpublicutilityrates-1960-10-10.pdf>.

to customers.⁴¹

D. Summary and Conclusion: In My Opinion, the Proposed Investment Program is Not Adverse to the Public Interest

The Investment Program benefits I described above accompany explicit elements of the proposed design that provide robust protections for the retail electricity customers of PG&E and the transmission customers of the CAISO, ensuring that ratepayers are not disadvantaged as a result of the Entitlements Leases. The DCOA has multiple provisions that specifically provide such customer protections:

- a. The cost of capital for Citizens' financing of leases associated with the proposed Investment Program is capped at PG&E's own cost of capital.⁴²
- b. PG&E has not provided any guarantee to Citizens with respect to Citizens' actual recovery of its costs.⁴³
- c. Citizens will recover its upfront and ongoing incremental costs associated with the proposed Investment Program from project profits and not through rates charged to

⁴¹ The Commission stated in the Sunrise Decision (D.11-05-048 at 18-19 (Sunrise Decision), 2011 Cal. PUC Lexis 302, at *26-28 (Cal. P.U.C. 2011)) that: "SDG&E touts the levelized cost recovery component of the DCA as another benefit of the Citizens project. In contrast to conventional utility ratemaking, where capital investment cost recovery is 'front end loaded' because revenue requirements decline as rate base depreciates, the DCA provides for levelized revenue requirements over the 30-year lease period. Citizens contends this is a significant consumer advantage because, according to its witness Dr. Wilson, in any long term projection the early years are important and 'distant forecasts (30, 40, 50 years into the future) are scarcely worth the air they ride on.' [footnote 19 in the original] DCA's provision for levelized capital cost recovery over the 30-year term of the lease, (compared to conventional ratemaking) provides a net benefit to ratepayers, because ratepayers are paying a constant amount for the lease period. While some could argue that this levelization is merely an inter-temporal shift of cost responsibility among ratepayers, it is a benefit to the ratepayers of today to not have to pay the front-ended costs. It is fair to ratepayers to levelize the costs out, at a set, but lower amount, for the entire 30 years rather than burdening some ratepayers today. Under the circumstances, we conclude that the DCA's levelized rate methodology provides a ratepayer benefit."

⁴² Smith Amended Testimony (Section G); Raman Amended Testimony (Section D).

⁴³ Amended Testimony of Michael Medeiros (Amended Chapter 2) ("Medeiros Amended Testimony") (Section B.4).

customers.⁴⁴

Together, those provisions of the DCOA help to protect PG&E customers from adverse rate impacts. Additionally, the DCOA expressly precludes any double-recovery of the costs of PG&E's transmission assets supported through the Investment Program.⁴⁵ The affected transmission assets will be financed either (a) by Citizens through the leasing arrangement, excluded from PG&E's rate base, and subject to FERC's normal transmission ratemaking, or (b) by PG&E using its traditional sources of capital and subject to FERC's normal ratemaking for transmission in the CAISO region.⁴⁶

Based on my experience in utility ratemaking, I conclude that these various attributes of the proposed Investment Program will ensure that it will provide ample protection of the interests of customers of PG&E and the CAISO.

Finally, there are several additional aspects of the proposed transaction that will further protect against any adverse impact on the public interest. There will be no diminution of this Commission's regulatory oversight over the approval of transmission facilities that will be financed through the proposed Investment Program. Citizens may only gain an interest in projects that have received the necessary regulatory approvals and have been constructed and are ready for service.⁴⁷ More broadly, the proposed Investment Program introduces no change in the planning, development, siting, permitting, construction, operation, maintenance, and physical control over the transmission assets that will be subject to the Entitlements Leases under the proposed Investment Program.

⁴⁴ Medeiros Amended Testimony (Section B.4); Raman Amended Testimony (Section E); Smith Amended Testimony (Section H).

⁴⁵ Amended Application, Section 3.B; Medeiros Amended Testimony (Section B.4); Raman Amended Testimony (Section C).

⁴⁶ Medeiros Amended Testimony (Section B.4); Raman Amended Testimony (Section D).

⁴⁷ For example, see the Proposed Project List for Option Period 1 from the Medeiros Amended Testimony (Section B.2, Table 2-1).

For these reasons, in my opinion the proposed Investment Program will provide net benefits to ratepayers and to the general public and is not adverse to the public interest. Compared to two other similar leasing transactions previously approved by the Commission, this proposal provides substantially greater public benefits without adverse impacts.

ATTACHMENT SFT-1:

Maps of California:

Disadvantaged Communities,

Low-Income Communities,

Electric Areas of Affordability Concern,

PG&E Service Territory,

California Electric Climate Zones,

Counties with a Majority of Hispanic Residents Composite Map

Figure 1-A¹

Disadvantaged Communities



Figure 1-B¹

Low-Income Communities



Figure 1-C²

Electric Areas of Affordability Concern



Figure 1-D³

Figure 1-E⁴

Figure 1-F⁵

¹ California Air Resources Board, “California Climate Investments Priority Populations Mapping Tool 4.0 - LowIncome Community Designation,” https://gis.carb.arb.ca.gov/portal/apps/experiencebuilder/experience/?id=5dc1218631fa46bc8d340b8e82548a6a&page=Priority-Populations-4_0 (accessed Jan. 14, 2025).

² CPUC, “2021/2022 Annual Affordability Report,” at 22 (Oct. 2023), <https://www.cpuc.ca.gov/-/media/cpucwebsite/divisions/energy-division/documents/affordability-proceeding/2021-2022/2021-and-2022-annualaffordability-report.pdf>.

³ PG&E, “Electric Service Area Maps,” at 2 (Nov. 17, 2014), https://www.pge.com/tariffs/assets/pdf/tariffbook/ELEC_MAPS_Service%20Area%20Map.pdf.

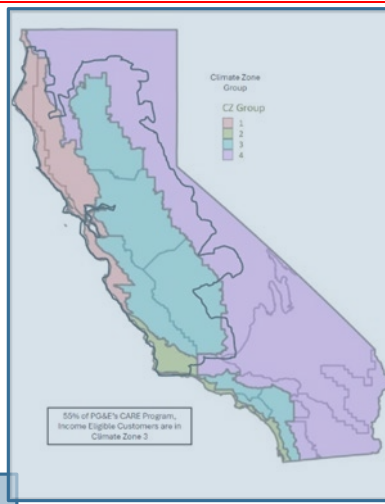
⁴ Evergreen Economics, “2022 Low Income Needs Assessment,” at 9 (Dec. 9, 2022), https://liob.cpuc.ca.gov/wp-content/uploads/sites/14/2023/07/2022_LINA_Report_120922_FINAL.pdf.

⁵ Rural Health Information Hub, “Hispanic Population, 2023 – California,” <https://www.ruralhealthinfo.org/charts/25?state=CA> (accessed Jan. 15, 2025).

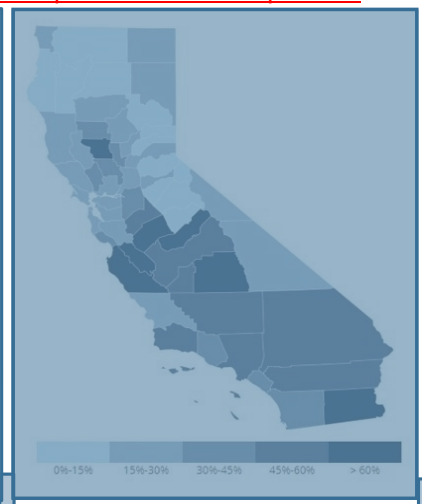
PG&E Electric Service Area



California Electric Climate Zones



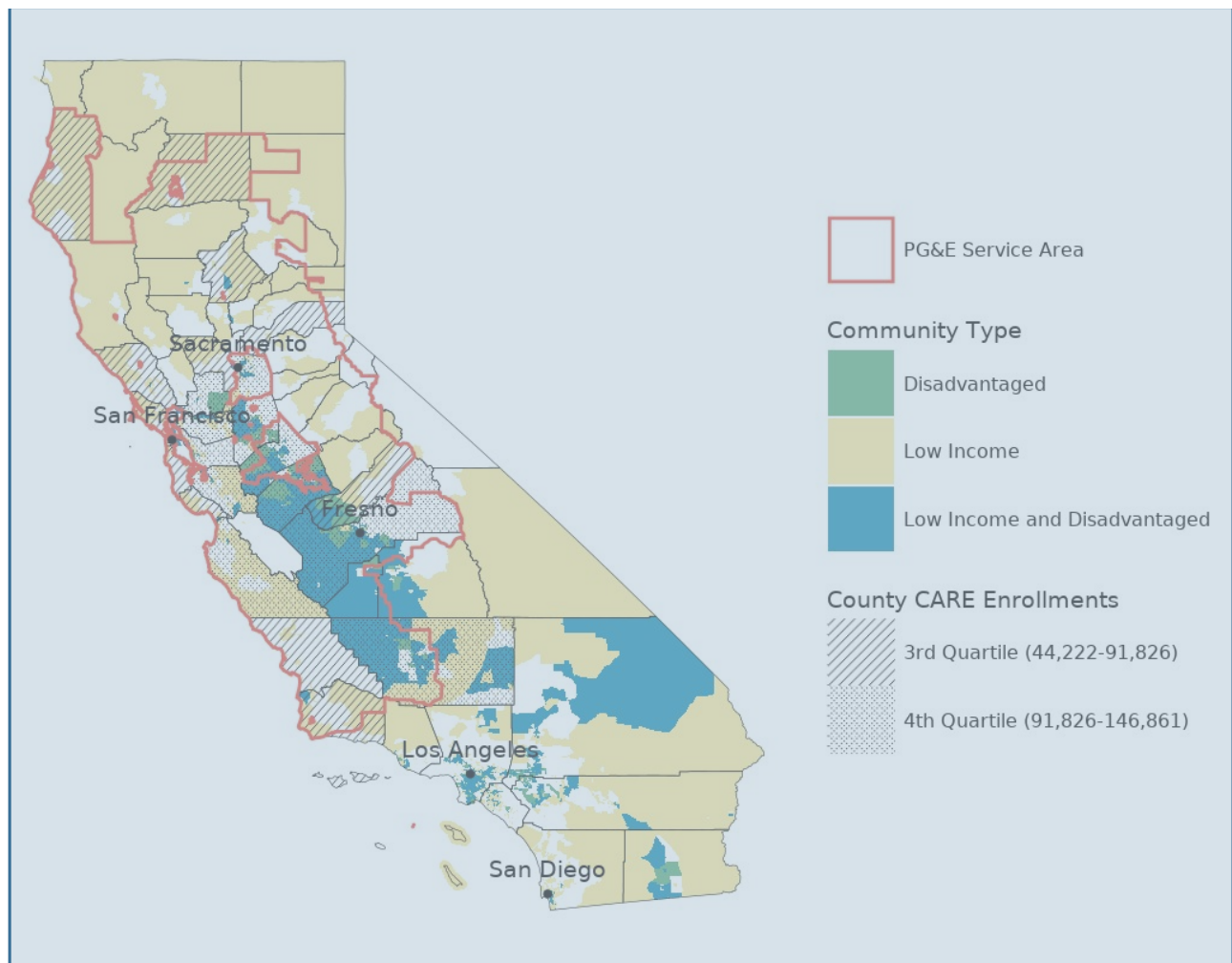
Hispanics as % of Population



¹ California Air Resources Board, "California Climate Investments Priority Populations Mapping Tool 4.0 - Disadvantaged Community Designation," https://gis.carb.arb.ca.gov/portal/apps/experiencebuilder/experience/?id=5dc1218631fa46bc8d340b8e82548a6a&page=Priority-Populations-4_0 (accessed Jan. 14, 2025).

Figure 1-G⁷

California Composite Map: Disadvantaged Communities, Low-Income Communities, PG&E Service Area with Counties Having High Numbers of PG&E Electricity CARE Customers



⁷ California State Geoportal, “Low-Income or Disadvantaged Communities Designated by California,” <https://gis.data.ca.gov/datasets/CAEnergy::low-income-or-disadvantaged-communities-designated-by-california-1/about> (accessed Jan. 14, 2025); U.S. Dep’t of Homeland Security, “Electric Retail Service Territories,” <https://hifld-geoplatform.hub.arcgis.com/datasets/f4cd55044b924fed9bc8b64022966097> (accessed Jan. 14, 2025); PG&E, “2023 Annual Report,” at 152; CPUC, “2021 and 2022 Annual Affordability Refresh – 2022 Areas of Affordability Concern,” <https://www.cpuc.ca.gov/industries-and-topics/electrical-energy/affordability/2021-and-2022-annual-affordability-refresh> (accessed Jan. 14, 2024).

ATTACHMENT SFT-2:

CV of Susan F. Tierney

SUSAN F. TIERNEY, Ph.D.

Analysis Group

Office (617-425-8114) and Mobile (617-901-6921)

180 N. Stetson Ave., Suite #2300

Susan.tierney@analysisgroup.com

Chicago, Illinois 60601

Dr. Tierney, a Senior Advisor at Analysis Group, is an expert on energy economics, regulation, and policy, particularly in the electric and gas industries. She has consulted to businesses, federal and state governments, tribes, environmental groups, energy consumers, foundations, and other organizations on energy markets, economic and environmental regulation and strategy, and energy projects. Her expert witness and consulting services have involved wholesale and retail market analysis and design, technology and market trends, regional transmission organizations, the siting of electric and gas infrastructure projects, electric system reliability, utility ratemaking, carbon-emission-reduction policy, and other environmental policy and regulation. She has served as an expert in civil litigation cases and regulatory proceedings before state and federal agencies.

Previously, she served as the Assistant Secretary for Policy at the U.S. Department of Energy. She was the Secretary of Environmental Affairs in Massachusetts, where she was responsible for environmental regulation and natural resource protection. She was Commissioner at the Massachusetts Department of Public Utilities, Chairman of the Board of the Massachusetts Water Resources Authority, and Executive Director of the Massachusetts Energy Facilities Siting Council.

Dr. Tierney has authored numerous articles and spoken frequently at industry conferences. She serves on a number of boards and advisory committees, including chairing the Board of Resources for the Future and the National Academies of Sciences, Energy and Medicine's Board on Energy and Environmental Systems. She also serves as: a trustee of the Barr Foundation and of the Alfred P. Sloan Foundation; a director of World Resources Institute, the Coalition for Green Capital, the Energy Foundation, and Climate Lead; and an Advisor to the Trustees of the Oak Foundation. She is a member of the advisory councils at the New York University's Institute for Policy Integrity and the New York Independent System Operator (NYISO). She is a member of the National Academies' Climate Crossroads Initiative, and was a member of the National Academies' Committee on Accelerating Decarbonization of the U.S. Energy System (2021-2023), Committee on the Future of Electric Power in the U.S. (2021), Committee on the Role of Net Metering (2023), and Committee on Enhancing the Resilience of the Nation's Electric Power Transmission and Distribution System (2021). Until recently, she chaired the External Advisory Council of the National Renewable Energy Laboratory (NREL) and previously chaired the Department of Energy's Electricity Advisory Committee. She was co-lead author of the energy chapter of the National Climate Assessment. She was Chair of Board of Directors of ClimateWorks Foundation, a member of the Columbia University's Center for Global Energy Policy Advisory Council, Duke University's Nicholas Institute Advisory Board, and a Visiting Fellow in Policy Practice at the University of Chicago's Energy Policy Institute, and served on the U.S. Secretary of Energy Advisory Board.

She taught at the Department of Urban Studies and Planning at MIT and at the University of California at Irvine, and has lectured at Harvard University, Yale University, New York University, Tufts University, Northwestern University, University of Chicago, and University of Michigan. She received NARUC's Mary Kilmarx Award in 2015, and in 2020 was designated as a National Associate of the National Research Council of the Academies of Sciences, Engineering and Medicine. She earned her Ph.D. and M.A. in regional planning at Cornell University and her B.A. at Scripps College.

8-AtchSFT2-2EDUCATION

1980 Ph.D., regional planning, Cornell University

1976 Masters of Regional Planning, Cornell University

1973 B.A., art history, Scripps College
Studied political science at L'Institut d'Etudes Politiques, Paris, France

PROFESSIONAL EXPERIENCE

2003–Present Analysis Group, Inc., Boston, MA, Denver, CO, and Chicago, IL
Senior Advisor (April 2014–Present)
Managing Principal (July 2003–March 2014)

1999–2003 Lexecon, Inc., Cambridge, MA (formerly The Economics Resource Group, Inc.) Senior Vice President

1995–1999 Economics Resource Group, Inc., Cambridge, MA
Principal and Managing Consultant

1993–1995 U.S. Department of Energy, Washington, D.C.
Assistant Secretary for Policy

1991–1993 Commonwealth of Massachusetts, Executive Office of Environmental Affairs, Boston
Secretary of Environmental Affairs

1988–1991 Commonwealth of Massachusetts, Department of Public Utilities, Boston, MA
Commissioner

1984–1988 Commonwealth of Massachusetts, Energy Facilities Siting Council, Boston, MA
Executive Director

1983–1984 Commonwealth of Massachusetts, Executive Office of Energy Resources, Boston, MA
Senior Economist

1982–1983 Commonwealth of Massachusetts, Energy Facilities Siting Council, Boston, MA
Policy Analyst

1982 National Academy of Sciences, Washington, D.C. *Researcher*

1978–1982 University of California at Irvine, Irvine, CA
Assistant Professor

SELECTED CONSULTING EXPERIENCE

● Various Confidential Engagements

Including power sales agreements, fuel contracts, investment strategy, project development, and other electric and gas industry matters.

● Commonwealth of Massachusetts, Office of Energy and Environmental Affairs, Office of Energy Transformation

Providing pro-bono assistance to support the “Financing the Transition Working Group” (2024-2025)

● Center for Applied Environmental Law and Policy

White paper on how vertically integrated electric utilities could maximize return on federal funding opportunities (2024)

● Environmental Defense Fund

White paper on electric system reliability and the EPA’s proposed rule to regulate GHG emissions from the nation’s power plants (2023-2024)

● National Grid US

White paper on the important role of the electric distribution system in the decarbonization of the Massachusetts economy (2023)

● Environmental Defense Fund

White paper on market fundamentals and transitions affecting coal-fired power plants in the U.S. (2023).

● Commonwealth Edison Company

Expert witness in support of ComEd’s proposed grid modernization plan and multi-year rate case (2022-2023).

● Coalition of Bondholders

Expert witness to assess demand forecasting and supply projections for the Puerto Rico Electric Power Authority (2023-2024)

● Major Electric Utility

Analyzed the economic and policy implications of wholesale electricity market congestion (2022).

● Zuni Tribal Council

Advisor on transmission line right-of-way compensation issues (2020-2022).

● RISE Light & Power/Outerbridge New Jersey LLC

Co-author of report on the public benefits of the client’s onshore transmission proposals to support the delivery of offshore wind into New Jersey (2021).

● Pacific Gas & Electric Company, Southern California Edison, San Diego Gas & Electric Company

Witness on policy issues related to reforms of the companies’ net energy metering tariff (2021-2022).

● Group of U.S. and European Foundations Funding on Climate Mitigation Issues

Work with China clean energy expert to analyze gaps in philanthropic funding on GHG mitigation in China (2021-present).

● Coalition of CEOs of Investor-Owned Electric Utilities and Environmental Organizations Project manager to support roundtable discussions on reducing greenhouse gas emissions in the U.S. power sector (2020-2022).

● **CMS Energy**

Witness in support of CMS Energy's appeal before the Michigan Tax Tribunal (2020-2022).

● **Coalition for Green Capital**

Co-authored a white paper on a new national green bank (2020-2021).

● **Pacific Gas and Electric Company**

Conducted benchmarking study on investor-owned utilities' provision of wholesale distribution service and submitted testimony in PG&E's rate case filing on its wholesale distribution tariff (2020-present).

● **Santee Cooper**

Prepared affidavit on states' electric industry structure (2020).

● **Major Electric and Gas Utility**

Analyzed the impacts (e.g., on cost, GHG emissions, gas and electric system costs) associated with alternative strategies for shifting end-use consumers' non-electric energy uses to electricity (2019-2020).

● **La Plata Electric Association**

Prepared testimony before the Colorado Public Utilities Commission regarding the complaints by La Plata Electric and United Power of the exit fee to be charged by Tri-State Generation and Transmission Association for La Plata's and United's potential withdrawal from the Tri-State system (2020).

● **Natural Resources Defense Council**

Prepared a white paper on comments filed in the Federal Energy Regulatory Commission docket on whether to modify its Policy Statement related to certification of new gas pipelines (2019).

● **Delta-Montrose Electric Association**

Provided testimony before the Colorado Public Utilities Commission regarding the complaint by DeltaMontrose of the exit fee being charged by Tri-State Generation and Transmission Association for Delta Montrose to withdraw from participation in the Tri-State system. (2019)

● **Transource**

Provided testimony before the Maryland Public Service Commission regarding regulatory standards for reviewing transmission proposals that emanate from the regional transmission-planning process administered by a Regional Transmission Organizations. (2019)

● **New York ISO (NYISO)**

Prepared a white paper on the impacts on New York of the introduction of a carbon pricing mechanism into NYISO wholesale markets (2019).

● **Salt River Project**

Wrote white paper on utility ratemaking processes and principles (2019).

● **Attorney General of New York State, on behalf of a coalition of state Attorneys General** Preliminary assessment of the U.S. Environmental Protection Agency's proposed Affordable Clean Energy (ACE) rule with changes in the New Source Review program (2018-2019).

● **Xcel Energy (Northern States Power - Minnesota)**

Facilitated stakeholder meetings and outreach related to NSPM's integrated resource plan (2018-2019).

● **Commonwealth Edison (ComEd)**

Provided expert testimony before the Illinois Commerce Commission on regulatory policy issues related to proposed pilot projects involved battery energy storage systems (2018).

● **Pacific Gas & Electric Company, San Diego Gas & Electric Company, Southern California Edison Company**

Prepared white paper on a future structure for California's resource-adequacy and wholesale market structure in a low-carbon power system (2018).

● **Analysis Group, Inc.**

Prepared a white paper about the rebound effect in estimating the impacts of changes in federal fuel economy and greenhouse-gas-emissions standards (2017-2018).

● **Merck Family Foundation**

Analyzed the economic impacts of the Regional Greenhouse Gas Initiative's third compliance period (2015-2017) (2018).

● **Commonwealth Edison (ComEd)**

Provided expert testimony before the Illinois Commerce Commission on regulatory policy issues related to a proposed microgrid pilot project (2017).

● **Natural Resources Defense Council**

Prepared a white paper on changes in the natural gas industry since 1999 when the Federal Energy Regulatory Commission issued its Policy Statement related to certification of new gas pipelines (2017).

● **New York State Research and Development Administration**

Provided support to NYSERDA and the New York Department of Public Service on issues relevant to the New York "REV" proceeding (2017-2019).

● **Hewlett Foundation**

Supported strategy development for the Foundation's Environment Program (2017).

● **Advanced Energy Economy Foundation and American Wind Energy Association**

Co-authored a white paper on wholesale power markets and system reliability and resilience (2017).

● **Entergy Vermont Yankee**

Provided expert testimony before the Vermont Public Service Board on the public benefits of the proposed sale of Vermont Yankee to NorthStar (2016-2018).

● **Dominion Energy**

Analyzed the implications for carbon emissions and consumer costs of a hypothetical shutdown of the Millstone Nuclear Station in Connecticut, and proposed testimony in support of Dominion filings before state agencies related to Millstone and a potential long-term power sales agreement for zerocarbon supply (2017-2019).

● **Protect the Granite State**

Analyzed the economic implications of the proposed Northern Pass Transmission project for New Hampshire and New England (2017).

● **Environmental Defense Fund**

Authored a white paper on challenges facing the U.S. coal industry in the 21st Century (2016).

● **Merck Family Fund**

Co-authored a white paper on potential design issues relating to trading of carbon-emission credits between RGGI states and other states under the U.S. EPA's Clean Power Plan (2016).

● **Consolidated Edison and Southern California Edison**

Authored a white paper on the role of distributed energy resources in distribution utility planning and operations (2016).

● Hawaii Gas Company

Provided expert testimony before the Hawaii Public Utilities Commission on issues related to the proposed merger of the Hawaii Electric Companies and NextEra (2015–2016).

● The Energy Foundation and Merck Family Fund

Co-authored report on the economic impacts of the Regional Greenhouse Gas Initiative's (RGGI's) second three years of implementation during 2012–2014. (2015).

● State of Delaware

Provided expert testimony before the Delaware Superior Court on issues related to the impact of the RGGI program on electricity customers and the economy in Delaware (2015–2016).

● NEXUS Gas Transmission

Co-authored a report on the market for natural gas in the state of Ohio (2015).

● Electric Power Supply Association

Co-authored a report for EPSA on the design of State Plans to align with organized wholesale markets in response to the U.S. Environmental Protection Agency's Proposed Clean Power Plan (2015).

● Baltimore Gas and Electric, Pepco Holdings Inc. and PHI's affiliates Pepco, Delmarva Power, and Atlantic City Electric

Provided expert testimony before the Federal Energy Regulatory Commission on the need for and risks associated with transmission investment (2015).

● Exelon Generating Company LLC

Analyzed alternative generation technologies and the consistency of Exelon's proposal to construct a natural-gas fired peaking unit with Massachusetts energy and environmental policies (2015).

● The Energy Foundation

Co-authored reports on reliability issues related to the U.S. Environmental Protection Agency's proposed Clean Power Plan. (2014–2015).

● New England Power Generators Association

Analyzed the impact of legislative proposals in Massachusetts to direct electric utilities to enter into long-term power supply agreements with Canadian hydropower companies. (2014, 2015).

● Spectra Energy

Provided expert report in Maine regulatory proceeding related to the potential for the State of Maine to enter into a contract to support natural gas pipeline infrastructure in New England (2014).

● The Energy Foundation and Merck Family Fund

Co-authored report on the consumer impacts of the U.S. EPA's proposed Clean Power Plan. (2014).

- **Exelon Corporation and Pepco Holdings, Inc.**
Analyzed customer and state economic benefits of the proposed merger (2014–2015).
- **Major electric utility**
Conducted independent review of the company’s internal customer and shareholder analyses of long-term resource options (2014).
- **Major merchant generating company** Conducted valuation of assets (2014).
- **Entergy Wholesale Commodities**
Provided strategic advice on wholesale and retail market issues in the Northeast power markets (2013–2016).
- **Hualapai Tribe**
Provided strategic advice regarding energy resource development and valuation of electric transmission rights of way (2014–2018).
- **Barr Foundation**
Prepared a report on the impacts of the Massachusetts Green Communities Act of 2008 on the Massachusetts economy. (2013–2014).
- **Five California Utilities (LADWP, PG&E, SCE, SDG&E, SMUD)**
Served on the four-person expert independent advisory panel for the third-party study of integration of renewable energy into California’s Electric System. Contributed to report titled “Investigating a Higher Renewables Portfolio Standard in California” (2013–2014).
- **State of Colorado**
Prepared expert report on behalf of the three public utility commissioners in Colorado, in support of the complaint against them on implementing Colorado’s renewable energy standard under alleged violations of the interstate commerce clause (2013–2014).
- **Energy Foundation**
Wrote white paper on the implications for electric system reliability of the Environmental Protection Agency’s implementation of its authority under Section 111(d) of the Clean Air Act, to regulate greenhouse gas emissions from existing power plants (2013–2014).
- **Major engineering, construction and project management company**
Prepared an expert report on electric market conditions in a dispute surrounding cancellation of a major power plant (2012–2017).
- **Ambri (battery company)**
Analyzed energy system issues related to integration of renewables on a military base (2013–2014).
- **Advanced Energy Economy Institute**
Facilitated workshop for state utility commissioners in Midwest states, on advanced energy technologies and related regulatory issues (2013).

- Environmental Defense Fund – North Carolina
Testified on energy efficiency program design issues (2013).
- Advanced Energy Economy Institute (with the New England Clean Energy Council and the New England Conference of Regulatory Utility Commissioners)
Supported workshop on advanced energy technologies and related regulatory issues (2013)
- Lawrence Berkeley National Laboratory Energy Program
Provided regulatory policy support at the NJ Board of Public Utilities on smart grid workshop (2013).
- Advanced Energy Economy Ohio
Provided testimony before the Ohio Senate Public Utilities Committee in support of the Ohio Energy Efficiency Resource Standard (2013).
- Pepco Holdings Inc., and its operating affiliates, Potomac Electric Power Company, Delmarva Power & Light Company, and Atlantic City Electric Company
Provided testimony in support of appropriate incentives for investment in electric transmission (2013)
- Baltimore Gas and Electric Company
Provided testimony in support of appropriate incentives for investment in electric transmission (2013).
- Advanced Energy Economy Institute
Survey of CEOs of advanced energy companies doing business in California, with regard to the state's energy and environmental policies (2012–2013).
- NSTAR and Cape Wind
Provided testimony in support of the long-term power contract of NSTAR and Cape Wind (2012).
- Energy Foundation
Conducted strategic planning for the China Sustainable Energy Program (2012).
- Pacific Gas & Electric Company
Provided testimony on ratemaking issues for PG&E's proposed pipeline safety enhancement plan (2012).
- COMPETE Coalition
Provided testimony on energy efficiency as part of the performance of state and wholesale electric markets in New Jersey (2011).
- Compressed Air Energy Storage Company

■

Confidential engagement to analyze regional wholesale markets for baseload and renewable energy power generation (2011).

Merck Family Foundation

Analyzed the economic impacts of the funds collected through the auction of allowances under the Regional Greenhouse Gas Initiative (2011).

● **American Clean Skies Foundation Corporation**

Analyzed the reliability and air emission issues associated with potential retirement of the Potomac River Generating Station (2011).

● **Colorado Public Utilities Commission**

Analyzed the Colorado solar photovoltaic incentive program (2011).

● **Exelon Corporation and Constellation Energy (Baltimore Gas & Electric)**

Analyzed the economic impacts on the Maryland economy associated with the proposed clean- energy commitments tied to the proposed merger of Exelon and Constellation Energy (2011–2012).

● **New England Power Generators Association**

Analyzed competition issues in the proposed merger of Northeast Utilities and NSTAR (2011).

● **Dominion Generation**

Analyzed the proposed state tax on output from in-state power generation (2011).

● **Exelon Corporation and Clean Energy Group**

Analyzed electric industry issues involved in responding to the U.S. EPA's air regulations (2010-2015).

● **Major electric distribution company and independent power producer**

Analyzed (modeled) the net benefits of retiring several generating units and replacing them with a long-term contract to provide power from a gas-fired power plant (2010).

● **Major electric utility company**

Analyzed changing fuel-market conditions affecting the value of gas-fired power generation in the context of litigation (2010).

● **Commonwealth Edison Company**

Analyzed the ratemaking issues for an electric distribution utility with respect to energy efficiency program effects in Illinois (2010–2011).

● **National Grid – Massachusetts electric distribution companies**

Analyzed the market for the long-term contract for power from the Cape Wind project (2010).

- Spectra Energy (with the Interstate Natural Gas Association of America)
Analyzed the markets for natural gas, and analysis of the implications of the U.S. EPA's Advanced Notice of Proposed Rulemaking on PCBs (2010–2011).
- Renewable energy company
Analyzed transmission access, planning, cost allocation and siting conditions in US regions (2010–2011).
- Indian tribe in Midwest
Analyzed the value of an oil pipeline right-of-way (2010).
- Dominion Generation
Analyzed the proposed legislation in Connecticut to establish a windfall profits tax on all generating assets located in the state (2010).
- Transmission consortium
Analyzed cost-allocation models for an interstate transmission project involving transmission utilities and merchant transmission companies (2009–2010).
- Massachusetts renewable energy trust
Analyzed transmission-related approaches to the development of offshore renewable energy (2009).
- Major electric utility
Developed business models and approaches for deploying energy efficiency within the context of the American Climate and Energy Security Act framework (2009).
- Major industrial electricity consumer
Assisted in analyzing the implications of the American Climate and Energy Security Act for the company, in light of impacts on energy prices and trade considerations (2009).
- National Grid
Assisted in developing a revenue decoupling mechanism for retail distribution service, and testifying in electric and natural gas distribution rate cases in Massachusetts, Rhode Island, New York, and New Hampshire (2009–2011).
- Sandia Pueblo
Assisted in valuing a transmission corridor on tribal reservation land (2008–2011).
- Major electric and gas company
Provided analytic and strategic support for company's development of a business plan for energy efficiency and other energy-related investments on the customer side of the meter (2008).

■

● AEP Transmission

Prepared a white paper on the design and cost allocation framework for a high-voltage transmission system designed to support renewable and other resources (2008).

● Reliant

Prepared study assessing competition in the wholesale and retail electricity markets in ERCOT (2008).

● Major environmental organization

Analytic and strategic support for utility ratemaking policies for advancing energy efficiency in many states (2008–2012).

● New York Independent System Operator

Supported strategic planning and assessment for the Board of Directors (2008–2010).

● Commonwealth Edison Company

Provided testimony on ratemaking policy issues relating to regulatory lag (2008).

● Energy Association of Pennsylvania (EGA)

Analyzed of proposed legislation to cap retail electricity rates in Pennsylvania after the expiration of rate caps (2008).

—
● National Association of Regulatory Utility Commissioners (NARUC)

Prepared study on best practices relating to state regulatory agency policies and utility practices on competitive procurement of resources to serve retail electricity customers (2007).

● KeySpan/Boston Gas

Analyzed of the implications of utility ratemaking for valuation of utility assets for property taxation purposes (2008).

● Electric company

Analyzed of state's retail and wholesale power market structure (2008).

● Electric company

Prepared expert report on electric industry structure in the 1990s and 2000s (2007–2008).

● Major electric company

Provided analytic support for company's development of strategic plan for company-wide GHG reduction commitments (2008).

Sierra Pacific Power Company

Provided testimony on policy issues relating to the use of historic, future, and hybrid test years in state utility rate cases (2007–2008).

● Harvard University

Provided strategic assistance relating to regulatory issues affecting the planning and design of Harvard’s “green campus” development in Allston Landing (2007–2008).

● Public Service Gas & Electric Company of New Jersey (PSEG)

Provided assistance in facilitating the development of a policy to address “leakage” of CO₂ emissions associated with the adoption of the RGGI cap-and-trade program (2007).

● Electric Power Supply Association

Prepared white paper on economic, environmental, and regulatory trends in the electric industry (2007).

● Sempra Energy Company – San Diego Gas & Electric Company and SoCalGas Company

Provided testimony on policy issues relating to the provision of financial incentives to electric and gas utilities for the successful provision of energy efficiency programs (2007).

● PECO Energy Company

Provided advice and testimony on various economic and policy issues relating to electric industry restructuring policy (2007).

Provided testimony on issues relating to the market for alternative energy credits and the proposal of PECO to voluntarily solicit, procure, and bank alternative energy credits (2007).

● Commonwealth Edison Company

Provided testimony on issues relating to the relationship of auctions for wholesale supply for basic service customers and alternative proposals for utility resource procurement (2007).

● ISO New England

Assisted in scenario planning for transmission and other alternatives (2006–2007).

● PJM

Preparing report on market monitoring functions performed under various federal regulatory agencies with responsibility to oversee electricity and energy markets (i.e., the Federal Energy Regulatory Commission and the Commodities Futures Trading Commission) (2006–2007).

● Major Industrial and Power Plant Company

Assisted company in analyzing market and negotiating the price and other terms and conditions for long-term gas supply and in valuing a power plant asset (2006–2007).

● State of North Carolina

■

Provided expert witness services on electric utility economics and regulatory issues, on behalf of the Attorney General in a nuisance lawsuit to require the Tennessee Valley Authority to put in place air pollution control equipment on coal-fired power plants in TVA's system. (2006–2008)

● Major Regional Transmission Organization

Performed analysis of market conditions and trends, and benchmarking market rules and reliability performance with other comparable organizations (2006–2007).

● Special LNG Committee, Commonwealth of Massachusetts

Prepared *pro-bono* report on the need for natural gas and liquefied natural gas in the Northeast (2006).

● Ute Indian Tribe of the Uintah and Ouray Reservation

■

Prepared a report on economic and policy issues relating to use of tribal lands for energy rights-of-way, as called for in Section 1813 of the Energy Policy Act of 2005 (2006).

New York ISO

Prepared white paper on fuel diversity issues in the New York market (2008).

Prepared white papers on long-term contracting issues in states with restructured electric industries, and on the economic foundations for single-clearing-price markets versus pay-as-bid markets (2007).

Performed economic benefit/cost study of wholesale competition into the region's wholesale electric market (2006–2007).

● **Commonwealth Edison Company**

Provided testimony on appropriate ratemaking principles for recovery of pension-related costs in proceeding to set rates to go into effect following the transition period (2006).

● **Commonwealth Edison Company**

Provided testimony on economic principles associated with single-price auction design versus pay-as-bid auction design (2006).

● **Exelon Corporation**

Provided analysis of designs of mandatory carbon control policies (2005–2007).

● **Sonosky, Chambers, Sachse, Endreson & Perry, LLP, on behalf of various Indian Tribes**

Provided analysis in support of comments filed with the Departments of Interior and Energy on energy rights of way on tribal land (as called for in Section 1813 of the Energy Policy Act of 2005) (2005–2006).

Provided analysis in support of various tribal negotiations with energy companies with respect to valuation of energy rights of way on tribal reservation lands (2007).

● **Electric utility company**

Performed independent evaluator services in procurement for power resources (2005–2006).

● **Power Generation Company**

Provided analysis of product market development in MidWest and Eastern RTOs (2005).

● **New England Energy Alliance**

Prepared a white paper on energy infrastructure needs in the New England states (2005).

● **Committee on Regional Electric Power Cooperation (of the Western Interstate Energy Board)**

Provides research on market monitoring for Western wholesale electric markets (2005–2007).

● **Southern California Edison Company**

Provided Independent Evaluator services for a competitive procurement of new long-term generation resources and renewable resources (2005).

■

● LNG / Interstate Gas Pipeline project – Duke Energy/Excelerate project

Prepared regional market study for the project proposed for Massachusetts (2004–2005).

● Electric Generating Company

In a contract dispute, provided expert witness services relating to whether changes in a region's wholesale power market rules nullified a power sales agreement (2004–2006).

● Louisville Gas & Electric and Kentucky Utilities

For two vertically integrated electric companies, provided expert witness services in a state investigation of which regional transmission approach satisfies state policy objectives (2004).

● Independent Generating Company

For a power company owned by commercial lenders in a Northeast power market, provided consulting services to monitor state regulatory policies and actions affecting power plants (2004).

● Major Electric and Gas Company

Performed confidential study of the benefits, costs and current conditions in certain wholesale and retail electric power markets (2004–2005).

Regional Transmission Organization

For a confidential project, analyzed market monitoring and mitigation approaches (2004–2005).

● Major Commercial Bank

For a confidential project, advise with regard to electric industry restructuring and profitability of large energy marketer and trading organization (2004–2005).

● Consumer Energy Council of America

For a group of electric industry market participants, regulators, and interest groups, prepared white papers on the need for transmission enhancements in U.S. power markets (2004).

● Retail electric company

Provides confidential analysis of business models and regulation approaches for providing retail electric service in the state (2004).

● Independent system operator

Provided confidential analysis and research on aligning retail and wholesale market policies (2004).

● California State attorney general

Provided expert witness services with regard to state resource adequacy & planning practices (2004).

■

● Pacific Gas & Electric Company

Provided expert witness services relating to the public benefits of the settlement between PG&E and the California Public Utility Commission, to enable PG&E to emerge from bankruptcy (2003).

● Independent power company

Provided consulting advice on economics of compliance strategies for air and water permits (2003).

● Major public utility company

Advised on the pricing and other terms for a long-term purchase power agreement (2003).

● Duke Power

Provided expert advisory services relating to ratemaking and other regulatory practices (2003).

● Exelon Generation

Provided strategic advice and analytic services relating to market conditions in New England (2003).

● Entergy Services Inc.

Provided services as the independent monitor of Entergy's Fall 2002, Spring 2003 and Fall 2003 Requests for Proposals for Supply-Side Resources (2002–2005).

● Power generation company in New England

Provided expert testimony in contract dispute regarding allocation of uplift costs in an agreement concerning the supply of wholesale power for standard offer service (2002).

● Connecticut Light and Power Company

Provided expert testimony in contract dispute regarding allocation of congestion costs in an agreement concerning the supply of wholesale power for standard offer service (2002–2003).

● Ocean State Power

Provided arbitration services in a dispute regarding a gas purchase contract between Ocean State Power and ProGas Ltd. (2002–2003).

● Regional independent system operator

Provided strategic advice on regional market trends and strategy (2002).

● PJM Interconnection

Provided advice to the appointed mediator as part of the Alternative Dispute Resolution process, in a dispute involving PJM and a market participant (2002).

■

■

Duke Energy Corporation

Provided analysis on strategic issues in gas and electric regulatory policy for Duke Energy's corporate office, including with regard to code of conduct issues and wholesale competition (2001–2002).

● **Pacific Gas and Electric Corporation**

Provided expert witness testimony in proceedings of the FERC on public benefits of the proposed restructuring of PG&E assets as part of its emergence from bankruptcy (2001–2002).

● **Massachusetts Renewables Trust**

Provided assistance in support of the Trust's renewables and power quality program (2001–2002).

● **Major electric holding company**

Prepared an analysis of the regulatory policies for reviewing merger applications in states where potential merger candidates are located (2001).

● **Western Massachusetts Electric Company**

Provided expert testimony in contract disputes regarding allocation of congestion costs in agreements concerning the supply of wholesale power for standard offer service (2001–2002).

● **Energy Foundation**

Researched and wrote a white paper on California's process for permitting new power plants (2001).

● **Cross-Sound Cable Company**

Provided expert testimony regarding public benefits of proposal to construct merchant transmission facility across Long Island Sound (2001–2002).

● **Major independent power company**

Served as expert witness in litigation surrounding power plant development project (2001–2004).

● **MASSPOWER Inc.**

Served as Mediator in a contract dispute involving pricing of power purchases (2001).

● **NRG Energy and Dynegy**

Provided expert witness support in regulatory proceeding to review these companies' acquisition of power plants being divested by Sierra Pacific and Nevada Power (2001).

● **Occidental Chemical Corporation**

Served as expert witness on vertical market power in electric utility's transmission practices (2000).

● **PP&L Global**

■

Provided economic and environmental analysis and expert witness support for proposal to build the Kings Park Energy power plant in Long Island, New York (2000).

● **Calpine Corporation**

Provided economic and environmental analysis and expert witness support for the Wawayanda power project in Rockland County, NY and for the Towantic power plant in Oxford, Connecticut (2001).

● **American National Power, Calpine, El Paso, NRG Energy, Sithe, Southern Energy**

Provided support for the development of a proposal for an RTO for New England (2000–2001)

● **Duke Energy/Maritimes and Northeast Pipeline**

Provided expert reports on the market and environmental impacts of new natural gas infrastructure and supply in New England (2000–2003).

Arkansas Electric Distribution Cooperatives and Arkansas Electric Cooperative Corporation Served as expert witness on economic and public policy issues associated with wholesale and retail competition in Arkansas (2000–2001).

■

● TransÉnergie U.S.

Served as expert witness on public benefits of a proposed merchant transmission facility (2000–2001).

● Conectiv

Provided strategic wholesale market analysis and support for procurement of supplies for distribution utility company's provision of Basic Generation Services to retail customers (2000).

● SCS Energy Corp. – Astoria Energy

Served as expert witness for proposal to build new power plant in New York City (2000–2001).

● HEFA Power Options

Provided strategic advice regarding wholesale power market for retail buyers' group (2000–2003).

● Major real estate development company

Provided analysis of electric and gas infrastructure for large mixed-use development (2000–2001).

● Investment company

Provided strategic advice to investment company with regard to potential investment in major electric generating equipment manufacturing company (2000)/

● Major independent power company

Provided economic and environmental support for company's application to construct a merchant power plant in Florida (2000).

● Major railroad company

Provided expert witness support on economic and regulatory policy issues for railroad in state regulatory proceeding on a proposed utility merger (2000).

● Coalition of Wireless Telecommunications Carriers

Prepared an expert report on economic benefits of wireless telecommunications (2000).

● Major brownfield property developer

Provided valuation of property as a site for new electric generating facility (2000).

● Fitchburg Gas and Electric Company

Provided litigation support for a gas and electric company on rate design policy (2000)/

● Consortium of electric companies

■

Provided economic analysis, contract review, and litigation support for a consortium of electric companies with power purchase agreements with PURPA projects (1999).

● **FirstEnergy Corp.**

Provided expert witness support regarding generation asset valuation and the impacts of a new electric industry restructuring law on the company (1999–2000).

● **Ozone Attainment Coalition**

Provided strategic analysis and advice on electric system reliability issues relating to electric companies' implementation of 2003 NOx requirements issued by the U.S. EPA (1999).

● **Municipal electric department**

Provided expert witness services and analysis of the economics and need for a new natural gas pipeline proposed to serve an existing electric power plant in Massachusetts (1998–2001).

● **Seneca Nation**

Provided expert analysis and strategic advice regarding the value of transmission rights of way, in a dispute with an electric utility company (1998–2000).

Major cable company

Provided strategic advice in a series of regulatory and court cases involving inter-affiliate transactions of electric utility company entering into competitive telecommunications and cable markets (1998).

● **Major electric utility company**

Provided expert witness support regarding structural changes in the electric industry, in litigation pertaining to the company's restructuring plans (1998–1999).

● **Sithe Energies, Inc.**

Provided strategic advice and regulatory support on a variety of issues (market analysis, transmission and ISO issues, federal and state market rules, legislation, siting, environmental strategy) relating to the company's participation in the New England, New York, and PJM markets (1997–2003).

Provided transition assistance to the company in its acquisition and integration of approximately 2,000 MW of existing fossil fuel generation from Boston Edison Company (1997–1998).

Provided transition assistance to the company in its acquisition and integration of approximately 4,100 MW of existing fossil and hydroelectric generation capacity from GPU Genco (1998–1999).

Provided support for the company's participation in electricity product markets under development in New England, New York and PJM (1997–2002).

Provided strategic project development advice and expert witness support for the company's applications to construct three natural gas merchant power plants (totaling 2865 megawatts) in Everett, Weymouth, and Medway, Massachusetts. (1998–2001)

Provided strategic guidance and regulatory support regarding design of air quality improvement plan for existing fossil units at Mystic Station. (1998–2001)

Provided strategic guidance regarding company's natural gas-fired merchant power plant development projects in Ontario, Canada (2000–2001).

● Natural Resources Canada

Prepared a white paper on the implications for electric system reliability in Canada that are associated with restructuring the electric industry in the United States (1999).

● Cummins Engine Company, Inc.

Provided strategic analysis on implications of national energy and environmental policies for the Company's long-term business opportunities (1999).

● Electric utility company

Provided advice and regulatory support with regard to the economics and prudence of an existing long-term power purchase agreement (1998).

● National Association of Regulatory Utility Commissioners (NARUC)

Assisted the Executive Director and NARUC leadership in updating its strategic plan and in preparing a business plan for its implementation (1998).

● State energy office

Assisted in analyzing options for supporting renewable resource development in the state and in designing a market-based strategy to implement a new renewables portfolio standard (1997–1998).

● U.S. Generating Company (PG&E Generating Company)

Provided analysis of and testimony on the economic, reliability, and environmental benefits to the host state and region of a new merchant power generation facility: the 360-megawatt Millennium project in Massachusetts (1996–1997).

Provided analysis of and testimony on the economic, reliability, and environmental benefits of a new merchant power generation facility: the 792-megawatt Lake Road Generating Project in Connecticut (1997–1998).

Pennsylvania Power & Light Company

Provided strategic guidance, economic and policy analysis, and regulatory support for electric utility company as it developed and proposed its plan for restructuring its company for retail competition. Provided expert witness testimony on rate design policy issues (1996–1998).

● Major diversified electric equipment company

Provided strategic advice and analysis on market opportunities and risk in various regions of the U.S. electric industry, under numerous restructuring scenarios (1996–1997).

● Major nationwide electricity consumer

Conducted analysis of buying options and strategies for acquisition of electricity services in states with customer choice in retail generation markets (1997).

● National Council on Competition in the Electric Industry

Prepared a Briefing Paper on Regional Issues in Electric Industry Restructuring, for the NCCEI – a joint project of the National Association of Regulatory Utility Commissioners, the National Conference of State Legislatures, the U.S. DOE and the U.S. EPA (1997).

● Major western coal company

Analysis of western states' electric industry restructuring policies and market prices for power in various states within the Western Systems Coordinating Council area (1996–1997).

● Major gas pipeline company

Provided analysis of market structures and prices for generation and delivery services in electric service territories where the gas pipeline would locate facilities that use electricity (1997).

● Major electric supply company

Provided analysis of regional electricity market conditions to support the company's analysis of the value of various utility assets that were being divested as part of corporate restructuring (1997).

● Massachusetts Division of Energy Resources

Analyzed Boston Gas Company's proposal for unbundling its retail service, its proposal for performance-based rates, and its plan for departing the merchant function (1996–1998).

● Massachusetts Division of Energy Resources

Assisted the state's energy office in developing policies for establishing a statewide fund to support renewable resource development as part of the state's electric industry restructuring plan (1997).

● Massachusetts Water Resources Authority Advisory Board

Analyzed opportunities for use of the Authority's energy-using and -producing assets, to position itself beneficially as a participant in a restructured retail electricity market in New England (1996–1997).

● Coalition of marketers and independent power producers

Analyzed state regulatory proposals for restructuring the electric industry (1996–1997).

● Major independent power producer

Analyzed market opportunities and risks for merchant plant development in a U.S. region (1996).

● Major independent power producer

Analyzed the expected market price of power in two regions of the U.S. electricity markets (1996).

• Group of municipal electric companies in New York State Served as expert witness on cost allocation issues in litigation on wholesale power contracts (1996).

■

TESTIMONY

Many confidential expert reports, testimonies, declarations, affidavits, and depositions.

- **On behalf of Environmental and Public Health Respondent-Intervenors (in the motion to stay the EPA's Mercury and Air Toxics Rule)**

Before the U.S. Court of Appeals for the District of Columbia Circuit, State of North Dakota, et al., v. U.S. Environmental Protection Agency, No. 24-1119, Declaration of Susan Tierney, July 22, 2024.

● **On behalf of Environmental and Public Health Respondent-Intervenors (in the motion to stay the EPA's Power Plant GHG Rule)**

Before the U.S. Court of Appeals for the District of Columbia Circuit, State of West Virginia, et al., v. U.S. Environmental Protection Agency, No. 24-1120, Declaration of Susan Tierney, June 11, 2024.

● **On behalf of her own behalf**

Before the Federal Energy Regulatory Commission, 2023 Electric Reliability Technical Conference, "Reliability Implications of EPA's Proposed Rule on Greenhouse Gas Standards and Guidelines for Fossil-Fuel Power Plants," November 9, 2023.

● **On behalf of her own behalf**

Before the Senate Budget Committee, Hearing on "Beyond the Breaking Point: The Fiscal Consequences of Climate Change on Infrastructure," July 26, 2023.

● **On behalf of Ad Hoc Group of PREPA Bondholders, et al.**

Before the U.S. District Court for the District of Puerto Rico, Main Docket, 17-BK-3283-LTS and Case No. 17BK-4780-LTS; Expert Report, May 5, 2023, December 18, 2023, January 12, 2024; cross-examination at deposition, May 31, 2023, January 22, 2024; testimony and cross-examination at trial, June 7th, 2023; declaration and cross-examination at trial, March 12-13, 2024.

● **On behalf of Commonwealth Edison Company**

Before the Illinois Commerce Commission, Order Requiring Commonwealth Edison Company to file an Initial Multi-Year Integrated Grid Plan and Initiating Proceeding to Determine Whether the Plan is Reasonable and Complies with the Public Utilities Act and Verified Petition for Approval of a MultiYear Rate Plan under Decision 16-108.18 of the Public Utilities Act, Consolidated Dockets No. 22-0486 and 23-0055, 2021, Direct Testimony, January 17, 2023; Rebuttal Testimony, June 27, 2023; Surrebuttal Testimony, August 14, 2023.

● **On her own behalf**

Before the Federal Energy Regulatory Commission, Technical Conference on Greenhouse Gas Mitigation: Natural Gas Act Sections 3 and 7 Authorizations," Docket No. PL21-3-000, November 19, 2021.

● **Pacific Gas and Electric Company, Southern California Edison Company, San Diego Gas & Electric Company**

Before the California Public Utilities Commission, Order Instituting Rulemaking to Revisit Net Energy Metering Tariffs Pursuant to Decision 16-01-044, and to Address Other Issues Related to Net Metering, Docket No. R.20-08-020, Opening Testimony (June 18, 2021), Rebuttal Testimony, July 16, 2021, cross-examination at hearing (July 26-27, 2021).

● **On behalf of CMS Energy**

Before the Michigan Tax Tribunal, CMS Energy Corporation v. Michigan Department of Treasury, Docket No. 19-003783, affidavit, supplemental affidavit and cross-examination at deposition (2021).

● **On her own behalf**

Before the House Committee on Energy and Commerce Committee Subcommittee on Energy Subcommittee Hearing on "The CLEAN Future Act and Electric Transmission: Delivering Clean Power to the People," June 29, 2021.

● **On her own behalf**

Before the Federal Energy Regulatory Commission, Workshop on the Office of Public Participation, April 16, 2021.

● **On her own behalf**

Before the House Committee on Science, Space and Technology, hearing on “Lessons learned from the Texas blackouts: Research needs for a secure and resilient grid,” March 18, 2021.

● **On her own behalf**

Before the Federal Energy Regulatory Commission, Technical Conference on Carbon Pricing in Organized Wholesale Electricity Markets, Docket No. AD20-14-000, September 30, 2020.

● **Pacific Gas and Electric Company**

Before the Federal Energy Regulatory Commission, in the Matter of Pacific Gas and Electric Company’s Wholesale Distribution Tariff Rate Case, Docket ER20-2878-000, Testimony, September 15, 2020; crossexamination at hearing, March 9, 2023.

● **Santee Cooper**

Before the Court of Common Pleas for the Ninth Judicial Circuit of South Carolina, City of Goose Creek v. South Carolina Public Service Authority, Civil Action No. 2020-CP-08-00821, Affidavit, August 24, 2020.

● **Amicus Curiae Brief of Susan Tierney in Support of Petitioners the Environmental Defense Fund in Support of Reversal of the Challenged Orders of the Federal Energy Regulatory Commission**

Before the U.S. Court of Appeals for the District of Columbia Circuit, in the case of Environmental Defense Fund v. Federal Energy Regulatory Commission, Case Nos. 20-1016 and 20-1017, Petition for Review of Orders of the Federal Energy Regulatory Commission, July 1, 2020.

● **On her own behalf**

Before the House Energy Subcommittee of the House Energy and Commerce Committee, at hearing on the Natural Gas Act, February 5, 2020.

● **La Plata Electric Association**

Before the Colorado Public Utilities Commission, in the matter of La Plata’s and United Power’s complaints that the Tri-State Generation and Transmission Association’s exit fee is unjust, unreasonable and discriminatory, Proceeding Nos. 19F-0620E and 19F-0621E, Testimony, January 10, 2020; CrossExamination at Deposition, January 31, 2020; Rebuttal Testimony, March 10, 2020; Cross-Examination at hearings, May 18, 2020.

● **Delta Montrose Electric Association**

Before the Colorado Public Utilities Commission, in the matter of Delta-Montrose’s complaint that the TriState Generation and Transmission Association’s exit fee is unjust, unreasonable and discriminatory, Proceeding No. 18F-0866E, Rebuttal Testimony, June 28, 2019.

● **Transource Maryland LLC**

Before the Maryland Public Service Commission, in the matter of Transource’s request for a certificate of public convenience and necessity to construct new high-voltage transmission facilities in Maryland, Case No. 9471, rebuttal testimony, May 8, 2019, and testimony under cross-examination at hearing before the Maryland PSC, June 24, 2019.

● **On her own behalf**

Before the Senate Energy and Natural Resources Committee, at hearing on the electric industry in a changing climate, oral and written testimony, March 5, 2019.

● **Commonwealth Edison Company (ComEd)**

Before the Illinois Commerce Commission, in the matter of ComEd's petition concerning the annual formula rate update and revenue requirement (on regulatory policy issues relating to two battery energy storage systems proposed to be part of ComEd's distribution services), Docket No. 18-0808, surrebuttal testimony, August 29, 2018.

● **Pacific Gas & Electric Company, San Diego Gas & Electric Company, Southern California Edison Company**

Before the California Public Utility Commission, in the matter of the Order Instituting Rulemaking to Oversee the Resource Adequacy Program, Consider Program Refinements, and Establish Annual Local and Flexible Procurement Obligations for the 2019 and 2020 Compliance Years, Rulemaking 17-09-020, July 10, 2018.

● **Dominion Energy Nuclear Connecticut**

Before the Connecticut Public Utilities Regulatory Authority, in the matter of implementation of Public Act 17-3, Docket No. 18-05-04, May 2018; testimony under cross-examination, August 2018.

● **Dominion Energy Nuclear Connecticut**

Before the Connecticut Department of Energy & Environmental Protection and Public Utilities Regulatory Authority, in the matter of DEEP's and PURA's joint proceeding to implement the Governor's Executive Order Number 59, Docket No. 17-07-32; affidavit, January 8, 2018.

● **Amici Curiae Brief of Independent Economists in Support of New York State Public Service Commission**

Before the U.S. Court of Appeals for the Second Circuit, in the matter of the Coalition for Competitive Electricity, et al., v. Zibelman et al., Case No. 17-2654-cv, On Appeal from a Final Judgment of the United States District Court for the Southern District of New York, No. 16-cv-8164 (VEC), November 22, 2017.

● **Commonwealth Edison Company (ComEd)**

Before the Illinois Commerce Commission, in the matter of ComEd's petition concerning the implementation of a demonstration distribution microgrid, Docket No. 17-0331, rebuttal testimony submitted October 27, 2017; surrebuttal testimony, November 20, 2017.

● **On her own behalf**

Before the House Committee on Energy and Commerce, Subcommittee on Energy, Hearing on "Powering America: Defining Reliability in a Transforming Electricity Industry, October 3, 2017 (testimony dated September 12, 2017, the original date of the hearing).

- ⊙ NorthStar Decommissioning Holdings, LLC, NorthStar Nuclear Decommissioning Company, LLC, NorthStar Group Services, Inc., LVI Parent Corp., NorthStar Group Holding, LLC, Entergy Nuclear Vermont Investment Company, and Entergy Nuclear Operations, Inc.
Before the Vermont Public Service Board, in the matter of the Joint Petition to transfer ownership of Entergy Nuclear Vermont Yankee, LLC, Docket No. 8880, December 16, 2016.

- ⊙ Entergy Nuclear Indian Point 2, LLC, Entergy Nuclear Indian Point 3, LLC, Entergy Nuclear FitzPatrick, LLC, and Entergy Nuclear Operations, Inc.
Before the New York Public Service Commission, in the matter of the Proceeding on Motion of the Commission to Implement a Large-Scale Renewable Program and a Clean Energy Standard, Case 15-E-0302, Affidavit of Susan Tierney Regarding the Staff White Paper on a Clean Energy Standard, April 21, 2016.

- ⊙ Amici Curiae Brief of Former State Environmental and Energy Officials in Support of the U.S. Environmental Protection Agency
Before the U.S. Court of Appeals for the District of Columbia Circuit, in the case of State of West Virginia v. U.S. EPA, Case No. 15-1363, Petition for Review of a Final Agency Action of the U.S. EPA 80 Fed. Reg. 64,662, April 1, 2016.

- ⊙ Environmental and Public Health Respondent-Intervenors (Natural Resources Defense Council, Environmental Defense Fund, Sierra Club, Center for Biological Diversity, American Lung Association, Clean Air Council, Clean Wisconsin, Conservation Law Foundation, and Ohio Environmental Council, West Virginia Highlands Conservancy, Ohio Valley Environmental Coalition, Coal River Mountain Watch, Kanawha Forest Coalition, Mon Valley Clean Air Coalition and Keepers of the Mountains Foundation)
Before the U.S. Court of Appeals for the District of Columbia Circuit, Nos. 15-1365 and Consolidated Cases, in Re: West Virginia, et al., on Petitions for the U.S. Environmental Protection Agency, prepared declaration, December 8, 2015.

- ⊙ New England Power Generators Association (NEPGA)
Before the Massachusetts Joint Committee on Telecommunications, Utilities and Energy, Hearing on Clean Energy Procurement, Transmission and Financing, Statement on SB 1965 (An Act relative to energy sector compliance with the Global Warming Solutions Act), September 29, 2015

- ⊙ Natural Resources Defense Council, Environmental Defense Fund, Sierra Club, Center for Biological Diversity, Clean Air Council, Clean Wisconsin, and Conservation Law Foundation Before the U.S. Court of Appeals for the District of Columbia Circuit, Nos. 15-1277 & 15-1284 in Re: West Virginia, et al., and in Re: Peabody Energy Corp., on Petitions for Extraordinary Writ, prepared declaration, August 31, 2015.

- ⊙ Pepco Holdings, Inc., and its operating affiliates, Potomac Electric Power Company, Delmarva Power & Light Company, and Atlantic City Electric Company
Before the Federal Energy Regulatory Commission, in Delaware Division of Public Advocate, et al., v.

Baltimore Gas and Electric Company and Pepco Holdings Inc., Docket No. EL13-48-000, April 3, 2013; prepared answering testimony, June 2, 2015; and prepared cross-answering testimony, August 21, 2015.

● **Hawaii Gas Company**

Before the Public Utilities Commission of Hawaii, in the Matter of the Application of Hawaiian Electric Company, Inc., Hawaii Electric Light Company, Inc., Maui Electric Company, Limited, and NextEra Energy, Inc. for Approval of the Proposed Change of Control and Related Matters, Docket No. 20150022, answering and direct testimony filed July 20, 2015, rebuttal testimony, October 5, 2015, Crossexamination under oath, February 9, 2016.

● **Delaware Department of Natural Resources and Environmental Control**

Before the Superior Court of the State of Delaware in and for Sussex County, C.A. No. S13C-12-025 RFS, in Re: David T. Stevenson, et al., v. Delaware Department of Natural Resources and Environmental Control and David S. Small, prepared affidavit, July 15, 2015, prepared affidavit, September 8, 2016; prepared affidavit, June 7, 2016; prepared affidavit, June 2, 2017; deposition, August 9, 2017; testimony at trial, December 4, 2017.

● **On her own behalf**

Before the House Committee on Science, Space and Technology, Subcommittee on the Environment and Subcommittee on Energy, Hearing on the U.S. Energy Information Administration Report: Analysis of the EPA's Clean Power Plan, June 24, 2015.

● **Baltimore Gas and Electric, Pepco Holdings Inc. and PHI's affiliates Pepco, Delmarva Power, and Atlantic City Electric**

Before the Federal Energy Regulatory Commission, in the Matter of Delaware Division of the Public Advocate, et. al., v. Baltimore Gas and Electric Company, et al, Docket Nos. EL13-48-001 and EL15- 27-000 (Consolidated), June 2, 2015.

● **On her own behalf**

Before the House Committee on Commerce and Energy, Subcommittee on Energy and Power, Hearing to Examine EPA's Proposed 111(d) Rule for Existing Power Plants and the Proposed Ratepayer Protection Act, April 14, 2015.

● **Exelon Generating Company LLC**

Before the Massachusetts Energy Facilities Siting Board for Approval to Construct a 200 MW Simple Cycle Combustion Turbine Generating Facility in the Town of Medway, Massachusetts, Exelon West Medway, LLC/Exelon West Medway II, LLC, EFSB Docket No. 15-1/D.P.U. 15-25, March, 2015; cross- examination under oath, December 8, 9, and 14, 2015.

● **On her own behalf**

Before the House Committee on Investigations and Government Oversight, Subcommittee on Interior, Hearing to Examine the Impacts of EPA Air and Water Regulations on the States and the American People, February 26, 2015.

● **Exelon Corporation and Pepco Holdings, Inc.**

Before the District of Columbia Public Service Commission, In the Matter of the Merger of Exelon Corporation and Pepco Holdings, Inc., prefiled direct testimony (June 18, 2014); rebuttal testimony (December 17, 2014); testimony under cross-examination (April 8, 2015); direct testimony in support of Settlement Agreement, October 20, 2015; testimony under cross-examination, December 4, 2015.

● On her own behalf

Before the Federal Energy Regulatory Commission, Technical Conference on Environmental Regulations and Electric Reliability, Wholesale Electricity Markets, and Energy Infrastructure, Docket No. AD15-4000, February 19, 2015.

● Exelon Corporation and Pepco Holdings, Inc.

Before the Maryland Public Service Commission, In the Matter of the Merger of Exelon Corporation and Pepco Holdings, Inc., prefiled direct testimony (August 19, 2014); rebuttal testimony (January 7, 2015); testimony under cross-examination (January 26–27, 2015); post-settlement testimony (March 27, 2015); supplemental post-settlement testimony (April 14, 2015); testimony under cross-examination (April 15, 2015).

● Algonquin Gas Transmission and Maritimes & Northeast Pipeline (Spectra Energy)

Before the Maine Public Utilities Commission, Investigation of Parameters for Exercising Authority Pursuant to the Maine Energy Cost Reduction Act, 35-A M.R.S.A. § 1901, Docket No. 2014-00071, testimony under cross-examination, July 11, 2014, and August 8, 2014.

● Exelon Corporation and Pepco Holdings, Inc.

Before the Delaware Public Service Commission, In the Matter of the Merger of Exelon Corporation and Pepco Holdings, Inc., prefiled direct testimony (June 27, 2014), rebuttal testimony (January 12, 2015).

● Exelon Corporation and Pepco Holdings, Inc.

Before the New Jersey Board of Public Utilities, In the Matter of the Merger of Exelon Corporation and Pepco Holdings, Inc., prefiled direct testimony (June 27, 2014), rebuttal testimony (December 10, 2014).

● Exelon Corporation and Pepco Holdings, Inc.

Before the District of Columbia Public Service Commission, In the Matter of the Merger of Exelon Corporation and Pepco Holdings, Inc., prefiled direct testimony (June 18, 2014), rebuttal testimony (December 17, 2014).

● On her own behalf

Before the Oregon State Legislature's House Interim Committee on Revenue, Senate Interim Committee on Finance and Revenue, on "Consideration of the Feasibility and Implications of a Clean Air Tax or Fee in Oregon: Implementing Greenhouse Gas Emission Reduction Policies – Experience from Other States," January 15–16, 2014.

● On her own behalf

Before the U.S. House of Representatives Energy and Commerce Subcommittee on Energy and Power, "Hearing on EPA's Proposed GHG Standards for New Power Plants and H.R. , Whitfield- Manchin Legislation," November 14, 2013.

● Joshua Epel, James Tarpey, and Pamela Patton, et al.

Before the U.S. District Court of the State of Colorado, on behalf of Joshua Epel, James Tarpey, and Pamela Patton (commissioners of the Colorado Public Utilities Commission), and Environment Colorado, Conservation Colorado Education Fund, Sierra Club, The Wilderness Society, Solar Energy Industries Association, and Interwest Energy Alliance, in re: American Tradition Institute and Rod Lueck, v. Epel at al., Civil Action Number 11-cv-00859-WJM-BMB, expert report, November 7, 2013.

● On her own behalf

Before the Federal Energy Regulatory Commission, in the Matters of Centralized Capacity Markets in Regional Transmission Organizations and Independent System Operators,” Docket No. AD13-7-000, re: considerations for the future, September 9, 2013.

● On behalf of Entergy Nuclear Vermont Yankee

Before the U.S. District Court, District of Vermont, in Central Vermont Public Service Corporation and Green Mountain Power Corporation v. Entergy Nuclear Vermont Yankee, Docket No. 2:12-cv-10- wks, expert report, May 8, 2013.

● Environmental Defense Fund and North Carolina Sustainable Energy Association Before the Public Utilities Commission of North Carolina, Docket E-7, SUB 1032, August 7, 2013.

● Advanced Energy Economy Ohio

Before the Ohio Senate Public Utilities Committee in support of the Ohio Energy Efficiency Resource Standard, April 9, 2013.

● Pepco Holdings, Inc., and its operating affiliates, Potomac Electric Power Company, Delmarva Power & Light Company, and Atlantic City Electric Company

Before the Federal Energy Regulatory Commission, in Delaware Division of Public Advocate, et. al., v. Baltimore Gas and Electric Company and Pepco Holdings Inc., Docket No. EL13-48-000, April 3, 2013.

● Major engineering, construction and project-management company

Prepared an expert report on electric market conditions in a dispute surrounding cancellation of a major power plant, 2012.

● Baltimore Gas and Electric Company

Before the Federal Energy Regulatory Commission, in Delaware Division of Public Advocate, et al., v. Baltimore Gas and Electric Company and Pepco Holdings Inc., Docket No. EL13-48-000, April 3, 2013.

● NSTAR Electric Company and Cape Wind LLC

Before the Massachusetts Department of Public Utilities, in the Petition of NSTAR Electric Company for Approval of a Proposed Long-Term Contract for Renewable Energy with Cape Wind Associates, LLC Pursuant to St. 2008, c. 169, §83, Prefiled Direct Testimony, March 30, 2012; testimony under crossexamination, August 2, 2012.

● Pacific Gas and Electric Company

Before the California Public Utilities Commission, in the Rulemaking on the Commission's Own Motion to Adopt New Safety and Reliability Regulations for Natural Gas Transmission and Distribution Pipelines and Related Ratemaking Mechanisms, Rulemaking 11-02-019, Rebuttal Testimony filed on February 28, 2012; testimony under cross-examination, March 20, 2012.

● **COMPETE Coalition**

Before the New Jersey Board of Public Utilities, In the Matter, In the Matter of the Board's Investigation of Capacity Procurement and Transmission Planning, Docket No. EO11050309, October 14, 2011.

● **On her own behalf**

Before the U.S. House Energy and Commerce Committee, Subcommittee on Energy and Power, EPA Regulations and Electric System Reliability, September 14, 2011.

● **On her own behalf**

Before the U.S. Senate Environment and Public Works Committee, Subcommittee on Clean Air and Nuclear Safety, June 30, 2011, Oversight Hearing: Review of EPA Regulations Replacing the Clean Air Interstate Rule (CAIR) and the Clean Air Mercury Rule (CAMR).

● **Exelon Corporation and Constellation Energy Group**

Before the Maryland Public Service Commission, In the Matter of the Merger of Exelon Corporation and Constellation Energy Group, Case No. 9271, prefired direct testimony (May 25, 2011); rebuttal testimony (October 12, 2011), supplemental testimony (December 15, 2011), testimony under cross-examination (November 10, 2011, January 25, 2012).

● **New England Power Generators Association**

Before the Massachusetts Public Utilities Commission, In the Matter of the Joint Petition for Approval of Merger [of Northeast Utilities and NSTAR] Pursuant to G.L. c. 164, § 96, Docket D.P.U. 10-170, prefired direct testimony (May 20, 2011); testimony under cross-examination (July 15 and 18, 2011).

● **Commonwealth Edison Company**

Before the Illinois Commerce Commission, Investigation of Proposed General Increase in Electric Rates of Commonwealth Edison Company, Docket No. 10-0467, ComEd Exhibit 13.0, prefired direct testimony (filed June 30, 2010); rebuttal testimony (filed November 22, 2010); surrebuttal testimony (filed January 2, 2011), testimony under cross-examination (January 18, 2011).

● **National Grid: Massachusetts Electric Company and Nantucket Electric Company**

Before the Massachusetts Department of Public Utilities, Investigation as to the Petition of Massachusetts Electric Company and Nantucket Electric Company each d/b/a National Grid for approval by the Department of Public Utilities of two long-term contracts to purchase wind power and renewable energy certificates, pursuant to G.L. c. 169, § 83 and 220 C.M.R. § 17.00 et seq. – Docket D.P.U. 10-54 (the Cape Wind contract proceeding), prefired direct testimony (filed June 4, 2010), rebuttal testimony (filed September 1, 2010), testimony under cross examination (September 8, 13, 14, 23, 24, 2010).

● **National Grid: Boston Gas Company, Essex Gas Company, Colonial Gas Company**

Before the Massachusetts Department of Public Utilities, Investigation as to the Propriety of Proposed Tariff Changes, Docket No. D.P.U. 10-55, prefiled direct testimony (filed April 16, 2010); testified under cross-examination, June 28-29, 2010.

● **National Grid: EnergyNorth Natural Gas, Inc., d/b/a National Grid NH**

Before the New Hampshire Public Utilities Commission, Investigation as to the Propriety of Proposed Natural Gas Tariff Changes, Docket DG 10-017, prefiled direct testimony (filed February 26, 2010).

● **National Grid: Niagara Mohawk Power Corporation**

Before the New York Public Service Commission, Investigation as to the Propriety of Proposed Electric Tariff Changes, Docket No. 10-E-0050, prefiled direct testimony (filed January 29, 2009), rebuttal testimony (filed August 2010).

● **National Grid: Narragansett Electric Company**

Before the Rhode Island Public Utilities Commission, Investigation as to the Propriety of Proposed Tariff Changes, Docket No. R.I.P.U.C. 4065, prefiled direct testimony (filed June 1, 2009; testimony under cross-examination, November 4, 2009).

● **National Grid: Massachusetts Electric Company and Nantucket Electric Company**

Before the Massachusetts Department of Public Utilities, Investigation as to the Propriety of Proposed Tariff Changes, Docket No. D.P.U. 09-39, prefiled direct testimony (filed May 15, 2009; testimony under cross-examination, August 7 and 25, 2009, and September 8, 2009).

● **Amerada Hess Corp., et al.**

Before the District Court of the United States for the Southern District of New York, on behalf of Amerada Hess Corp., et al., in *City of New York v. Amerada Hess Corp. et al.*, Case No. 1:00-1898, testimony in deposition, May 12, 2009.

● **State of North Carolina**

Before the District Court of the United States for the Western District of North Carolina, on behalf of North Carolina in *State of North Carolina, ex rel. Roy Cooper, Attorney General, v. Tennessee Valley Authority*, Case No. 1:06CV20, testimony in deposition, May 17, 2007; testimony at July 22, 2008.

● **KeySpan Energy Delivery (National Grid)**

Before the Massachusetts Appellate Tax Board, *Boston Gas Company, d/b/a KeySpan Energy Delivery New England v. City of Boston*, Docket No. F275055-F275056 (FY 2004), F279207-F279208 (FY 2005), F284088-F286194 (FY 2006), testimony and cross-examination, May 20-21, 28, June 4, 2008.

● **Commonwealth Edison Company**

Before the Illinois Commerce Commission, Investigation of Proposed General Increase in Electric Rates of Commonwealth Edison Company, Docket No. 07-0566, ComEd Exhibit 18.0, prefiled rebuttal testimony (filed April 12, 2008).

● **Sierra Pacific Power Company**

Before the Public Utilities Commission of Nevada, In the Matter of the Application of Sierra Pacific Power, filed pursuant to NRS 704.110(3), for authority to increase its general rates charged to all classes of electric customers to reflect an increase in annual revenue requirement, Docket No. 07-12 (filed December 3, 2007), Prefiled Direct Testimony; cross examination, April 17–18, 2008.

● **Amerada Hess Corp., et al.**

Before the District Court of the United States for the Southern District of New York, on behalf of Amerada Hess Corp., et al., in County of Suffolk and Suffolk County Water Authority v. Amerada Hess Corp. et al., Case No. 1:00-1898, testimony filed October 1, 2007.

● **Sempra Energy Company – San Diego Gas & Electric Company and SoCalGas Company**

Before the California Public Utility Commission, Order Instituting Rulemaking to Examine the Commission's post-2005 Energy Efficiency Policies, Programs, Evaluation, Measurement and Verification and Related Issues, Rulemaking Docket 06-04-010 (Filed April 13, 2006), testimony filed May 3, 2007, cross examination, May 29, 2007.

● **Commonwealth Edison Company**

Before the Illinois Commerce Commission, Investigation of Rider CPP of Commonwealth Edison Company, and Rider MV of Central Illinois Light Company d/b/a AmerenCILCO, of Central Illinois Public Service Company d/b/a AmerenCIPS, and of Illinois Power Company d/b/a Ameren IP, pursuant to Commission Orders regarding the Illinois Auction, Docket No. 06-0800, testimony filed April 6, 2007; cross-examination, April 24, 2007.

● **PECO Energy Company**

Before the Pennsylvania Public Utility Commission, Petition of PECO for Approval of (1) a Process to Procure Alternative Energy Credits During the AEPS Banking Period, and (2) A Section 1307 Surcharge and Tariff to Recover AEPS Costs, Prefiled Direct Testimony, March 19, 2007.

● **Masspower**

Before the Superior Court Department of Suffolk County, Massachusetts, Massachusetts Municipal Wholesale Electric Company v. Masspower, et al., Civil No. 05-02710 (BLS1), on the changes in conditions in the electric industry in New England as they relate to Masspower's performance under its power supply agreement with MMWEC; Expert Report, September 11, 2006; oral testimony under cross examination at trial, October 16–17, 2006.

● **Commonwealth Edison Company**

Before the Illinois Commerce Commission, Proposed general increase in electric rates, general restructuring of rates, price unbundling of bundled service rates, and revision of other terms and conditions of service, Docket No. 05-0597, Rebuttal Testimony, January 30, 2006; Surrebuttal Testimony, March 14, 2006; oral testimony under cross-examination, March 23, 2006. Testimony on rehearing, September 20, 2006.

● **Commonwealth Edison Company**

Before the Illinois House of Representatives, Electric Utility Oversight Committee, on the Pay-as-Bid versus Uniform Price Auction Approach To Procurement of Wholesale Power for ComEd's Full- Requirements Customers, January 18, 2006, Springfield, Illinois.

● **Louisville Gas & Electric Company and Kentucky Utilities Company**

Before the Kentucky Public Service Commission, Application of LG&E and KU to transfer functional control of their transmission assets, Direct Testimony, November 19, 2005.

● **Western Massachusetts Electric Company**

Before the Superior Court Department of Norfolk County, Massachusetts, Alternative Power Source, Inc., v. Western Massachusetts Electric Company, Civil Action No. 00-1967, on the allocation of costs related to transmission congestion in wholesale power contract for standard offer service. Expert Report, September 19, 2001; deposition, October 15, 2001; testimony at trial, July 15, 2005.

● **Entergy Louisiana, Inc. and Entergy Gulf States Inc.**

Before the Louisiana Public Service Commission, Application of Entergy Louisiana, Inc. for Approval of the Purchase of Electric Generating Facilities and Entergy Gulf States, Inc. for Authority to Participate in Contract for the Purchase of Capacity and Electric Power, Docket No. U27836, January 21, 2005.

● **Louisville Gas & Electric Company and Kentucky Utilities Company**

Before the Kentucky Public Service Commission, Investigation Into The Membership of Louisville Gas and Electric Company and Kentucky Utilities Company In The Midwest Independent Transmission System Operator, Inc., Case No. 2003-00266, September 29, 2004; Supplemental Rebuttal Testimony, January 10, 2005; testimony at hearing, June 2005.

● **Entergy Services Inc.**

Before the Federal Energy Regulatory Commission, Entergy Services Inc., et al., in support of the application for approval of market-based power purchase agreements under Section 205 of the Federal Power Act. Affidavit, February 28, 2003; Affidavit, March 31, 2003; Testimony, September 2003; Testimony at deposition, November 20, 2003; Rebuttal Testimony, May 11, 2004; Deposition, May 27, 2004, and June 10–11, 2004; Testimony under cross-examination, July 19–23, 26–27, 2004.

● **Pacific Gas & Electric Company**

Before the California Public Utilities Commission, In Re: Order Instituting Investigation into the ratemaking implications for Pacific Gas and Electric Company (PG&E) pursuant to the Commission's Alternative Plan of Reorganization under Chapter 11 of the Bankruptcy Code for PG&E, in the United States Bankruptcy Court, Northern District of California, San Francisco Division, In re Pacific Gas and Electric Company, Investigation 02-04-026, Pre-Filed Testimony, July 23, 2003, Testimony under crossexamination, September 12, 2003.

● **Entergy Louisiana, Inc.**

Before the Louisiana Public Service Commission, Entergy Service, In Re: Application of Entergy Louisiana, Inc. for Authorization to Enter into Certain Contracts for the Purchase of Capacity and Energy, Docket No. U-27136, Rebuttal Testimony, April 25, 2003.

● **Pacific Gas and Electric Company/PG&E Corporation**

Before the Federal United States Bankruptcy Court, Northern District of California, San Francisco Division, In Re: Pacific Gas and Electric Company, Debtor, Federal I.D. No. 94-0742640, on the public policy

concerns raised by the proposed reorganization plan of PG&E Corporation. Expert report, November 8, 2002; rebuttal report, November 26, 2002.

● **PP&L Global**

Before the New York Public Service Commission, Article X Siting Board, on the economic and environmental benefits of the Kings Park Energy power plant. Prefiled direct testimony, January 2002; rebuttal testimony, October 23, 2002.

● **Connecticut Light & Power Company**

Before the Federal United States District Court, District of Connecticut, Connecticut Light & Power Company v. NRG Power Marketing Inc., on their standard offer service wholesale sales agreement. Expert report, August 30, 2002; deposition, September 27, 2002.

● **Pacific Gas and Electric Company/PG&E Corporation**

Before the Federal Energy Regulatory Commission, in the Matter of Pacific Gas and Electric Company, PG&E Corporation, on behalf of its Subsidiaries Electric Generation LLC, ETrans LLC, and GTrans LLC, on the public benefits of the application seeking approval under Section 203 of the Federal Power Act and Section 12 of the Natural Gas Act for various actions relating to restructuring of the company to emerge from bankruptcy, November 30, 2001.

● **Cross-Sound Cable Company LLC**

Before the Connecticut Siting Council, on the public benefits of the proposed Cross Sound Cable Project's Application for a Certificate of Environmental Compatibility and Public Need, Docket No. 208. Prepared direct testimony, July 23, 2001; oral testimony under cross-examination, October 24–26, 29–30, 2001.

● **Sithe New England (Sithe Edgar LLC, Sithe New Boston LLC, Sithe Framingham LLC, Sithe West Medway LLC, Sithe Mystic LLC)**

Before the Federal Energy Regulatory Commission, in the Matter of NSTAR Electric & Gas Corp., v. Sithe Edgar LLC, Sithe New Boston LLC, Sithe Framingham LLC, Sithe West Medway LLC, Sithe Mystic LLC, and PG&E Energy Trading, Docket No. EL01-79-000. Affidavit comparing historical cost recovery by Boston Edison for its fossil generation units (pre-divestiture) under rate regulation, versus Sithe's revenue recovery for these same units (post-divestiture) under market prices, June 5, 2001.

● **NRG Energy Inc. and Dynegy Holdings Inc.**

Before the Public Utilities Commission of Nevada, In Re: petition of the Attorney General's Bureau of Consumer Protection to issue an Order staying further proceedings regarding divestiture of Nevada's electric generation assets and to open a docket to consider whether to issue a moratorium on divestiture in Nevada. Supplemental prepared direct testimony on behalf of Valmy Power LLC, April 6, 2001; testimony under cross-examination.

Before the Public Utilities Commission of Nevada, In Re: petition of the Attorney General's Bureau of Consumer Protection to issue an Order staying further proceedings regarding divestiture of Nevada's electric generation assets and to open a docket to consider whether to issue a moratorium on divestiture in Nevada, prepared direct testimony on behalf of Reid Gardner Power LLC and Clark Power LLC, April 3, 2001; testimony under cross-examination.

● Sithe New England, LLC

Before the Federal Energy Regulatory Commission, In the Matter of Maine Public Utilities Commission and The United Illuminating Company v. ISO New England, Inc., affidavit on the role of price “spikes” in compensating generators for the services that they provide in the region, September 7, 2000.

● Arkansas Electric Distribution Cooperatives

Before the Arkansas Public Service Commission, In the Matter of a Generic Proceeding to Establish Uniform Policies and Guidelines for a Standard Service Package. Prepared joint reply testimony (with Janet Gail Besser), July 21, 2000; prepared joint surreply testimony (with Janet Besser), August 3, 2000.

● TransEnergie U.S.

Before the Connecticut Siting Council, on the public benefits of the proposed Cross Sound Cable Project. Expert report, July, 2000; prepared direct testimony, September 20, 2000; oral testimony, September 27, 2000; supplemental written testimony, December 7, 2000; oral testimony under cross-examination, December 14, 2000; oral testimony January 9–11, 2001.

● SCS Energy Corp.

Before the New York State Public Service Commission, on the economic and environmental impact of a new combined cycle power plant in Queens, NY, June 19, 2000.

● Reading Municipal Light Department

Before the Massachusetts Energy Facilities Siting Board, Docket No. EFSB 97-4, on the economics and need for a new natural gas pipeline, June 19, 2000; testimony under cross-examination September 19, 2000, September 21–22, 2000, October 5, 2000, and October 17, 2000.

● Fitchburg Gas and Electric Light Company

Before the Massachusetts Department of Telecommunications and Energy, Docket D.T.E. 99-66, on gas and electric company rate design policy, testimony under cross-examination, January 14, 2000.

● FirstEnergy Corp.

Before the Public Utilities Commission of Ohio, In the Matter of the Application of FirstEnergy Corp. on behalf of Ohio Edison Company, the Toledo Edison Company, and The Cleveland Electric Illuminating Company: for Approval of an Electric Transition Plan and for Authorization to Recover Transition Revenues (Case No. 99-1212-EL-ETP); for Approval of New Tariffs (Case No. 99-1213-EL-ATA); for Certain Accounting Authority (Case No. 99-1214-EL-AAM), on recovery of transition costs and calculation of the market value of generation assets. Joint testimony (with Dr. Scott Jones), December 22, 1999; supplemental testimony (with Dr. Scott T. Jones), April 4, 2000; deposition, April 7, 2000.

● Sithe New England, LLC

Before the Massachusetts Energy Facilities Siting Board, Docket EFSB 98-10, in support of an application to construct a 540 MW gas-fired single cycle peaking power plant in Medway, Massachusetts. Prepared direct testimony, April 1999; oral testimony under cross-examination, July 27, 1999.

PUBLICATIONS, REPORTS, ARTICLES

Hibbard, Paul, Grace Howland, Grace Maley, Daniel Stewart, and Susan Tierney, "Electric Utilities and the IRA/IIJA: Ensuring Maximum Benefits for Consumers from New Federal Funding Opportunities," January 2024, <https://www.analysisgroup.com/globalassets/insights/publishing/2024-electric-utilities-and-the-iraiija.pdf>.

Tierney, Susan, "Electric System Reliability and EPA Regulation of GHG Emissions from Power Plants: 2023," <https://www.analysisgroup.com/globalassets/insights/publishing/2023-tierney-electric-reliability-and-epaghg-reg.pdf>, November 7, 2023.

Hibbard, Paul, Susan Tierney, Grace Howland, and Daniel Stuart, "Massachusetts' Energy Transition: Innovation for Electric Utility Regulation," September 2023. https://www.analysisgroup.com/globalassets/insights/publishing/2023_ma_energy_transitioninnovation_for_electric_utility_regulation.pdf.

Tierney, Susan, "U.S. Coal-Fired Power Generation: Market Fundamentals as of 2023 and Transitions Ahead," August 8, 2023. <https://www.analysisgroup.com/globalassets/insights/publishing/2023-tierney-coalgeneration-report.pdf>

Tierney, Susan, Joseph Cavicchi, and Paul Hibbard, "The Outerbridge New Jersey Renewable Energy Connector Transmission Proposal to Support Delivery of Offshore Wind: Project Benefits Report," September 14, 2021.

The National Academies of Sciences Committee on the Future of the U.S. Electric System (with Susan Tierney as Committee member and co-author), <https://www.nap.edu/catalog/25968/the-future-of-electric-power-inthe-united-states>, February 2021.

The National Academies of Sciences Committee on Accelerating Decarbonization of the U.S. Energy System (with Susan Tierney as Committee member and co-author), "Accelerating Decarbonization of the U.S. Energy System," February 2, 2021, <https://www.nap.edu/resource/25932/interactive/>.

Tierney, Susan, and Paul Hibbard, "Accelerating Job Growth and an Equitable Low-Carbon Energy Transition: The Role of the Clean Energy Accelerator," January 2021. <https://www.analysisgroup.com/globalassets/insights/publishing/2021-ag-white-paper-on-cgc-acceleratorfull-paper.pdf>.

Tierney, Susan, "Wholesale Power Market Design in a Future Low-Carbon Electric System: A proposal for consideration," WRI/RFF Future of Power Initiative, November 28, 2020. https://files.wri.org/s3fspublic/tierney-white-paper-on-wholesale-market-design-12-15-2020-final-to-wrirff.pdf?KmZ4_HCRyF4ZtCCmu3EFjbpx4R9Xxpa0.

Tierney, Susan, and Lori Bird, "Setting the Record Straight About Renewable Energy," World Resources Institute, blog, May 12, 2020, <https://www.wri.org/blog/2020/05/setting-record-straight-about-renewableenergy>.

Tierney, Susan, "Powering Through – and Beyond – The Crisis," Utility Dive, May 4, 2020. <https://www.utilitydive.com/news/powering-through-and-beyond-the-crisis/577221/>.

Tierney, Susan, "Time to move away from old precedents in FERC pipeline reviews," *Utility Dive*, November 19, 2019, <https://www.utilitydive.com/news/time-to-move-away-from-old-precedents-in-ferc-pipelinereviews/567512/>.

Tierney, Susan, "Certification of New Interstate Natural Gas Pipeline Facilities: Revising the 1999 Policy Statement for the 21st Century," White paper prepared with funding from the Sustainable FERC Project at the Natural Resources Defense Council, November 2019.

Tierney, Susan and Paul Hibbard, "Clean Energy in New York State: The Role and Economic Impacts of a Carbon Price in NYISO's Wholesale Electricity Markets," October 2019.

Tierney, Susan, "Rushing to Close NJ's Nuclear Power Plants Could Be a Costly Mistake," NJ.Com, April 9, 2019.

Tierney, Susan. "Public Utility Ratemaking: Context for SRP's 2019 Public Pricing Process," February 17, 2019.

Tierney, Susan, et al., "The California Wildfires: Implementing SB 901's Customer Harm Threshold," December 2018.

Duffy, Philip, et al. (including Susan Tierney), "Strengthened scientific support for the Endangerment Finding for atmospheric greenhouse gases," *Science*, December 13, 2018.

Tierney, Susan, "Initial Observations: On the Operational and Investment Incentives of Different Owners of Coal-Fired Power Plants in Light of EPA's Proposed 'Affordable Clean Energy' Rule With Proposed Changes in the New Source Review Program," October 30, 2018.

Tierney, Susan, "Resource Adequacy and Wholesale Market Structure for a Future Low-Carbon Power System in California," July 10, 2018.

Hibbard, Paul, and Susan Tierney, Pavel Darling, and Sarah Cullinan, "An expanding carbon cap-and-trade regime? A decade of experience with RGGI charts a path forward," *The Electricity Journal*, June 2018.

Tierney, Susan, and Paul Hibbard, "Vehicle Fuel-Economy and Air-Pollution Standards: A Literature Review of the Rebound Effect," June 28, 2018.

Tierney, Susan, and Karen Palmer, "Federal Interventions in Wholesale Power Markets: Examining the Implications for Market Performance and National Security," blog post on Resources for the Future website, May 9, 2018. <http://www.rff.org/blog/2018/federal-interventions-wholesale-power-markets-examiningimplications-market-performance>.

Tierney, Susan and Karen Palmer, "Grid Resilience, Generation Portfolios, and National Security," blog post on Resources for the Future website, May 8, 2018. <http://www.rff.org/blog/2018/grid-resilience-generationportfolios-and-national-security>.

Hibbard, Paul, Andrea Okie, Susan Tierney, and Pavel Darling, "The Economic Impacts of the Regional Greenhouse Gas Initiative on Nine Northeast and Mid-Atlantic States: Review of RGGI's Third Three- Year Compliance Period (2015–2017)," April 2017.

Tierney, Susan, "About that national conversation on resilience of the electric grid: The urgent need for guidance and action," *Utility DIVE*, December 13, 2017.

Tierney, Susan, "Natural Gas Pipeline Certification: Policy Considerations for a Changing Industry," November 6, 2017.

Tierney, Susan, "Rick Perry went looking for a reason to bail out coal and came back empty," *The Hill*, September 7, 2017.

Tierney, Susan, "The Big Drumroll Ends with a Thud: DOE's Study on the U.S. Power Grid," August 24, 2017. *Insights: WRI Blog*, August 24, 2017.

Hibbard, Paul, Susan Tierney and Katie Franklin, "Markets, Reliability and the Evolving U.S. Power System," June 2017.

Tierney, Susan and Pavel Darling, "The Proposed Northern Pass Transmission Project: Assessing its impacts on New Hampshire," February 2017.

Tierney, Susan, and Craig Aubuchon, "Millstone Power Station: Providing support for achieving Connecticut's clean energy goals," December 2016.

Tierney, Susan, "Is Nuclear Power Vital to Hitting CO2 Emissions Targets? Yes, Renewables Can't Fill the Gap Yet," *Wall Street Journal*, November 11, 2016.

Tierney, Susan, "The U.S. Coal Industry: Challenging Transitions in the 21st Century," September 26, 2016.

Rabago, Karl, and Susan Tierney, "Does the Clean Power Plan Go Too Far? No." *National Law Journal*, September 26, 2016.

Tierney, Susan, Paul Hibbard, and Ellery Berk, "Considerations Related to Trading for the RGGI States Under the EPA's Clean Power Plan," July 12, 2016.

Tierney, Susan, "Proposed Senate Bill No. 1965: An Act Relative to Energy Sector Compliance with the Global Warming Solutions Act: Potential costs and other implications for Massachusetts consumers and the state's and region's electric system," September, 2015.

Tierney, Susan, "Usher in a New Era of Affordable Power," *U.S.News.com* (Debate Club: webpost), August 5, 2015. <http://www.usnews.com/debate-club/is-obamas-clean-power-plan-a-good-idea/usher-in-a-new-era-ofaffordable-power>.

Tierney, Susan, "Don't let nuke plants go too fast," *The Hill* (Opinions: webpost), July 15, 2015. <http://thehill.com/opinion/op-ed/247858-dont-let-nuke-plants-go-too-fast>.

Hibbard, Paul, Andrea Okie, Susan Tierney, and Pavel Darling, "The Economic Impacts of the Regional Greenhouse Gas Initiative on Nine Northeast and Mid-Atlantic States: Review of RGGI's Second Three- Year Compliance Period (2012–2014)," July 2015.

Tierney, Susan, Paul Hibbard and Craig Aubuchon, "Electric System Reliability and EPA's Clean Power Plan: The Case of MISO," June 8, 2015.

Tierney, Susan, Craig Aubuchon, and Pavel Darling, "Ohio Natural Gas Market Study: Prepared for the NEXUS Gas Transmission Project," Appendix 1C4 to the NEXUS Project's Resource Report 1 – General Project Description, Pre-Filing Draft, submitted to the Federal Energy Regulatory Commission, June 2015.

Tierney, Susan, and Paul Hibbard, "Carbon Control and Competitive Wholesale Electricity Markets: Compliance Paths for Efficient Market Outcomes," May 2015.

Tierney Susan, "Déjà vu: Pushback to U.S. Clean Power Plan Reminiscent of 2011 Mercury Rule," *Insights: WRI Blog*, May 14, 2015.

Tierney, Susan, Eric Svenson, Brian Parsons, letter and report to Chairman Norman Bay, Federal Energy Regulatory Commission, re: Ensuring Electric Grid Reliability Under the Clean Power Plan: Addressing Key Themes from the FERC Technical Conferences, Docket No AD15-4, April 17, 2015.

Tierney, Susan, "The Role of "DER" to "D"": The role of distributed energy resources in local electric distribution system reliability," March 31, 2015.

Tierney, Susan, Paul Hibbard and Craig Aubuchon, "Electric System Reliability and EPA's Clean Power Plan: The Case of PJM," March 16, 2015.

Tierney, Susan, Paul Hibbard and Craig Aubuchon, "Electric System Reliability and EPA's Clean Power Plan: Tools and Practices," February 2015.

Hibbard, Paul, Andrea Okie and Susan Tierney, "EPA's Clean Power Plan: States' Tools for Reducing Costs and Increasing Benefits to Consumers," July 14, 2014.

Lubber, Mindy and Susan Tierney, "Carbon producers can meet EPA's limits as they have in the past," McClatchy-Tribune News Service (printed in the *Miami Herald*) July 10, 2014.

Tierney, Susan, "Greenhouse Gas Emission Reductions From Existing Power Plants Under Section 111(d) of the Clean Air Act: Options to Ensure Electric System Reliability," May 8, 2014.

Tierney, Susan, "The Proposed 'Clean Energy Resources' Bill: Potential costs and other implications for Massachusetts consumers and the state's and region's electric system," April 1, 2014.

Tierney, Susan, "State shouldn't pursue hydropower from Quebec," *The Boston Globe Opinion* (The Podium (online)), March 25, 2014.

Hibbard, Paul, Steven Carpenter, Pavel Darling, Andrea Okie, Maggie Reilly, Susan Tierney, "Project Vigilance: Functional Feasibility Study for the Installation of Ambri Energy Storage Batteries at Joint Base Cape Cod," March 7, 2014.

Hibbard, Paul, Susan Tierney, and Pavel Darling, "The Impacts of the Green Communities Act on the Massachusetts Economy: A Review of the First Six Years of the Act's Implementation," March 4, 2014.

Arvizu, Dan, Severin Borenstein, Susan Tierney, and Stephen Wright, "Report of the Independent Advisory Panel Regarding the Five California Utilities' Study of Integration of Renewable Energy into California's Electric System: 'Investigating a Higher Renewables Portfolio Standard in California'," January 2014.

Tierney, Susan, with Steve Carpenter, "Planning for Offshore Energy Development: How Marine Spatial Planning Could Improve the Leasing/Permitting Processes for Offshore Wind and Offshore Oil/Natural Gas Development," paper prepared for the Fund for Ocean Economic Research," June 2013.

Tierney, Susan, "Framing the Issues: Growing Tensions at the Interface of the Natural Gas and Electricity Markets (or, If You Want People to Think Outside of the Box, Don't Put Them in One)," paper prepared for MIT Energy Initiative (MITEI) Symposium: "Growing Concerns, Possible Solutions: The Interdependency of Natural Gas and Electricity Systems," April 16, 2013.

Hibbard, Paul, Andrea Okie, Susan Tierney, "California's Advanced Energy Economy: Advanced Energy Business Leaders' Perspectives and Recommendations on California's Energy Policies," February 2012.

Alliance Commission on National Energy Efficiency Policy (Susan Tierney, member), "Energy 2030: Doubling U.S. Energy Productivity by 2030," February 2013.

Bipartisan Policy Center Energy Project (Susan Tierney, member), "America's Energy Resurgence: Sustaining Success, Confronting Challenges," February 2013.

Tierney, Susan, Co-lead Convening Author, Energy Supply and Use Chapter, Draft National Climate Assessment, January 2013.

Tierney, Susan, "The Positive Outlook for Cleaner Air and Reliable Electric Service," June 11, 2012.

Tierney, Susan, "America's Bright Future: Cleaner Air and Affordable, Reliable Electricity," April 23, 2012.

Tierney, Susan, Foreword to CERES Report, "Practicing Risk-Aware Electricity Regulation: What Every State Regulator Needs to Know (How State Regulatory Policies Can Recognize and Address the Risk in Electric Utility Resource Selection," authored by Ron Binz, with Richard Sedano, Denise Furey, Dan Mullen, April 2012.

Tierney, Susan, "Time to retire coal-fired plants," *Politico*, March 20, 2012.

Tierney, Susan, "Why Coal Plants Retire: Power Market Fundamentals as of 2012," February 16, 2012.

Hibbard, Paul J., and Susan F. Tierney, "Carbon Control and the Economy: Economic Impacts of RGGI's First Three Years." *Electricity Journal*, December 2011.

Deutch, John, Steven Holditch, Fred Krupp, Kathleen McGinty, Mark Zoback, Susan Tierney, and Daniel

Yergin, "The Secretary of Energy Advisory Board Shale Gas Production Subcommittee Second Ninety- Day Report" (on steps to address the environmental and safety performance of shale gas extraction) November 18, 2011.

Hibbard, Paul J., Susan F. Tierney, Andrea M. Okie, Pavel G. Darling, "The Economic Impacts of the Regional Greenhouse Gas Initiative on Ten Northeast and Mid-Atlantic States: Review of the Use of RGGI Auction Proceeds from the First Three-Year Compliance Period," November 15, 2011.

Deutch, John, Steven Holditch, Fred Krupp, Kathleen McGinty, Mark Zoback, Susan Tierney, and Daniel Yergin, "The Secretary of Energy Advisory Board Shale Gas Production Subcommittee Ninety-Day Report" (addressing the environmental and safety performance of shale gas extraction) August 11, 2011.

Hibbard, Paul J., Pavel Darling, and Susan Tierney, "Potomac River Generating Station: Update on Reliability and Environmental Considerations," prepared for the American Clean Skies Foundation, July 19, 2011.

Bradley, Michael J., Susan F. Tierney, Christopher E. Van Atten, Amlan Saha, and Carrie Jenks, "Ensuring a Clean, Modern Electric Generating Fleet while Maintaining Electric System Reliability: Summer Update 2011," prepared for the Clean Energy Group, June 2011.

Tierney, Susan, and Charles Cicchetti, The Results in Context: A Peer Review of EEI's "Potential Impacts of Environmental Regulation on the U.S. Generation Fleet," May 2011.

Tierney, Susan, "Policies for a Secure Energy Future: Issues in Supply and Demand," paper prepared for the Aspen Institute Congressional Program, February 22-27, 2011.

Tierney, Susan, "Guest Commentary: EPA Air Pollution Rules are Good for the Nation," *CarbonMarket North America*, February 11, 2011.

Tierney, Susan, "Electric Reliability under New EPA Power Plant Regulations: A Field Guide," January 18, 2011.

Tierney, Susan, and Robert Earle, "The Costs of Compliance to EPA's Advance Notice of Proposed Rulemaking on the PCB Use Authorization for Interstate Natural Gas Pipelines," prepared on behalf of the Interstate Natural Gas Association of America ("INGAA"), September 10, 2010.

Bradley, Michael J., Susan F. Tierney, Christopher E. Van Atten, Paul J. Hibbard, Amlan Saha, and Carrie Jenks, "Ensuring a Clean, Modern Electric Generating Fleet while Maintaining Electric System Reliability," prepared for the Clean Energy Group, August 2010.

Tierney, Susan, "The New York Independent System Operator: A Ten-Year Review," prepared for the NYISO, April 12, 2010.

Tierney, Susan, "The Prospects for Natural Gas, Coal, and Nuclear Power in America's Energy Future," paper prepared for the Aspen Institute's Congressional Program on Energy Security and Climate Change: Policy Challenges for the Congress, Lisbon, Portugal, April 7, 2010.

Tierney, Susan, with Andrea Okie and Stephen Carpenter, "Strategic Options for Investment in Transmission in Support of Offshore Wind Development in Massachusetts: Summary Report with Expanded Technical Information" Report prepared for the Massachusetts Renewable Energy Trust, January 2010.

Tierney, Susan, with Andrea Okie and Stephen Carpenter, "Strategic Options for Investment in Transmission in Support of Offshore Wind Development in Massachusetts: Summary Report," Report prepared for the Massachusetts Renewable Energy Trust, December 2009.

Tierney, Susan, "Allocating Investment Risk in Today's Uncertain Electric Industry: A Guide to Competition and Regulatory Policy During 'Interesting Times,'" A paper prepared for the Electric Power Supply Association, September 2009.

Tierney, Susan, "An Assessment of the McCullough Research Memo on Profitability Results of Selected Power Plants in New York State," A paper prepared for the New York ISO, September 2009

Tierney, Susan, "An Evaluation of the McCullough Research Report on New York's Wholesale Power Market," A report prepared for the New York ISO, March 25, 2009.

Tierney, Susan, Andrea Okie, Rana Mukerji, Michael Swider, Robert Safuto, Arvind Jaggi, "Fuel Diversity in the New York Electricity Market," A New York ISO White Paper, October 2008

Tierney, Susan, "ERCOT Texas's Competitive Power Experience: A View from the Outside Looking In," October, 2008.

Tierney, Susan, "A 21st Century "Interstate Electric Highway System" – Connecting Consumers and Domestic Clean Power Supplies," October 31, 2008.

Barmack, Matthew, Edward Kahn, Susan Tierney, Charles Goldman, "Econometric models of power prices: An approach to market monitoring in the Western US," *Journal of Utilities Policy*, 2008, 307-320.

Tierney, Susan, and Todd Schatzki, "Competitive Procurement of Retail Electricity Supply: Recent Trends in State Policies and Utility Practices," prepared for the National Association of Regulatory Utility Commissioners (NARUC), July 2008.

Tierney, Susan, et al., "Pay-as-Bid vs. Uniform Pricing: Discriminatory auctions promote strategic bidding and market manipulation," *Public Utilities Fortnightly* (March 2008).

Tierney, Susan, "Statement on Pennsylvania House Bill No. 54 – Why Extending Electricity Rate Caps Ultimately Would Not Protect Consumers From Rising Electricity Prices," February 2008.

Tierney, Susan, "Pennsylvania's Electric Power Future: Trends and Guiding Principles," January 2008, Prepared for the Energy Association of Pennsylvania.

Tierney, Susan, "Decoding Developments in Today's Electric Industry – Ten Points in the Prism," October 2007, Prepared for the Electric Power Supply Association.

Baldick, Ross, Ashley Brown, James Bushnell, Susan Tierney, and Terry Winter, "A National Perspective on Allocating the Costs of New Transmission Investment: Practice and Principles," A White Paper Prepared by The Blue Ribbon Panel on Cost Allocation for WIRES, the Working group for Investment in Reliable and Economic electric Systems, September 2007.

Tierney, Susan, "Adaptation and the Energy Sector," National Summit on Coping with Climate Change, University of Michigan, Ann Arbor, May 8–10, 2007.

Tierney, Susan, and Edward Kahn, "A Cost-Benefit Analysis of the New York Independent System Operator: The Initial Years," March 2007.

Tierney, Susan, and Paul Hibbard, "Market Monitoring at U.S. RTOs: A Structural Review," March 2007 (Appendix 17 of PJM 2007 Strategic Report, April 2, 2007).

"A Cost-Benefit Assessment of Wholesale Electricity Restructuring and Competition in New England," Coauthored with Dr. Matthew Barmack and Dr. Edward Kahn, *Journal of Regulatory Economics*, 2007, vol. 31, Issue 2, pages 151–184.

Tierney, Susan, "Recollections of a State Regulator," NRRI 30th Anniversary, *Journal of Applied Regulation*, Volume 4, December 2006.

Barmack, Matthew, Edward Kahn, Susan Tierney, and Charles Goldman, "A Regional Approach to Market Monitoring in the West," Prepared the Western Interstate Energy Board Committee on Regional Electric Power Cooperation and Office of Electricity Delivery and Energy Reliability, Department of Energy, LBNL-61313, October 2006.

"Electric Reliability," letter to the Editor, *Issues in Science and Technology*, Fall 2006, Forum.

Report to the Massachusetts Special Commission Relative to Liquefied Natural Gas Facility Siting and Use, June 2006.

"Energy Policy Act Section 1813 Comments: Report of the Ute Indian Tribe of the Uintah and Ouray Reservation for Submission to the U.S. Departments of Energy and Interior," Coauthored with Paul J. Hibbard, In Cooperation With The Ute Indian Tribe of the Uintah and Ouray Reservation, May 15, 2006.

"In support of a Sound plan," Op Ed Coauthored with John DeVillars, *Boston Globe*, April 23, 2006.

"Let's Talk About the Weather: Interview with Susan Tierney on climate change risks that corporate boards should know about and address," *Corporate Board Member Magazine*, January/February 2006.

"New England Energy Infrastructure – Adequacy Assessment and Policy Review," White Paper prepared for the New England Energy Alliance; Coauthored with Paul J. Hibbard November 2005.

"New energy bill doesn't do enough." Op Ed, *Boston Globe*, July 29, 2005.

"The Benefits of New LNG Infrastructure in Massachusetts and New England: The Northeast Gateway Project," Prepared for Northeast Gateway Energy Bridge, L.L.C., and Algonquin Gas Transmission, LLC, White Paper Coauthored with Paul. J. Hibbard, June 2005.

"Principles for Market Monitoring and Mitigation in PJM: A Review of Economic Principles, Legal and Regulatory Structures, and Practices of Other Regions, with Recommendations," White Paper prepared for PJM Interconnection, January 3, 2005.

"Keeping the Power Flowing: Ensuring a Strong Transmission System to Support Consumer Needs For CostEffectiveness, Security and Reliability – A Report of the Transmission Infrastructure Forum of the Consumer Energy Council of America," Coauthored the report with CECA staff for this CECA Transmission Infrastructure Forum, January 2005.

Signatory to "Ending the Energy Stalemate: A Bipartisan Strategy to Meet America's Energy Challenges, Summary of Recommendations," National Commission on Energy Policy, December 2004.

"Comments of Susan F. Tierney and Paul. J. Hibbard on their own behalf," before the *Federal Energy Regulatory Commission, in the Matters of Solicitation Processes for Public Utilities (Docket No. PL04-6-000) and Acquisition and Disposition of Merchant Generation Assets by Public Utilities (Docket No. PL04-9-000)*, on the role of independent monitors in public utility resource solicitations, July 1, 2004.

"Energy and Environmental Policy in the United States: Synergies and Challenges in the Electric Industry" (with Paul J. Hibbard), prepared for Le Centre Français sur les Etats-Unis (The French Center on the United States), July 2003; presentation in Paris, October, 2003.

"Supplemental Report on the Benefits of New Gas Infrastructure in New England: The Everett Extension Project" (with Charles Augustine), prepared for Algonquin Gas Transmission Company, February 5, 2003.

"The Political Economy of Long-Term Generation Adequacy: Why an ICAP Mechanism Is Needed as Part of Standard Market Design" (with Janet Gail Besser and John Farr), *The Electricity Journal*, August/September 2002.

"Siting Power Plants in the New Electric Industry Structure: Lessons California and Best Practices for Other States" (with Paul J. Hibbard), *The Electricity Journal*, June 2002.

"Maritimes Phase III & Algonquin Hubline: 'Coastal Dependency'" *CZM Consistency Review*, May 2002.

"Siting Power Plants: Recent Experience in California and Best Practices in Other States" (with Paul J. Hibbard), prepared for The Hewlett Foundation and The Energy Foundation, February 2002.

"Economic and Environmental Benefits of the Kings Park Energy Project: System Production Modeling Report" (with Joseph Cavicchi), prepared for PPL Global, January 25, 2002.

"The Benefits of New Gas Infrastructure in New England: The Maritimes & Northeast Phase IV Pipeline Project" (with Charles Augustine), prepared for Maritimes & Northeast Pipeline, LLC, January 2002.

"Activating Ontario's Capacity Market: Design and Implementation Issues" (with Janet Gail Besser and John Farr), prepared for Sithe Energies, Inc., October 24, 2001.

White paper on "Ensuring Sufficient Capacity Reserves in Today's Energy Markets" (with Janet Gail Besser and John Farr), prepared for submission as part of comments filed by Sithe Power Marketing LLC, Sithe New England Holdings, FPL Energy LLC, in FERC Docket No. EX01-1-000, October 17, 2001.

"The Rationale and Need for Capacity Obligations and a Capacity Market in a Restructured Ontario Electricity Industry" (with Janet Gail Besser & John Farr), prepared for Sithe, September 27, 2001.

"Economic and Environmental Benefits of the Wawayanda Energy Center: System Production Modeling Report" (with Joseph Cavicchi), prepared for Wawayanda Energy Center, LLC, August 24, 2001.

"A Better CO2 Rule," op-ed, *The New York Times*, May 16, 2001.

"Air Pollution Reductions Resulting from the Kings Park Energy Project" (with Joseph Cavicchi), prepared for PPL Global, January 24, 2001.

"Report on "Economic Benefits of Wireless Telecommunications," prepared on behalf of the N.H. Coalition of Wireless Carriers for the New Hampshire HB 733 Study Committee, November 13, 2000.

Expert Report: "Public Benefits of the Proposed Cross Sound Cable Project Prepared for TransÉnergie U.S. Ltd.," July 2000.

"The Benefits of New Gas Infrastructure in Massachusetts and New England: The Maritimes & Northeast Phase III Pipeline and the Algonquin Gas Transmission Company HubLine Projects" (with Wayne Oliver of Navigant Consulting), prepared for Maritimes & Northeast Pipeline, LLC and Algonquin Gas Transmission Company, October 2000.

"Production Modeling for the Astoria Project: Report on Results" (with John G. Farr), report for SCS Energy Corp., June 14, 2000.

"Observations from Across the Border: Implications for Canadian Reliability of Recent Changes in U.S. Electricity Markets and Policy," white paper for Natural Resources Canada, 1999.

"Research Support for the Power Industry" (with M. Granger Morgan), *Issues in Science and Technology*, Fall 1998.

"Maintaining Reliability in a Competitive U.S. Electricity Industry," Final Report of the Task Force on Electric System Reliability, U.S. Department of Energy, September 29, 1998.

"Regional Issues in Restructuring the Electric Industry," *The Electricity Industry Briefing Papers*, The National Council on Competition and the Electric Industry, April 1998.

"Fueling the Future: America's Automotive Alternatives" (with Philip Sharp), The American Assembly, Columbia University, Arden House, NY, September, 1995.

"Needed: Broad Perspective, Fresh Ideas," guest editorial, *The Electricity Journal*, November 1994. Foreword in J. Raab, *Using Consensus Building to Improve Utility Regulation*, American Council for an Energy-Efficient Economy, Washington, D.C., 1994.

"Massachusetts' Pre-Approval Approach to Prudence in Massachusetts," *Electricity Journal*, December 1990.

"Using Existing Tools to Pry Open Transmission—A New England Proposal," *Electricity Journal*, April 1990.

"Sustainable Energy Strategy: Clean and Secure Energy for a Competitive Economy" (directed), National Energy Policy Plan, July 1995.

"Siting Needs: Issues and Options," U.S. Department of Energy, June 1993.

"The Nuclear Waste Controversy," in D. Nelkin, *Controversy: The Politics of Technical Decisions*, Sage, 1977; 1984 (second edition).

Kenneth Kraemer, Siegfried Dickhoven, John Leslie King, Susan Fallows Tierney, *Datawars*, Columbia University Press, 1987.

"The Evolution of the Nuclear Debate: Role of Public Participation," *Annual Review of Energy*, 1978.

RECENT SPEECHES AND PRESENTATIONS IN THE PAST 10 YEARS

"The Spark of Innovation: Exploring Decarbonization from Electrification," IEEE PES Conference, Anaheim, May 8, 2024.

"The State-RTO Partnership: Policies, Markets, Reliability, and the Energy Transition," Northwestern University Electricity Dialogue," Chicago, April 23, 2024.

"The Future of Fossil Fuels in a Decarbonized United States," *Resources Radio* podcast, March 26, 2024.

"Accelerating Decarbonization in the US," *The Energy Transition Show* podcast, February 21, 2024.

"What's Really Needed to Cut U.S. Emissions Faster This Decade?" *Electrify This!* podcast, February 9, 2024.

"Reality Check on Policy and Markets," Aspen Institute Winter Energy Forum, February 6, 2024.

"Energy Grid Infrastructure: Progress and Impediments to Sustainability," Cosmos Club Climate Change Mitigation and Adaptation Group and Economics Group, Washington DC, February 6, 2024.

"The Electric Power Sector: Context for Climate Pollution Reduction Grants," Environmental Protection Agency Technical Assistance Forum, December 13, 2023.

"Weather, Markets, and Reliability: Harmonizing the Gas and Electric Industries," Northwestern University Electricity Dialogue, Chicago, October 5, 2023.

"Rate Design for Electrification and Activating Demand," New England Roundtable, March 24, 2023.

"Net Zero America," National Association of Regulatory Utility Commissioners, November 7, 2021.

"Transmission's Critical Role in Decarbonizing New England," New England Electricity Restructuring Roundtable, September 24, 2021.

"Wholesale Electricity Markets," National Governors Association, September 23, 2021.

Expert Panel on "Greenhouse Gases - Where are they from, why do they matter, and can they be reduced?" America in One Room: Climate and Energy - Deliberative Polling Event (Stanford University), September 2021.

"Improving Electricity Transmission Siting Opportunities to Meet America's Consumer, Economic, Clean Energy and Climate Goals," Progressive Policy Institute, September 14, 2021.

"Energy Transitions: Agency of Change, Changing Agents," UT Energy Week, 2021, University of Texas Energy Institute, April 2021.

Briefings on the National Academies' study on The Future of Electric Power, February-March 2021.

Briefings on the National Academies' study on Decarbonizing the U.S. Energy System, February-March 2021.

"Wholesale Electricity Markets: Resource Adequacy," Future Power Markets Forum, Johns Hopkins and Columbia University Center for Global Energy Policy, February 5, 2021.

"Wholesale Power Market Design in a Future Low-Carbon Electric System," WRI-RFF Workshop, December 16, 2020, <https://www.rff.org/events/workshops/market-design-for-the-clean-energy-transition-advancinglong-term-approaches/>.

"Introduction to the Theory and Practice of Regulation: The Coming Utility Transition," NRRI Regulatory Training Initiative," November 9, 2020, <https://www.youtube.com/watch?v=OqVv1KEK5ko>.

"Opportunities for Governors to Leverage or Align Electricity Markets to Meet State Energy Goals," National Governors Association, October 29, 2020, <https://www.nga.org/center/meetings/strategies-meet-clean-energygoals/>.

"New York's Path to a Carbon Free Future," City and State New York, September 17, 2020, <https://www.cityandstateny.com/events/nys-path-carbon-free-future>.

"Energy Stimulus: Investing in the Power Grid of the Future," Irving Institute, Dartmouth College, July 14, 2020.

"The Future of Natural Gas in New England's Electric System? Who knows; It's complicated," New England Electricity Roundtable, June 12, 2020. <http://www.raabassociates.org/main/roundtable.asp?sel=155>.

"The NYISO's Carbon Pricing Proposal: Value Proposition to New York," Energy Policy Roundtable in the PJM Footprint, panel on carbon pricing, April 28, 2020. <http://pjm.raabassociates.org/main/roundtable.asp?sel=159>.

"Decarbonizing the Electric Power Sector," Center for Strategic and International Studies, March 30, 2020. (podcast) <https://www.csis.org/events/audio-event-decarbonizing-electric-power-sector>.

"Making Sense of FERC's MOPR Order," Resources for the Future Workshop, January 22, 2020.

"CEO Roundtable: The New England Investment Thesis," moderator of panel at the New England Power Generator Association's Summit, Boston, December 2, 2019.

"Government Policies Promoting Low Carbon Transitions," moderator of panel at the U.S. Association of Energy Economists, Denver, November 5, 2019.

"A Transformation of Power: The U.S. Electric Grid Undergoes Change," Energy Journalism Initiative, Center for Global Energy Policy, Columbia University, New York City, June 12, 2019.

"Trends and Issues in the Electric Industry – and Potential Implications for State AGs," New York University State Energy & Environmental Impact Center, Washington, DC, May 29, 2019.

"Electric System Planning: Mapping Opportunities for Participation by State Air Offices," National Association of Clean Air Agencies, Webinar, April 4, 2019.

"Emerging Energy and Environmental Technologies: Possibilities, Policy Implications, and Potential Consequences," Resources for the Future/Alfred P. Sloan Foundation Conference on Energy Research Insights for Decision making, Washington, DC, November 29, 2018.

"The Energy 202 Live: Powering a Cleaner and Brighter Future," Washington Post Live, November 28, 2018.

"Energy Policy: Research and analysis in an era of disruptive change," Keynote Address, Energy Policy Research Conference, Boise State University Energy Policy Institute, Boise, Idaho, September 6, 2018.

"Transitions to a Low-Carbon Electric Supply," EEI CEO meeting, Colorado Springs, September 5, 2018.

"Potential Solutions & Discussions, NERC (North American Electric Reliability Corporation), Technical Workshop on Gas Infrastructure Risk and Associated Recommendations, Atlanta, July 10, 2018.

"Economic Approaches to Understanding and Addressing Resilience in the Bulk Power System," Resources for the Future and R Street Institute Workshop, Washington, D.C., May 30, 2018; webinar, June 18, 2018.

[“The Future of Nuclear Power,” The Council of State Governments/Eastern Regional Conference, Northeastern Legislative Climate and Energy Summit, Andlinger Center for Energy and the Environment, Princeton University, May 11, 2018.](#)

[“The Energy 202 Live: Energy Investment for Today and Tomorrow,” Washington Post Live, May 10, 2018.](#)

[“State Policies and Proposals to Support Existing Nuclear Power Plants,” Center for Climate and Energy Solutions, Washington, DC, May 9, 2018.](#)

[“The Energy 202 Live: Energy Investment for Today and Tomorrow,” Washington Post Live, May 10, 2018.](#)

[“The Fracking Debate: The Pros, Cons, and Lessons Learned from the U.S. Energy Boom,” Energy Policy Institute of Chicago, University of Chicago, April 11, 2018.](#)

[“Power Sector Transformation: Natural Gas/Electricity Panel,” Annual Meeting of the Joint Institute for Strategic Energy Analysis, National Renewable Energy Laboratory, April 5, 2018.](#)

[“The Evolution of Utility and Regulatory Reform in the U.S.,” 2018 e21 Forum #1: Toward a 21st C. Electric System in Minnesota, March 20, 2018.](#)

[“The Natural Gas/Electricity Nexus,” Keystone Energy Board meeting, Keystone CO, February 9, 2018.](#)

[“Critical Aspects of Transitioning to Competitive Energy Markets from a Wholesale and Retail Perspective & Renewable Energy Procurement in Restructured Markets,” Committee on Energy Choice, State of Nevada, Las Vegas, November 7, 2017.](#)

[“Firm With Trump Cabinet Ties Scores \\$300M Puerto Rico Power Contract,” On Point radio show on restoration of Puerto Rico’s electric grid, WBUR/NPR, October 25, 2017.](#)

[“Beyond Baseload? Electricity Markets and Reliability,” Keystone Energy Board meeting, Washington, D.C., October 24, 2017.](#)

[“The Future of Baseload in the West,” Committee on Regional Electric Power Cooperation \(CREPC\), Reno, October 17, 2017.](#)

[“Regulatory Paths Forward for a Clean Grid,” Harvard Law School, Cambridge, October 13, 2017.](#)

[“This Thing about Coal and Nukes,” Grid Geeks Podcast, October 6, 2017.](#)

[“What Do Americans Think about the Direction of Energy and Climate Policy?” EPIC, University of Chicago, October 4, 2017.](#)

[“Preparing for the Future: Challenges and Opportunities of Modernizing the Grid,” NextGrid Illinois conference, Chicago, September 28, 2017.](#)

[“Designing America’s Energy Future,” National Renewable Energy Laboratory’s 40th Anniversary meeting on energy innovation, Golden, CO, September 20, 2017.](#)

[“The Future of Power Markets in a Low Marginal Cost World: Electricity Sector Overview,” Resources for the Future, September 14, 2017.](#)

[“The National Academy of Sciences Report on Electric System Resiliency: Natural Gas and Electric System Interdependencies,” NAESB, September 7, 2017.](#)

[“Valuing Distributed Energy Resources,” Aspen Energy Policy Forum, July 2017.](#)

[“The Road from Paris: A Conversation with the Former Secretary of Energy Ernie Moniz,” Aspen Ideas Festival, July 2017.](#)

[“How Policy Choices Today Will Impact the Future of Electric Power,” Edison Electric Institute, Annual Meeting, Boston, MA, June 12, 2016.](#)

"Big Think Presentations on the Future of Retail Electricity Service," California Public Utilities Commission and California Energy Commission, Joint En Banc on Changing Nature of Consumer and Retail Choice in California, Sacramento, CA, May 19, 2017.

"Energy Resources: The Right Mix – or Mix It Up? Is What We Need Compatible With The Region's Energy Goals?" Northeast Energy and Commerce Association, Mystic, CT, May 10, 2017.

"Comments at the FERC Technical Conference on Certain Matters Relating to State Policy Initiatives Affecting Wholesale Energy and Capacity Markets Operated by Eastern Regional Transmission Organizations (RTOs) and Independent System Operators (ISOs)," Washington, D.C, May 2, 2017.

"Utility of the Future: Valuing Distributed Energy Resources," Electric Power Research Institute (Research Advisory Committee), Tempe, AZ, March 7, 2017.

"Navigating the Energy and Environmental Policy Landscape," Nicholas School for the Environment, Duke University, Washington, D.C, February 15, 2017.

"What is Next for the EPA's Carbon Regulations for Existing Power Plants?" NARUC Electricity Committee and the Energy Resources and the Environment Committee, Washington, D.C., February 14, 2017.

"Carbon: A risk or an opportunity?" NARUC Energy Resources and the Environment Committee, Washington, D.C., February 14, 2017.

"Managing the Energy Transition: Exploring Pathways to Deep Decarbonization," Bipartisan Policy Center, Washington, D.C., December 8, 2016.

"The Clean Power Plan and Beyond: What to Expect in 2017..." NYU School of Law – Institute for Policy Integrity, New York, NY, November 15, 2016.

"Location, Location, Location, and the Value of Distributed Energy Resources," NARUC Annual Meeting, La Quinta, CA, November 14, 2016.

"Value of 'DER' to 'D': The role of distributed energy resources in local electric distribution system reliability," Presentation to NARUC Committee on Electricity, November 14, 2016, La Quinta, California.

"State Electric Industry Policies and Organized Wholesale Electricity Markets," Presentation to the NYISO Environmental Advisory Council, Albany, NY, November 4, 2016.

"Existing nuclear units and potential policy solutions: Approaches in other states beyond Illinois," Chicago, IL, October 18, 2016.

"Existing Nuclear Units – and New York's Clean Energy Standard," presentation to the NARUC Energy Resources and the Environment Committee – Monthly Conference Call, September 16, 2016.

"Understanding the Evolving Trends in the Eastern Interconnect: Implications for Environmental Policies & Investments," Duke Nicholas Institute for Environmental Policy Solutions/Great Plains Institute/Bipartisan Policy Center, I, Atlanta, September 13, 2016.

"What does the U.S. need to do to meet its climate goals? Why Nuclear? How Much and How Fast?" Aspen Institute Forum on the Future of Nuclear Energy, Aspen, August 10, 2016.

Testimony of Susan F. Tierney, Ph.D. Before the Democratic Platform Committee, U.S. Progress on Clean Energy Policy, Phoenix, June 17, 2016.

"Value of "DER" to "D": The Role of Distributed Energy Resources in Local Electric Distribution System Reliability," presentation to the MidAtlantic Conference of Regulatory Utility Commissioners (MACRUC), Williamsburg, VA, June 21, 2016.

"How does New Jersey Achieve a Low-Carbon Future?" New Jersey Spotlight conference, Trenton, NJ, June 3, 2016.

"Potential federal and state actions that could help address financial risks facing many existing nuclear power plants," U.S. Department of Energy's Summit on Improving the Economics of America's Nuclear Power Plants, Washington, D.C., May 19, 2016.

"New England's Electricity 'Restructuring': Successes, disappointments, and what's next," 150th meeting of the New England Electricity Restructuring Roundtable, Boston, MA, May 18, 2016.

"Clearing the Way: Pioneering New York's Clean Energy Standard," Albany, NY, May 11, 2016.

"Electricity markets in transition," Annual Energy Summit of Columbia University's Center for Global Energy Policy, New York, NY, April 27, 2016.

"Value of "DER" to "D": The Role of Distributed Energy Resources in Local Electric Distribution System Reliability," California Public Utility Commission's "Thought Leaders Forum," April 21, 2016.

"Transforming Power Systems: Challenges and Solutions," Annual meeting of the Joint Institute for Strategic Energy Analysis, NREL, Golden, CO, March 31, 2016.

"Background and Context: Eras of Electric Utility Industry (in 5 Minutes!)," New Orleans City Council/Entergy New Orleans Electricity Symposium, March 22, 2016.

"Affordability, Cost Containment, and Economic Development: Complying with the Clean Power Plan," 3-N meeting (NARUC, NASEO, NACAA) on How State Agencies Are Working Together, Washington D.C., February 11, 2016.

"Evaluating Clean Power Plan Pathways in a Dynamic Electricity Sector," Conference on Navigating the EPA's Clean Power Plan: Charting a Course for the Southeast, sponsored by Duke University Nicholas Institute for the Environment, Orlando, January 28, 2016.

NASEO/DOE/EIA, "2015 – 2016 Winter Energy Outlook Conference," National Press Club, Washington, D.C., October 6, 2015.

"Outlook for Energy," Clinton Foundation Global Initiative, New York, NY, September 28, 2015.

"Reactions to the Clean Power Plan," NARUC Electricity Committee, Arlington, VA, August 14, 2015.

"Trends in national climate policy," Institute for Sustainable Cities, June 18, 2015.

"EPA's Clean Power Plan and its potential effects on system reliability," Mid-American Regulatory Commissioners (MARC) Conference, Milwaukee, June 8, 2015.

"Proposed Reliability Mechanisms for the Clean Power Plan," Bipartisan Policy Center Workshop, National Press Club, Washington D.C., May 9, 2015.

"EPA's Proposed Clean Power Plan: Testing the tires, looking under the hood... How far does it take us toward a clean, modern electric system?" Cornell University, Ithaca, NY, November 2014.

"Readying States for New Greenhouse Gas Rules in the Electricity Sector," National Governors Association – Workshop for Governors' Energy Advisors, Washington, D.C., September 22, 2014.

"Natural Gas and Renewable Energy Synergies: Challenges and Opportunities," North American Energy Standards Board (NAESB), Board Meeting, Houston, September 10, 2014.

"America's Electricity Evolution: New Policies, Regulations, and Technologies Converging to Change the Future of Power Production and Use," 2014 NASEO Annual Meeting, Savannah, September 2014.

"Implications for Energy, Economy, and Environment Under the Proposal," Environmental Council of the States (ECOS), Washington D.C., July 31, 2014.

"Regional Options and Strategic Choices," NARUC Workshop on Regional Compliance Options for Sec. 111d, Washington D.C., July 28, 2014.

"111d in Big D: Compliance Options, Regional Approaches, and Where We Go from Here," NARUC, Dallas, July 16, 2014.

"The National Climate Assessment: What Risks Lie Ahead for the Energy Sector?" NARUC, Dallas, July 14, 2014.

"The EPA's new Clean Power Plan proposal: Some suggestions for state action now," National Association of Clean Air Agencies, Washington, D.C., July 13, 2014.

"Changing electric industry dynamics: The role of regulation," Aspen Institute Energy Policy Forum: Electricity Structure and Regulation, July 7, 2014.

"Natural Gas and Renewable Energy Synergies: Challenges and Opportunities," Synergies of Natural Gas and Renewable Energy: 360 Degrees of Opportunity, Center for the New Energy Economy (CNEE), Joint Institute for Strategic Energy Analysis (JISEA), Gas Technology Institute (GTI), Bloomberg New Energy Finance, New York, NY, July 1, 2014.

"EPA's Clean Power Plan," Bipartisan Policy Center, June 18, 2014.

"Electric Power Systems: The Outlook for Electric Transmission: Where You Stand Depends Upon Where You Sit," Harvard Law School, March 20, 2014.

SERVICE ON BOARDS OF DIRECTORS (PUBLIC COMPANIES, PRIVATE COMPANIES, NON-GOVERNMENTAL ORGANIZATIONS)

Chair, National Academies' Board on Energy and Environmental Systems (2023-Present); Member of the Board (2022-Present).

Chair, Resources for the Future Board of Directors (2018–Present); Member of the Board (2014–Present)

Trustee, Barr Foundation (2016–Present)

Trustee, Alfred P. Sloan Foundation (2022-present)

Advisor, Oak Foundation Board of Trustees (2022-present)

Member, Climate Leadership Initiative, Board of Directors (2022-present), Advisory Board (2019–2022)

Chair, ClimateWorks Foundation Board of Directors (2013–2022)

Member and Vice-Chair, World Resources Institute Board of Directors (2009–Present)

Chair, Energy Foundation Board of Directors (2000– 2011); Vice-Chair (1999–2000); Director (1997–2011); Director (2013–2022, 2023-present)

Member, Clean Energy and Sustainability Accelerator (2022-present)

Member, Coalition for Green Capital, Board of Directors (2021-present)

Member, Keystone Center Energy Board (2016–present)

Member, Keystone Center Board of Trustees (2016–2019)

Member, Alliance to Save Energy Board of Directors (2011–2018)

Member, EnerNOC, Inc. Board of Directors (February 2010–May 2013)

Member, Evergreen Solar, Inc. Board of Directors, 2008–2011)

Member, Ze-gen Inc. Board of Directors, 2009–2011)

Member, Renegy Holdings Board of Directors, 2007–2009)

Member, Clean Air Task Force Board of Directors, 2008–2013)

Member, Catalytica Energy Systems Inc. Board of Directors (2001–2007)

Member, Climate Policy Center Board of Directors (2001–2007)

Member, NorthEast States Center for a Clean Air Future, Board of Directors (1998–2010)

Chair, Clean Air–Cool Planet / Climate Policy Center Board of Directors (2004–2009); Director (1999–2014)

Member, ACORE (American Council on Renewable Energy) Board of Directors (2006–2007)

Member, Electric Power Research Institute (EPRI) Board of Directors (1998–2003, 2005–2006)

Chair, Electricity Innovations Institute, Board of Directors, (2002–2004); Director (2001–2002)

Director, The Randers Group (subsidiary of Thermo TERRATEK) Board of Directors (1997–2000)

Director, Thermo ECOTEK Corporation Board of Directors (1996–1999)

OTHER PROFESSIONAL ACTIVITIES

Member, Committee on Accelerating Decarbonization in the United States: Technology, Policy and Social Dimensions, National Academies of Sciences, Engineering & Medicine (2020-2023)

Member, Climate Crossroads Advisory Committee, National Academies of Sciences, Engineering & Medicine (2022-present)

Member, Committee on Net Metering, National Academies of Sciences, Engineering & Medicine (2021-2023)

Member, Committee on the Modernization of the Electric Grid, National Academies of Sciences, Engineering & Medicine, Climate Communications Initiative (2019-2021)

Member, Advisory Committee of the National Academy of Sciences, Engineering & Medicine, Climate Communications Initiative (2018-2023)

Co-chair, National American Energy Standards Board (NAESB) Gas-Electric Harmonization Committee (2012, 2014, 2022-present)

Chair, External Advisory Council, National Renewables Energy Laboratory (2009–present)

Member, Columbia University, Center for Global Energy Policy (2014–2018, 2020-2023)

Member, Institute for Policy Integrity, New York University School of Law (2017-Present)

Member, New York Independent System Operator, Environmental/Advisory Council (2004–Present)

Member, Technical Review Panels at National Renewable Energy Laboratory: Member, Energy Systems Integration TRP (2021-2023); Chair, Computational Sciences and Energy Analysis TRP (2018-2021); Chair, Energy Analysis TRP (2009-2018).

Visiting Fellow in Policy Practice at the Energy Policy Institute at the University of Chicago (2017–2018)

Chair and Member, Electricity Advisory Committee (Department of Energy) (2015–2017)

Member, National Academy of Sciences Committee on Enhancing the Resiliency of the Nation's Electric Power Transmission and Distribution System (2015–2017)

Chair, Aspen Institute Energy Policy Forum (2015)

Member, Innovation Review Panel, "51st State" Initiative of the Solar Electric Power Association (2015)

Chair, External Review Panel for the Clean Energy Ministerial (2015)

Chair, Aspen Institute Energy Policy Forum (2014)

Participant in studies of the Colorado State University's Center for Clean Energy Economy ("Powering Forward: Presidential and Executive Agency Actions to Drive Clean Energy in America") (January 2014)

Co-Lead Convening Author, Energy Supply and Use Chapter, National Climate Assessment (2012–2014)

Member, Committee on Risk Management and Government Issues in Shale Gas Development, of the National Academy of Sciences, Board on Environmental Change and Society (of the Division of Behavioral and Social Sciences and Education) (2013–2014)

Co-chair, Bipartisan Policy Center’s Cyber-security and the Electric Grid project (2013–2014)

Alliance Commission on National Energy Efficiency Policy (2012–2013): Report “Energy 2030: Doubling Energy Productivity by 2030” (February 2013)

Bipartisan Policy Center – Energy Project (2011–Present): Report (“America’s Energy Resurgence: Sustaining Success, Confronting Challenges” (February 2013)

U.S. Secretary of Energy Advisory Board (July 2010–May 2013). Member of the Natural Gas Subcommittee examining shale gas development. (2011–2013)

Chair, Policy Subgroup of the National Petroleum Council’s study on North American Gas and Oil Resource Development (2010–2011)

Visiting Professor, Department of Urban Studies & Planning, Massachusetts Institute of Technology (Spring 2010)

Massachusetts Clean Energy Grand Prize Judge (2010)

World Resources Institute: Chair of Presidential Search Committee (2011)

Co-Lead, Department of Energy Agency Review Team, Obama/Biden Presidential Transition Team, Washington D.C., while on full-time leave for four months from Analysis Group (2008–2009)

Chair, Massachusetts Ocean Advisory Commission (2008–2010)

Member, Blue Ribbon Commission on Cost-Allocation Issues for Transmission Investment, WIRES (2007)

Member, National Academy of Sciences Committee on Enhancing the Robustness and Resilience of Electrical Transmission and Distribution in the United States to Terrorist Attack (2005–2008)

Member, National Commission on Energy Policy, Member (2002–2011); Co-chair (2009–2011)

Member, Advisory Committee, Carnegie Mellon Electricity Industry Center (2001–2009)

Member, Policy Advisory Committee, China Sustainable Energy Project–A Joint Project of The Packard Foundation and The Energy Foundation (1999–2014)

Co-Chair, Energy/Environment Working Group, Governor Deval Patrick Transition Team (2006–2007)

Presenter, Economic Issues, National LNG Forums, U.S. Department of Energy, Boston Massachusetts; Astoria, Oregon (2006)

Chair of the Technical Review Panel, Critical Infrastructure Protection Decision Support Systems (CIP- DSS), Argonne, Los Alamos and Sandia National Laboratories (2006)

Advisory Council member, New England Energy Alliance (2005–2006)

Chair of the Laboratory Direction’s Division Review Panel for the Environmental Energy Technologies Division, Lawrence Berkeley National Laboratory (2005)

Chair, Ocean Management Task Force, Commonwealth of Massachusetts (2003–2004)

Co-Chair, RTO Futures: Regional Power Working Group (2001–2002)

Member, Florida Energy 2020 Study Commission, Environmental Technical Advisory Committee (2001)

Technical Advisor, Mid-Atlantic Area Council/PJM, Dispute Resolution Procedure (1998–2008)

Member, “ISO-New England” (Independent System Operator) Advisory Committee (1998–2003)

Member, United States Department of Energy, Electricity Reliability Task Force (1996–1998)

Member, Harvard Electricity Policy Group (1993–2005)

HONORS AND AWARDS

Lifetime National Associate of the National Research Council of the National Academies of Sciences, Engineering and Medicine (January 2020)

Mary Kilmarx Award for lifetime work on good government, clean energy and the environment, presented by NARUC’s Committee on Energy Resources and the Environment (November 2015)

Lifetime Achievement Award, U.S. Department of Energy/MIT/Clean Energy Ministerial C3E (CleanEnergy Education & Empowerment) Initiative (2014)

Champions Award, Charles River Watershed Association (2013)

Leadership Award, New England Women in Energy and the Environment (2013) Clean Energy Hall of Fame, New England Clean Energy Council (2012)

DOE Women in Clean Energy Initiative, C3 Ambassador (2012)

Climate Champion Award, Clean Air – Cool Planet (2009)

Distinguished Alumna Award, Scripps College, Claremont, CA (1998)

Award for Individual Leadership in Public Service, *The Energy Daily* (1995)

Special Recognition Award, Outstanding Contribution to the Industry, Assn of Energy Engineers (1994)

Leadership Award, National Association of State Energy Officials (1994)

Commencement Speaker and Honorary Doctorate of Laws, Regis College, Weston, MA (1992)

PACIFIC GAS AND ELECTRIC COMPANY

CHAPTER 9

UTILITY FINANCING PRINCIPLES

Application No. 24-03-009

DIRECT TESTIMONY OF

JENNIFER E. NELSON

ON BEHALF OF

PACIFIC GAS AND ELECTRIC

January 31, 2025

TABLE OF CONTENTS

<u>I.</u>	<u>WITNESS IDENTIFICATION & PURPOSE.....</u>	<u>1</u>
<u>II.</u>	<u>THE NATURE OF REGULATION AND THE OBLIGATION TO SERVE.....</u>	<u>5</u>
<u>III.</u>	<u>UTILITY CAPITAL EXPENDITURES</u>	<u>9</u>
<u>IV.</u>	<u>HOW UTILITIES RAISE CAPITAL.....</u>	<u>10</u>
<u>V.</u>	<u>THE BENEFITS OF DIVERSE CAPITAL SOURCES</u>	<u>17</u>
<u>VI.</u>	<u>THE IMPACT AND MERIT OF THE INVESTMENT PROGRAM</u>	<u>18</u>

WITNESS IDENTIFICATION & PURPOSE

1Q. Please state your name, affiliation, and business address.

1A. My name is Jennifer E. Nelson. I am a Vice President at Concentric Energy Advisors (“Concentric”). Concentric is a management consulting and economic advisory firm that specializes in the North American energy and water industries. Based in Marlborough, Massachusetts and Washington, D.C., Concentric specializes in regulatory and litigation support, financial advisory services, energy market strategies, market assessments, energy commodity contracting and procurement, economic feasibility studies, and capital market analyses. My business address is 293 Boston Post Road West, Suite 500, Marlborough, Massachusetts, 01752.

2Q. On whose behalf are you submitting this testimony?

2A. I am submitting this direct testimony (Direct Testimony) to the California Public Utilities Commission (CPUC or Commission) on behalf of Pacific Gas and Electric Company (PG&E or the Company).

3Q. Please describe your professional experience and educational background.

3A. I have more than fifteen years of experience in the energy industry, having served as a consultant and energy/regulatory economist for state government agencies. Since 2013, I have provided consulting services on a range of financial and regulatory issues including the cost of capital, ratemaking policy, and regulatory strategy issues. Prior to consulting, I was a staff economist at the Massachusetts Department of Public Utilities, and a petroleum economist for the State of Alaska. I completed utility regulatory training offered by New Mexico State University’s Center for Public Utilities and have earned the Certified

1 Rate of Return Analyst designation from the Society of Utility and Regulatory Financial
2 Analysts. I hold a Bachelor's degree in Business Economics from Bentley University and
3 a Master's degree in Resource and Applied Economics from the University of Alaska. A
4 summary of my professional and educational background, including a list of my testimony
5 filed before regulatory commissions, is included in my Statement of Qualifications.

6 **4Q. Have you previously submitted testimony to the Commission?**

7 4A. No, I have not. I have filed expert testimony before regulatory commissions in Arkansas,
8 Delaware, Florida, Kentucky, Maine, Montana, New Hampshire, New Mexico, North
9 Carolina, Ohio, Oklahoma, Oregon, South Carolina, Texas, Utah, West Virginia, and
10 Wyoming.

11 **5Q. What is the purpose of your Direct Testimony?**

12 5A. The purpose of my Direct Testimony is to explain why PG&E's application to lease
13 entitlements to certain of its transmission projects to Citizens Energy Corporation
14 (Citizens)¹ subject to the terms and conditions in the Development, Coordination, and
15 Option Agreement (DCOA) (the Investment Program) is a reasonable and prudent option
16 for raising financial capital. My testimony provides a background on utility financing

¹ I understand that Citizens expects to enter into the Entitlement Leases through an indirect, wholly owned
subsidiary, Citizens Pacific Transmission LLC. For the purpose of my testimony, I use the term "Citizens"
collectively. I refer to Citizens and PG&E collectively as the Parties.

1 principles and explains how customers benefit from PG&E having access to a variety of
2 financial tools to access financial capital on efficient terms.

3 **6Q. What is your conclusion regarding PG&E's proposal to lease entitlements to its**
4 **transmission projects to Citizens as a means of raising financial capital?²**

5 **6A. In my opinion, the proposed Investment Program is a reasonable and prudent method for**
6 **PG&E to raise financial capital. Financial flexibility is critical for a utility like PG&E to**
7 **meet its obligation to serve customers. Utilities are among the most capital-intensive**
8 **sectors and, unlike unregulated companies, cannot defer capital expenditure requirements**
9 **when economic or market conditions are unfavorable. As such, utilities require continuous**
10 **access to diverse sources of financial capital. Restricting certain types of funding sources**
11 **would result in PG&E – and its customers – becoming over-reliant on fewer sources of**
12 **financial capital that may become constrained, uneconomic, or unavailable at any given**
13 **time. Ultimately, this would raise PG&E's cost of capital, which would result in increased**
14 **customer rates. PG&E has substantial planned capital expenditures that will require more**
15 **financial capital than it can generate internally and raise through traditional debt and equity**
16 **offerings without harming its credit metrics. Therefore, it is essential that PG&E has a**
17 **variety of financing tools at its disposal to finance its capital expenditures to meet**
18 **customers' needs and California's policy objectives. It is in customers' best interest that**
19 **the Commission enable PG&E to access financial capital efficiently, as this is essential for**
20 **PG&E to continue providing safe and reliable electric service at fair and reasonable rates,**
21 **consistent with the regulatory compact to serve its customers each and every day. In the**

² The term "capital" refers to an asset used for a firm's operations. Financial capital refers to financial assets (i.e., money) available to a firm to finance operations. Capital can also refer to a firm's physical assets, such as buildings, infrastructure, real estate, land, machinery, inventory, etc.

1 end, customers benefit from PG&E having access to a variety of sources of financial capital
2 and will be harmed if reasonable and prudent options such as the Investment Program are
3 foreclosed.

4 Moreover, the proposed Investment Program is substantially similar to two lease
5 agreements between San Diego Gas & Electric Company (SDG&E) and Citizens that the
6 Commission approved. As such, the benefits to customers that the Commission identified
7 in the SDG&E transactions similarly apply to the Investment Program. Further, the
8 Investment Program delivers enhanced benefits to customers beyond those included in the
9 approved SDG&E transactions, including escalating charitable contributions for direct bill-
10 paying assistance to support PG&E customers in need. The benefits of the Investment
11 Program are described more fully in PG&E's and Citizens' testimonies served with
12 PG&E's amended application.

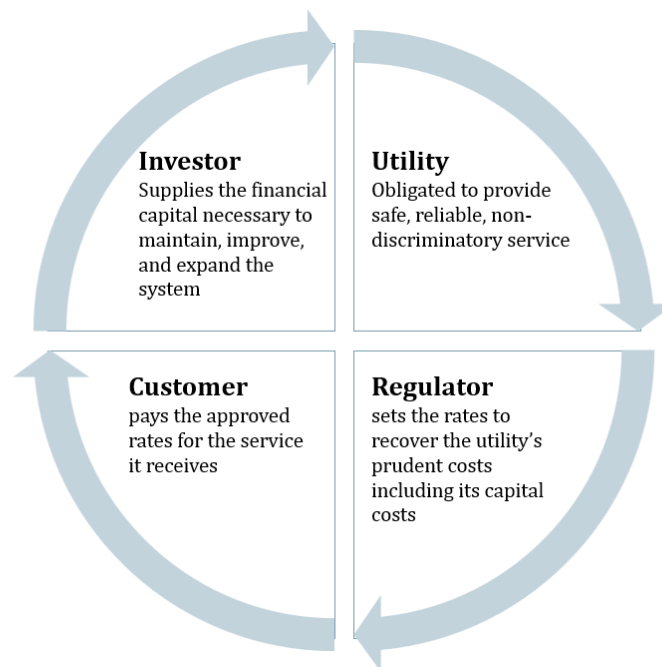
13 Based on my review of PG&E's proposal, and the filings, amended testimony, and
14 Commission orders approving the SDG&E lease agreements with Citizens, it is my opinion
15 that the proposed Investment Program provides customer benefits and protections beyond
16 those provided in the SDG&E transactions. My review and analysis of these materials
17 support the proposed Investment Program as being in the public interest.

THE NATURE OF REGULATION AND THE OBLIGATION TO SERVE

7Q. For context, please summarize the nature of utility regulation and the regulatory compact.

7A. From an economic perspective, because utilities provide essential services with declining cost structures, utility services are thought to be more efficiently provided by one company that is regulated by the government, rather than by multiple companies. The regulatory compact is fundamental to utility ratemaking principles. In exchange for being granted an exclusive franchise to provide essential utility services in a specific geographic area, utilities have an obligation to serve all customers safely, reliably, and fairly and agree to be subject to regulation that allows the utility a reasonable opportunity to recover its prudently incurred costs and earn a regulated return it pays to the investors that supply the capital. As shown in Figure below, for a utility to provide safe, reliable, and essential utility service to customers, it needs investors to supply financial capital. Without investors to supply external financial capital, there is no utility service. From that perspective, customers and investors have a common interest in ensuring safe, reliable and prudent utility service.

Figure 1: The Regulatory Compact



Under the regulatory compact, an electric utility like PG&E is obligated to connect any customer in its territory that requests service and must meet the energy demands of its customers each and every day, regardless of economic or market conditions. In other words, a regulated utility cannot decide to whom it provides utility service in its footprint, how much utility service it delivers, nor when it provides utility service. As explained in more detail below, the regulatory obligation to serve distinguishes regulated utilities from unregulated firms and is a principal driver of utility financing practices.

8Q. Please explain how the obligation to serve drives utility financing practices.

8A. Companies – including utilities – secure financing based on the specific risks and funding requirements associated with their unique individual operations. As such, utility financing practices reflect the nature of regulation, and the investments made under the regulatory compact. In many respects, the regulatory compact is what induces investors to invest

1 substantial amounts of financial capital into large, essentially irreversible, assets that are
2 recovered over decades.

3 Unlike unregulated businesses, utilities have an obligation to serve customers and
4 that obligation to serve must be fulfilled regardless of prevailing economic and capital
5 market conditions. As such, utilities must ensure they have access to external financial
6 capital on efficient terms not only during times when markets are well-behaving, but also
7 when markets are volatile or constrained (e.g., during periods of high inflation and interest
8 rates, global pandemics, changes in government, and economic recessions). It is therefore
9 critical that utilities have the financial flexibility to access both long-term capital and short-
10 term liquidity in all market environments. As Moody's Investors Services (Moody's)
11 explains:

12 *Liquidity and access to financing are of particular importance in this sector. Utility assets can*
13 *often have a very long useful life – 30, 40 or even 60 years is not uncommon, as well as high*
14 *price tags.... Utilities are among the largest debt issuers in the corporate universe and typically*
15 *require consistent access to the capital markets to assure adequate sources of funding and to*
16 *maintain financial flexibility.*³

17 The requirement to access external financial capital in all market environments
18 contrasts with the financial needs of other entities without the regulatory obligation to
19 serve. Unregulated firms may adjust the timing and amount of major capital expenditures
20 to align with economic cycles and can defer decisions and investments to better match
21 market conditions. Unregulated firms can also decide to cease service to unprofitable
22 customer bases or geographies. Utilities have limited options to do so. Therefore, it is
23 critical that a utility maintain financial flexibility through a diverse set of financing tools

³ Moody's Investor Service, *Rating Methodology: Regulated Electric and Gas Utilities*, at 25 (June 23, 2017).

1 to ensure that it can access financial capital efficiently and on reasonable terms for
2 customers' benefit in all market environments.

3 **9Q. What does "financial flexibility" mean?**

4 **9A.** Financial flexibility refers to a company's capacity to respond to unexpected changes in
5 its cash flows that may affect its ability to fund operations and investments in a timely
6 manner. In other words, it describes the ability of a company to avoid financial distress if
7 an adverse event beyond its control affects its cash flow. Having access to multiple sources
8 of internal and external capital enables financial flexibility because it means a company
9 has multiple options to fund its operations when unanticipated events threaten cash flows
10 or constrain one or more sources of capital.

11 **10Q. Why do utilities require continuous access to external capital?**

12 **10A.** Utilities are among the most capital-intensive sectors and require substantial amounts of
13 capital to meet the obligation to serve. To fund the significant capital expenditures needed
14 to maintain, expand, and modernize existing infrastructure, utilities require sufficient
15 internally generated cash flow and ongoing access to external financial capital.

16 The amount of financial capital that utilities require to meet the obligation to serve
17 often exceeds the amount of funds they can generate internally through regulated rates
18 charged to customers. As such, cash flow received from operations is often insufficient to
19 fund cash spent on plant. When a utility does not generate sufficient financial capital
20 internally through rates to fund the investments required to meet its obligation to serve, it
21 must seek funds from external sources. The substantial amount of capital that utilities
22 require magnifies the importance of always having access to multiple sources of financial
23 capital to fund the investments needed to meet the obligation to serve.

1 **11Q. What factors determine a utility's ability to access financial capital?**

2 **11A. A utility's ability to access capital is driven by its risk profile and the supply and demand**
3 **for the various capital sources. Financial capital is finite, and utilities must compete for**
4 **capital among other utilities and investment options. Investors will provide funds only if**
5 **the return that they expect is equal to, or greater than, the return that they require to accept**
6 **the risk of investing capital in the firm. A utility's risk profile is influenced by its specific**
7 **operating, regulatory, and financial risks. As a utility's risk increases, so do the costs of**
8 **both debt and equity, both of which are ultimately reflected in the rates that customers pay.**
9 **Further, a riskier utility with a weaker financial profile will have fewer options to source**
10 **external capital, likely at higher prices and/or less advantageous terms. As a utility with a**
11 **below-investment grade credit rating, PG&E is at a disadvantage relative to the vast**
12 **majority of other utilities with which it competes for financial capital today. Because**
13 **customers ultimately bear the cost of raising and retaining financial capital, customers'**
14 **interests are best served by ensuring utilities have a sound financial profile with sufficient**
15 **financial flexibility that is facilitated by access to diverse capital funding options.**

16 **III. UTILITY CAPITAL EXPENDITURES**

17 **12Q. Please summarize utilities' capital investment requirements in the near term.**

18 **12A. Utilities' capital investment requirements have increased significantly in the last few years**
19 **to decarbonize and prepare for the energy transition, to replace aging infrastructure, and to**
20 **harden and strengthen the system in response to increasing physical risks (e.g., storms,**
21 **wildfires, and cybersecurity threats). According to Regulatory Research Associates**
22 **(RRA), U.S. utilities anticipate nearly \$620 billion in capital expenditures in just the next**

1 three years (2025-2027).⁴ Ensuring utilities can meet customers' future energy needs and
2 state regulatory goals and objectives will require a multitude of capital financing options.

3 **13Q. How do PG&E's and the other California utilities' planned capital expenditures**
4 **compare to the nearly \$620 billion in capital expenditures for the U.S. utility**
5 **industry?**

6 13A. RRA reports \$38.4 billion in planned capital expenditures for PG&E Corp. from 2025 –
7 2027, which is the third largest of the 45 utilities covered in the report and more than 6
8 percent of the \$620 billion total.⁵ RRA Reports planned capital expenditures of \$23.8
9 billion for Edison International (parent of Southern California Edison Company) and \$28.8
10 billion for Sempra Energy (parent of SDG&E). Combined, the three California-based
11 utilities account for nearly 15 percent of the \$620 billion in planned capital expenditures
12 between 2025-2027.

13 **IV. HOW UTILITIES RAISE CAPITAL**

14 **14Q. Please describe the sources of financial capital available to a company to finance its**
15 **operations.**

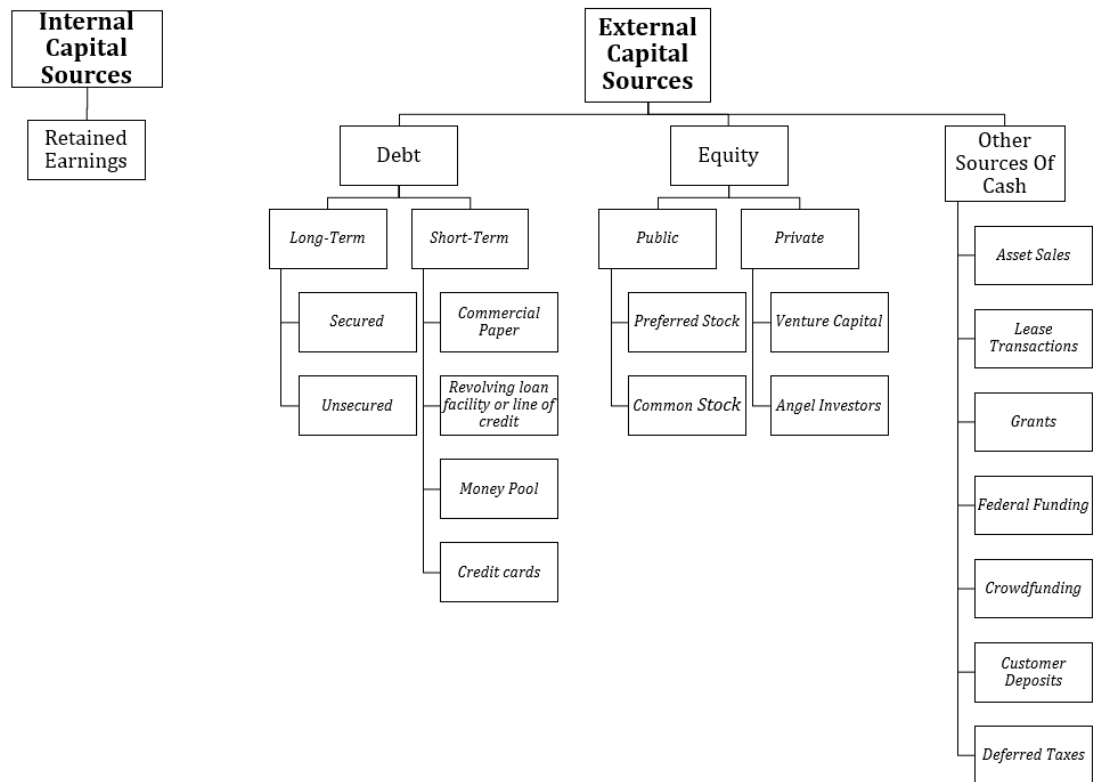
16 14A. To finance operations, companies can use internal financial capital in the form of retained
17 earnings, which are funds a firm retains after it pays all its costs. When a firm cannot
18 generate sufficient funds internally to finance its operations, it must seek financial capital
19 from external sources. External capital sources include debt and equity from investors as

⁴ S&P Global Regulatory Research Associates, RRA Financial Focus, *Energy Utility Capex Projected to Eclipse \$790B from 2025 Through 2028* (Dec. 30, 2024).

⁵ S&P Global Regulatory Research Associates, *Utility capital expenditures final update for H2 2024: 2013-28f, as of December 23, 2024* databook.

well as other sources of cash, including but not limited to asset and minority interest sales, lease transactions, grants, federal funds, and crowdfunding. Figure 2 below provides a high-level illustration of the common sources of financial capital available to a firm.

Figure 2: Sources of Financial Capital⁶



Debt capital is money that is borrowed through a bank loan or corporate bond and requires the borrower to repay the principal of the debt plus interest. Debt can be short-term (debt securities that mature in less than one year) or long-term (debt securities with terms of a year or longer). Raising equity capital involves selling an ownership stake, or shares, in the firm through public or private offerings.

⁶ Please note that this figure is illustrative and not meant to be exhaustive.

1 **15Q. What sources of financial capital do investor-owned utilities use to finance their**
2 **operations?**

3 15A. Investor-owned utilities, like PG&E, primarily use retained earnings and long-term sources
4 of external financial capital (i.e., common stock, preferred stock, and long-term debt) to
5 finance their permanent rate base because the duration of these long-term sources of capital
6 matches the long lives of utility assets.⁷ Short-term debt is generally used to finance
7 working capital requirements and construction work in progress. As shown in Figure 2
8 above, other external sources of financial capital include non-investor supplied capital
9 sources such as customer deposits, deferred income taxes, tax credits, and grants. As noted
10 earlier, utilities also sell assets or enter into lease transactions.

11 **16Q. Are there benefits and costs inherent in each source of financial capital?**

12 16A. Yes. The benefits and costs associated with each source of financial capital vary at any
13 given time due to the prevailing market environment and risk profile of the company. For
14 example, one benefit of debt is its lower cost relative to equity. However, taking on
15 additional debt increases the risk that a company may not be able to repay its debts. This
16 increases a company's financial risk, which adversely affects its credit profile and increases
17 the firm's cost of obtaining financial capital. Equity, on the other hand, involves no
18 repayment obligation (and therefore does not increase the company's financial risk) but is
19 more expensive than debt. This is because returns to equity owners are not guaranteed and
20 are available only after a company's fixed obligations (e.g., debt and other contractual
21 obligations) are paid. Therefore, equity ownership entails greater risk than debt investment

⁷ See, e.g., Amended Testimony of Divya Raman (Amended Chapter 3), Section C (explaining that PG&E's long-term debt is issued for a term of 30 years).

1 because debt investors have a priority claim on earnings. Because equity ownership is
2 riskier, equity investors require a higher return to compensate them for taking on additional
3 risk.

4 **17Q. For regulated utilities, who bears the cost associated with acquiring and retaining**
5 **financial capital?**

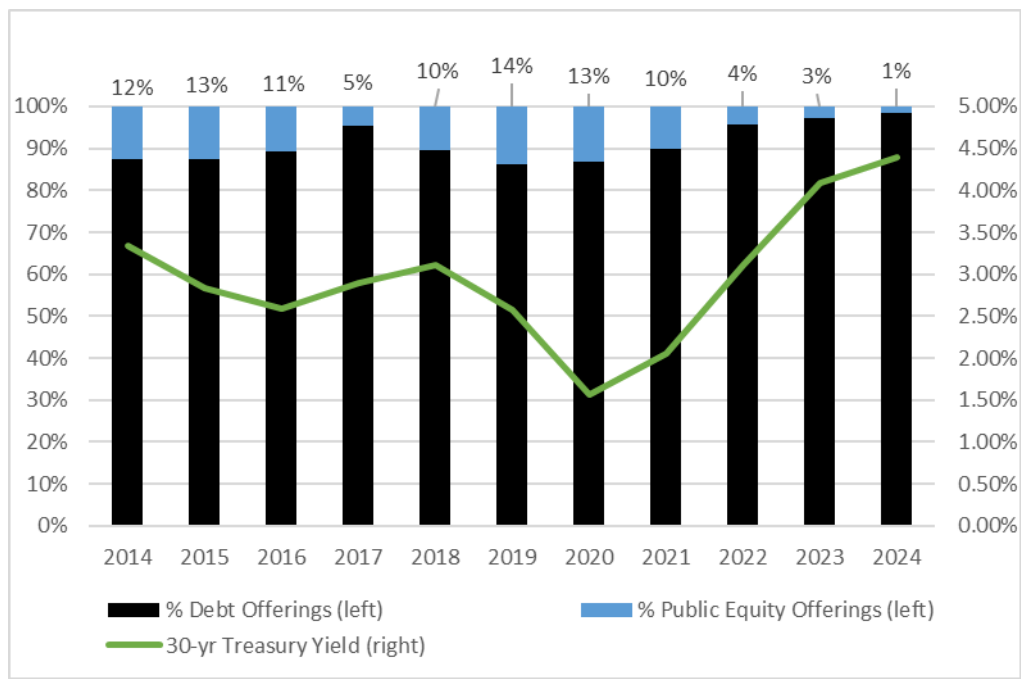
6 17A. Customers receive the benefit of utility service and thus bear the cost of raising and
7 retaining financial capital. Under the regulatory compact, a utility is entitled to revenues
8 sufficient to recover its cost to serve⁸ customers through its regulated rates, including the
9 cost of capital. Therefore, the rates that customers pay include the utility's cost of capital,
10 including the costs of both debt and equity.

11 **18Q. To what extent do utilities rely on public equity issuances (i.e., common stock**
12 **offerings) versus long-term debt to meet capital needs?**

13 18A. As I explained above, equity is more expensive than debt; therefore, it is logical that
14 utilities rely more heavily on long-term debt offerings (e.g., corporate bonds or first
15 mortgage bonds) than common stock issuances to meet external capital needs. As shown
16 in Figure 3 Error! Reference source not found.below, over the last ten years, utility
17 public common equity offerings account for less than 15 percent of utility capital offerings
18 relative to long-term debt.

⁸ The cost of service is also referred to as the revenue requirement. The revenue requirement is calculated as the sum of (1) operating and maintenance expenses, (2) taxes, (3) return of investment in capital assets through depreciation expense, and (4) the return on capital investment through the regulated return on rate base. The return on capital is calculated as the weighted average cost of capital multiplied by the rate base.

Figure 3: Utility Debt Offerings vs. Public Equity Offerings (2014-2024)⁹



Notably, as **Error! Reference source not found.** shows, the proportion of utility common equity issuances generally tracks the interest rate environment. As the cost of capital declines, common equity issuances tend to increase, and vice versa.

19Q. Why would utilities issue less common stock as interest rates rise?

19A. It is important to remember that the cost of equity is a cost to the utility and its customers just like any other component of the revenue requirement, as it reflects the cost of raising and retaining equity capital. As interest rates increase, utilities must offer a comparatively higher equity return to attract an equity investment. As equity capital becomes more expensive, equity issuances become a less desirable capital option. Equity investors require a premium over the return they can earn on safer bonds. Thus, as bond yields rise, so does investors' required return on equity (though not on a one-to-one basis).

⁹ Source: S&P Capital IQ.

1 **20Q. How does PG&E compare to other utilities in the amount of common stock it has**
2 **issued in the last ten years?**

3 **20A. PG&E has issued a greater proportion of common stock in the last ten years than other**
4 **utilities have. As shown in Figure 4, between 2014 and 2024, nearly 22 percent of PG&E's**
5 **long-term capital offerings have been public common stock offerings, compared to only 8**
6 **percent for the utility sector in aggregate. This figure includes the Company's \$1.2 billion**
7 **common stock offering in December 2024. The bulk of the \$11.4 billion in common stock**
8 **offerings occurred in June and July 2020 when PG&E Corp. issued \$8.9 billion in common**
9 **equity to fund its emergence from bankruptcy.**

10 **Figure 4: Proportion of Common Stock Offerings (2014-2024)¹⁰**

	<u>PG&E (\$000)</u>	<u>All Other Utilities (\$000)</u>
<u>Common Stock Offerings</u>	<u>\$11,438,984</u>	<u>\$84,913,885</u>
<u>Total Debt + Common Stock Offerings</u>	<u>\$52,183,984</u>	<u>\$1,050,063,354</u>
<u>% Common Stock Offering</u>	<u>21.92%</u>	<u>8.09%</u>

11
12 **21Q. In addition to public stock offerings, what alternatives have utilities used to raise**
13 **external financial capital and avoid over-leveraging the balance sheet with debt?**

14 **21A. As debt and equity have become more expensive in recent years and the capital needs of**
15 **utilities have grown, utilities have been pursuing other options to raise funds for capital**
16 **investment and to deleverage balance sheets that have pressured utility credit profiles.**
17 **Those alternatives include asset sales (including sales of minority stakes in operating**
18 **subsidiaries), joint ventures, and lease transactions like those approved by the Commission**

¹⁰ Source: S&P Capital IQ. Includes long-term debt and common stock issued by PG&E Corp. and long-term debt issued by Pacific Gas & Electric Company. "All Other Utilities" data excludes offerings by PG&E Corp. and Pacific Gas & Electric Company.

1 between SDG&E and Citizens. These options provide the utility with cash to fund capital
2 investment without harming credit metrics.

3 Recent examples of utility asset and minority stake sales include Dominion
4 Energy's (Dominion) sale of three natural gas LDCs¹¹ to Enbridge Inc., Duke Energy's
5 sale of a 19.9 percent minority interest in Duke Energy Indiana to EPSOM Investment Pte.
6 Ltd.,¹² NiSource, Inc.'s sale of a 19.9 percent minority interest in Northern Indiana Public
7 Service Company to Blackstone Infrastructure Partners¹³, and FirstEnergy's sale of a 49.9
8 percent minority stake in FirstEnergy Transmission to Brookfield Infrastructure Partners.¹⁴
9 Additionally, Dominion sold a 50 percent non-controlling interest in its Coastal Virginia
10 Offshore Wind Project to Stonepeak Partners in October 2024.¹⁵ In the case of Dominion,
11 the sale of three of its LDCs and a 50 percent interest in its offshore wind project raised
12 \$16.6 billion, which allowed Dominion to improve its financial profile by reducing debt,
13 strengthen its credit metrics, and pursue important clean energy investment projects like its
14 offshore wind project.

¹¹ LDC = Local Distribution Company.

¹² *Duke Energy Partners with GIC to Secure Minority Investment in Duke Energy Indiana, Increases Long-Term EPS Growth Rate*, Duke Energy (Jan. 28, 2021), <https://news.duke-energy.com/releases/duke-energy-partners-with-gic-to-secure-minority-investment-in-duke-energy-indiana-increases-long-term-eps-growth-rate>. EPSOM Investment is an affiliate of Government of Singapore Sovereign Wealth Fund ("GIC").

¹³ *NiSource Inc. Completes NIPSCO Minority Equity Interest Transaction*, NIPSCO (Jan. 2, 2024), [https://www.nipSCO.com/our-company/news-room/news-article/nisource-inc.-completes-nipSCO-minority-equity-interest-transaction#:~:text=\(NYSE%3A%20NI\)%20\(%E2%80%9C,the%20dedicated%20infrastructure%20group%20of](https://www.nipSCO.com/our-company/news-room/news-article/nisource-inc.-completes-nipSCO-minority-equity-interest-transaction#:~:text=(NYSE%3A%20NI)%20(%E2%80%9C,the%20dedicated%20infrastructure%20group%20of).

¹⁴ FirstEnergy sold a 19.9% interest to Brookfield in 2022 and a subsequent 30% interest in March 2024. Press Release, FirstEnergy, *FirstEnergy Closes on \$3.5 Billion FirstEnergy Transmission, LLC 30% Interest Sale* (Mar. 25, 2024) https://www.firstenergycorp.com/newsroom/news_articles/fe-closes-on-fe-transmission-interest-sale.html.

¹⁵ Press Release, Dominion Energy, *Dominion Energy, Stonepeak Announce Closing of Sale of Noncontrolling Equity Interest In Coastal Virginia Offshore Wind Commercial Project* (Oct. 22, 2024), <https://investors.dominionenergy.com/news/press-release-details/2024/Dominion-Energy-Stonepeak-Announce-Closing-of-Sale-of-Noncontrolling-Equity-Interest-In-Coastal-Virginia-Offshore-Wind-Commercial-Project/default.aspx>.

V. THE BENEFITS OF DIVERSE CAPITAL SOURCES

22Q. Is it prudent for companies, including utilities, to have a diverse set of capital sources available to fund operations?

22A. Yes, very much so. The capital financing process is dynamic and complex as it must satisfy multiple objectives subject to multiple constraints that can vary widely due to the market environment at any given time, as well as the specific risks and funding requirements associated with the firm's unique individual operations. As explained earlier, the benefits and costs of each source of capital depend on the risk profile of the firm and the prevailing market environment. At any given time, a source of funding could be unavailable, constrained, and/or uneconomic. Markets are unpredictable and often beyond a firm's control. By having diverse funding sources, the firm is more flexible and resilient to exogenous events that may adversely affect the availability, pricing, and terms of one or more sources of capital. Further, different funding sources can offer different terms and conditions. Ultimately, having financial flexibility with diverse capital funding sources mitigates the risk that the firm is unable to access capital when it needs to and enables a lower overall cost of funds.

23Q. How do utility customers benefit from a utility with financial flexibility?

23A. For customers to receive safe and reliable electric service, utilities must continuously invest in their systems (e.g., to meet customer demand, replace aging infrastructure, and improve reliability and resiliency), which requires ongoing access to external sources of financial capital. The ease with which a utility can access financial capital is driven by its risk profile and the supply and demand for various capital sources. Since utilities require significant amounts of external capital, they need a large supply of potential funding sources. Markets

1 are unpredictable, and at any given time, a specific source of funding could be unavailable,
2 constrained, and/or uneconomic. Therefore, having access to multiple sources of financial
3 capital minimizes the risk to customers that the utility will be forced to rely on less
4 economic sources of capital that may have more onerous terms. Ultimately, having diverse
5 funding sources (1) mitigates the risk that the utility is unable to access financial capital at
6 reasonable terms for customers' benefit when it needs to; (2) enhances the utility's
7 resiliency to exogenous events that may adversely affect the availability, pricing, and terms
8 of one or more sources of capital; and (3) enables a lower overall cost of funds that
9 ultimately benefits customers.

10 VI. THE IMPACT AND MERIT OF THE INVESTMENT 11 PROGRAM

12 **24Q. Would approval of the proposed Investment Program mean that PG&E would not**
13 **need to access other sources of financial capital, including equity?**

14 24A. No. As discussed in Section III, PG&E has substantial capital expenditure needs to meet
15 its obligation to serve and achieve California's ambitious climate goals. This will require
16 access to a variety of funding sources. PG&E thus has been raising capital in a variety of
17 ways and will need to continue to do so. In a November 2024 Investor Presentation, PG&E
18 Corporation reported that it anticipated issuing \$3 billion of common stock over the 2024-
19 2028 timeframe.¹⁶ As anticipated, PG&E Corporation (PG&E Corp.) issued \$2.4 billion
20 in common and preferred equity in December 2024 (\$2.7 billion including over-allotment

¹⁶ PG&E Corporation, 2024 Third Quarter Earnings Investor Presentation at 11 (Nov. 7, 2024),
https://s1.q4cdn.com/880135780/files/doc_financials/2024/q3/Q3-24-Earnings-Presentation.pdf

1 to the underwriters).¹⁷ Additionally, the U.S. Department of Energy recently approved a
2 \$15 billion loan guarantee to PG&E to fund infrastructure projects that support clean
3 energy.¹⁸ The proposed Investment Program is one of several financing tools that enhance
4 the Company's financial flexibility for the benefit of customers and address its capital
5 needs.

6 **25Q. Would the proposed Investment Program adversely affect PG&E's financial profile?**

7 25A. No. Customers ultimately bear the cost of PG&E's financial profile in two primary ways:
8 (1) PG&E's cost of debt and equity that customers pay in rates depends in part on the
9 strength of PG&E's financial profile, and (2) PG&E's financial profile affects the ease and
10 terms on which PG&E can access the financial capital needed to serve customers on a
11 continuous basis. Therefore, having access to financial capital that does not further stress
12 PG&E's financial profile benefits customers, and these benefits should be recognized,
13 particularly with PG&E's recent emergence from bankruptcy.

14 Unlike issuing debt, the proposed Investment Program would provide PG&E with
15 a source of financial capital that does not adversely affect its financial profile and credit
16 metrics. Taking on more debt increases a utility's fixed obligations (i.e., interest expense),
17 which increases its financial risk and the costs of both debt and equity to customers'

¹⁷ Specifically, PG&E issued \$1.2 billion of shares of common stock and \$1.2 billion in convertible preferred stock. Press Release, PG&E Corp., *PG&E Corporation Announces Launch of Concurrent Offerings of Common Stock and Mandatory Convertible Preferred Stock*, (Dec. 2, 2024), <https://investor.pgecorp.com/news-events/press-releases/press-release-details/2024/PG&E-Corporation-Announces-Launch-of-Concurrent-Offerings-of-Common-Stock-and-Mandatory-Convertible-Preferred-Stock/default.aspx>

¹⁸ See PG&E Corp., *PG&E Federal Loan Guarantee Approved* (Jan. 17, 2025), <https://www.pge.com/en/newsroom/currents/energy-savings/pg-e-federal-loan-guarantee-approved.html> and U.S. Dep't of Energy, Loan Programs Office, *DOE Announces \$15 Billion Loan Guarantee to Pacific Gas & Electric Company to Expand Hydropower Generation, Battery Energy Storage, and Transmission* (Jan. 17, 2025), <https://www.energy.gov/lpo/articles/doe-announces-15-billion-loan-guarantee-pacific-gas-electric-company-expand-hydropower>.

1 detriment. Approving the proposed Investment Program would not increase PG&E's debt
2 leverage and the corresponding cost of capital borne by customers.

3 **26Q. Under the Investment Program, Citizens would finance its prepaid rent payment with**
4 **debt that includes a coupon rate that is fixed for 30 years. Do utilities also issue long-**
5 **term debt at a rate that is fixed over the term of the debt?**

6 26A. Yes, they do. Utility long-term debt rates are also fixed, and they are generally not able to
7 refinance long-term bonds prior to maturity if interest rates decline. PG&E witness Divya
8 Raman explains that PG&E would issue long-term debt in connection with the
9 development of the long-life transmission projects included in the Investment Program and
10 that debt would also include a coupon rate that is fixed over the term of the debt. In other
11 words, both Citizens and PG&E would issue long-term debt to fund the transmission
12 investments covered under the proposed Investment Program and the debt would have
13 coupon rates that are fixed for the term of the debt security. Accordingly, Citizens'
14 financing practice is consistent with standard utility financing practices and customers are
15 not disadvantaged by Citizens' long-term fixed rate financing relative to PG&E's debt
16 financing.

17 Further, Citizens would seek debt financing at the time of each Entitlements Lease
18 and the coupon rate would reflect the interest rate environment at the time of financing. To
19 the extent that interest rates decline between financings, the lower interest rates will be
20 reflected in each subsequent debt financing, thus capturing the benefit of lower interest
21 rates for customers. In other words, the interest rate for each of Citizens' debt financings
22 would reflect the prevailing market rate at the time of each financing. As the Commission

1 concluded in SDG&E's lease proceedings, fixed interest rates provide certainty and rate
2 stability that benefit customers.¹⁹

3 **27Q. What is your conclusion regarding the proposed Investment Program?**

4 27A. The proposed Investment Program is a reasonable option for PG&E to raise financial
5 capital. PG&E has substantial planned capital expenditures that will require more financial
6 capital than can be raised internally and through traditional debt and equity offerings.
7 Because it relies heavily on external financial capital, PG&E must have access to a diverse
8 set of capital financing tools so that it can meet its obligation to serve customers. PG&E
9 has already issued a greater proportion of common stock relative to long-term debt than is
10 standard for other utilities. Financial capital diversity is critical to enabling financing
11 flexibility which ensures PG&E can access capital on reasonable terms to serve customers
12 reliably. Restricting PG&E's access to a source of external financial capital would harm
13 customers by (1) reducing its financial flexibility, (2) reducing its resiliency to adverse
14 exogenous market events, and (3) increasing PG&E customers exposure to the risk of
15 capital market constraints and the associated cost premium.

16 Additionally, the Investment Program provides many benefits to customers as
17 explained by PG&E's and Citizens' witnesses. Since transmission projects like those that
18 will be subject to the Entitlements Leases would be financed with debt by either Citizens
19 or PG&E regardless of the prevailing interest rate environment, and PG&E's long term
20 debt rate would also be fixed without the ability to refinance, customers are not
21 disadvantaged by Citizens' long-term debt that would be fixed over the term of the lease.

¹⁹ See, D.19-03-024 at 16, 19, 24 (Sycamore Section 851 Decision), 2019 Cal. PUC Lexis 154, at *22, *27-28, *33-34 (Cal. P.U.C. 2019).

1 **28Q. Does this conclude your direct testimony?**

2 28A. Yes, it does.

PACIFIC GAS AND ELECTRIC COMPANY
APPENDIX A
STATEMENTS OF QUALIFICATIONS

PACIFIC GAS AND ELECTRIC COMPANY
STATEMENT OF QUALIFICATIONS OF BARRY J. BENTLEY

Q 1 Please state your name and business address.

A 1 My name is Barry J. Bentley, and my business address is Pacific Gas and Electric Company (PG&E), 300 Lakeside Drive, Oakland, California.

Q 2 Briefly describe your responsibilities at PG&E.

A 2 I am the Senior Vice President (VP) of Electric Engineering leading electric engineering, electric process safety, electric design engineering and instrumentation and control. I am accountable for program planning, financial budgeting, and project delivery of all electric engineering projects.

Q 3 Please summarize your educational and professional background.

A 3 I graduated from Purdue University with a Bachelor of Science degree in electrical engineering and have completed executive education courses at Georgetown University, the University of Virginia and the University of Michigan.

I joined PG&E as Senior VP of Electric Engineering in 2021. Previously, I have served as the Senior VP, United States (U.S) Utility Operations for AES Corporation. During this 30-year career with AES and its subsidiaries, I held leadership roles of increasing responsibility and span of control including:

AES

- VP, Asset Management, U.S. Utility Operations.

Indianapolis Power & Light Company

- Senior VP, Customer Operations;
- VP, Power Delivery; and
- VP, Fuel and Energy Supply.

Q 4 What is the purpose of your testimony?

A 4 I am sponsoring the following amended testimony in support of PG&E's Application for Approval under Public Utilities Code Section 851 to Lease Entitlements to Transmission Projects to Citizens Energy Corporation:

- Amended Chapter 1, "Overview and Policy."

Q 5 Does this conclude your statement of qualifications?

A 5 Yes, it does.

PACIFIC GAS AND ELECTRIC COMPANY
STATEMENT OF QUALIFICATIONS OF JAMES L. HIGHAM, JR

Q 1 Please state your name and business address.

A 1 My name is James L. Higham, Jr, and my business address is Pacific Gas and Electric Company (PG&E), 300 Lakeside Drive, Oakland, California.

Q 2 Briefly describe your responsibilities at PG&E.

A 2 I am a Tax Senior Manager in the Tax Department within the Controller's organization at PG&E. In this position, I am responsible for overseeing the management of PG&E's federal and state income tax audits, as well as providing tax research and planning support on a variety of transactions, including the tax implications of the credits contained in the Inflation Reduction Act.

Q 3 Please summarize your educational and professional background.

A 3 I received a Bachelor of Arts degree in Fine Arts (Art History) from the College of William and Mary, Williamsburg, Virginia. I received a Juris Doctor from the University of Mississippi School of Law, Oxford, Mississippi. I received a Master's in Law (Taxation) from New York University School of Law, New York, New York. Since joining PG&E in April 1998, I have experienced increasing responsibilities within the Tax Department. Prior to my employment with PG&E, I was a Tax Manager at the accounting firm of KPMG Peat Marwick LLP in Los Angeles, California.

Q 4 What is the purpose of your testimony?

A 4 I am sponsoring the following amended testimony in support of PG&E's Application for Approval under Public Utilities Code Section 851 to Lease Entitlements to Transmission Projects to Citizens Energy Corporation:

- Amended Chapter 4, "Tax."

Q 5 Does this conclude your statement of qualifications?

A 5 Yes, it does.

PACIFIC GAS AND ELECTRIC COMPANY
STATEMENT OF QUALIFICATIONS OF RONALD E. KENNEDY III

Q 1 Please state your name and business address.

A 1 My name is Joseph P. Kennedy III, and my business address is 2 Seaport Lane, Suite 5C, Boston, Massachusetts, 02210.

Q 2 Briefly describe your responsibilities at Citizens Energy Corporation.

A 2 I am the President of Citizens Energy Corporation. In this role my primary responsibility is to advance commercial and policy initiatives that align with the company's mission of service to our community.

Q 3 Please summarize your professional background.

A 3 Prior to my work at Citizens, I served for four terms as a member of the U.S. House of Representatives for the Fourth District to Massachusetts. I was a member of the House Energy and Commerce Committee and a member of the Sub-Committee on Energy for several years.

Before being elected to Congress, I served as an Assistant District Attorney, a legal aid volunteer, and a volunteer with the Peace Corps.

I have also founded the non-profit social justice organization known as Groundwork Project. The Groundwork Project focuses on Appalachia, the Deep South, and the Plains, and is the sole national pro-democracy and social justice organization singularly focused on supporting frontline organizers on the most crucial fronts to expand civil rights, equality, and democracy.

In addition, I served President Biden as his Special Envoy to Northern Ireland for Economic Affairs. In that role, I focused my work on leveraging business partnerships and investments to help spread the "peace dividend" of the Belfast/Good Friday Agreement of 1998.

Q 4 What is the purpose of your testimony?

A 4 I am sponsoring the following amended testimony in support of PG&E's Application for Approval under Public Utilities Code Section 851 to Lease Entitlements to Transmission Projects to Citizens Energy Corporation:

- Amended Chapter 7, "Citizens Energy – Citizens' Charitable Giving."

Q 5 Does this conclude your statement of qualifications?

A 5 Yes, it does.

PACIFIC GAS AND ELECTRIC COMPANY
STATEMENT OF QUALIFICATIONS OF RONALD E. KENNEDY

Q 1 Please state your name and business address.

A 1 My name is Ronald E. Kennedy, and my business address is MCR Performance Solutions (MCR), 155 N. Pfingsten Road, Suite 155, Deerfield, Illinois.

Q 2 Briefly describe your responsibilities at MCR.

A 2 I am a Vice President in the Transmission Strategy Practice at MCR where my responsibilities include managing projects for MCR clients in various Regional Transmission Organizations (RTO) including the California Independent System Operator (CAISO), the Midcontinent Independent System Operator (MISO), the New York Independent System Operator (NYISO) and the Southwest Power Pool (SPP) as well as clients that are not in an RTO.

Q 3 Please summarize your educational and professional background.

A 3 I graduated from the University of Michigan in 1992 with Bachelor of Arts degrees in Economics and Political Science. I earned a Master of Business Administration in Finance from Wayne State University in 1996. I manage projects for MCR clients in various RTO including the CAISO, the MISO, the NYISO and the SPP as well as clients that are not in an RTO. I have developed or supported expert testimony, provided analytics, and assisted our clients in intervention support for transmission rate filings at the Federal Energy Regulatory Commission (FERC) under the Federal Power Act Section 205. These filings have included requesting: (1) implementation of transmission formula rates; (2) updating transmission revenue requirements (TRR) (3) making variances to existing formula rates; (4) implementation of transmission rate incentives; and (5) implementing forward-looking rates. I have also led engagements, supported in-depth testimony, and developed supporting analytics and transmission rate schedules for numerous requests by public power and generation and transmission owners for transmission rate incentives under Order 679. I have managed over 150 preparations and/or reviews of existing formula rate updates for transmission owners in RTOs. I have also conducted several reviews of public power and

investor-owned utility accounting structures and cost reporting approaches to ensure they are in conformance with the FERC's Uniform System of Account. I have supported the strategy and developed the economic analysis for a competitive bid for a transmission project in the CAISO under FERC Order 1000. Further, I have developed analytical financial tools and have led client projects to determine the cost allocation, economics, and risks of proposed investments in major cost-shared transmission projects. I have authored or co-authored many MCR white papers on topics such as transmission investment and rate impacts in RTOs, formula rate protocols, and cost allocation methodologies.

Q 4 Have you testified as an expert witness regarding utility rates and tariffs?

A 4 Yes, I have submitted direct testimony in Federal Power Act Section 205 filings in support of proposed annual TRRs, formula transmission rates and transmission rate incentives in the following FERC dockets:

- EL08-32-000 on behalf of Central Minnesota Municipal Power Agency.
- ER15-277-000 on behalf of Rochester Public Utilities.
- ER15-2028-000 on behalf of North Iowa Municipal Electric Cooperative Association Corn Belt Power Cooperative.
- ER17-428-000 on behalf of North Iowa Municipal Electric Cooperative Association Corn Belt Power Cooperative.
- ER17-1523-000 on behalf of North Iowa Municipal Electric Cooperative Association and Corn Belt Power Cooperative.
- ER15-2324-000 on behalf of Missouri River Energy Services.
- ER19-1485-000 on behalf of North Iowa Municipal Electric Cooperative Association and Corn Belt Power Cooperative.
- ER24-118 and ER24-119 on behalf of Citizens Energy.
- ER24-149 and ER24-150 on behalf of Citizens Energy.

Additionally, I have supported direct testimony of my colleagues and clients and prepared accompanying analytics and exhibits in the following FERC dockets:

- ER06-586-000 on behalf of Southern Minnesota Municipal Power Agency.
- ER07-1415-000 on behalf of Central Minnesota Municipal Power Agency.

- 1 • ER11-2700-000, 001, 002 and 003 on behalf of Central Minnesota
- 2 Municipal Power Agency.
- 3 • EL11-45-000 on behalf of Missouri River Energy Services.
- 4 • EL12-67-000 on behalf of WPPI Energy.
- 5 • ER12-351-000 on behalf of Missouri River Energy Services.
- 6 • EL13-19-000 on behalf of Dairyland Power Cooperative.
- 7 • ER13-2468 on behalf of Central Minnesota Municipal Power Agency.
- 8 • ER14-246 on behalf of Central Minnesota Municipal Power Agency.
- 9 • ER15-1079-000 on behalf of South Mississippi Electric Power
- 10 Association.
- 11 • ER15-1544-000 on behalf of WPPI Energy.
- 12 • ER15-689-000 on behalf of Dairyland Power Cooperative.
- 13 • ER15-1777 on behalf of Heartland Consumers Power District.
- 14 • ER15-1943 on behalf of Missouri River Energy Services.
- 15 • ER15-2291 on behalf of Harlan Municipal Utilities.
- 16 • ER15-2324 on behalf of Missouri River Energy Services.
- 17 • ER17-1504 on behalf of WPPI Energy.
- 18 • ER17-1515 on behalf of Missouri River Energy Services.
- 19 • ER18-193 on behalf of Dairyland Power Cooperative.
- 20 • EL19-30 on behalf of LS Power Grid New York Corporation.
- 21 • EC19-42-000, PL19-3-000, EC20-13-000, RM20-10-000 and
- 22 ER20-3025-000 on behalf of Gridliance, LLC.
- 23 • ER19-263 on behalf of AMP Transmission, LLC.
- 24 • ER22-1732-000 on behalf of Missouri River Energy Services.
- 25 • ER22-411-000 on behalf of Lincoln Electric.
- 26 • ER23-513-000 on behalf of Great River Energy.

27 Q 5 What is the purpose of your testimony?

28 A 5 I am sponsoring the following amended testimony in support of PG&E's

29 Application for Approval under Public Utilities Code Section 851 to Lease

30 Entitlements to Transmission Projects to Citizens Energy Corporation:

- 31 • Amended Chapter 6, "Citizens Energy – Citizens Rate Model";
- 32 • Chapter 6, Attachment 1, "PG&E Representative Rate Model With the
- 33 Base Case Capital Cost Assumptions"; and
- 34 • Chapter 6, Attachment 2, "Citizens Capped Rate."

- 1 Q 6 Does this conclude your statement of qualifications?
- 2 A 6 Yes, it does.

PACIFIC GAS AND ELECTRIC COMPANY
STATEMENT OF QUALIFICATIONS OF MICHAEL MEDEIROS, JR.

Q 1 Please state your name and business address.

A 1 My name is Michael Medeiros, Jr., and my business address is Pacific Gas and Electric Company (PG&E), 3400 Crow Canyon Road, San Ramon, California.

Q 2 Briefly describe your responsibilities at PG&E.

A 2 I am the Vice President of South Bay Delivery. Amongst a number of areas of responsibility, one is identifying new technology and funding opportunities that can assist with the modernization of PG&E's electric grid.

Q 3 Please summarize your educational and professional background.

A 3 I graduated from Santa Clara University with a Bachelor of Science degree in Economics in 1988. I received my Masters of Business Administration degree from Golden Gate University in 1992.

From 1990-1996, I worked for PG&E, first supporting large industrial and commercial customers on matters such as energy efficiency, cogeneration, and natural gas transportation issues, and then as a Senior Pricing and Rates Analysis focused on individual customer pricing negotiations and rate design for the large industrial and commercial rate class.

I left PG&E in 1996 and first went to work for New Energy Ventures as their Manager of Northern California Operations, focused on acquiring customers for their Direct Access program. From there I joined PG&E Energy Services as their Director of Commercial National Accounts; my priority was selling energy and energy-related services to large, multi-location commercial customers throughout the United States. I also spent a year working for Pacific Gas Transmission (PGT), working with wholesale customers interested in securing natural gas transportation capacity rights on PGT's interstate transportation system.

In 2002, I joined GWF Power Systems in Pittsburg, California, where for 10 years I served as their Manager—Power Markets and then Senior Development Manager. My main responsibility was the day-to-day asset management of our existing generation portfolio and the development of new natural gas-fired generation. In this role, I was responsible for

1 managing all development activities associated with interconnection, land
2 rights, water rights, economic analysis, development of proposals, and the
3 negotiation of contracts with California-based utilities. Upon the successful
4 completion of the Power Purchase Agreements, I participated in the
5 company's effort to secure third-party financing for the projects.

6 In 2012, I re-joined PG&E as Manager of Renewable Development, with
7 a focus on its Compressed Air Energy Storage feasibility study. In 2016,
8 I joined the Transmissions Operations organization focused on Federal
9 Energy Regulatory Commission 1,000 competitive transmission projects and
10 energy storage development activities, which include the successful
11 development and construction of PG&E's Elkhorn Energy Storage facility. In
12 2020, I became the Director of Project and Portfolio Management for
13 PG&E's Transmission and Substation portfolio before assuming my current
14 role in 2022.

15 Q 4 What is the purpose of your testimony?

16 A 4 I am sponsoring the following amended testimony. in PG&E's Application for
17 Approval under Public Utilities Code Section 851 to Lease Entitlements to
18 Transmission Projects to Citizens Energy Corporation:

- 19 • Amended Chapter 2, "The Investment Program."

20 Q 5 Does this conclude your statement of qualifications?

21 A 5 Yes, it does.

PACIFIC GAS AND ELECTRIC COMPANY
STATEMENT OF QUALIFICATIONS OF JENNIFER E. NELSON

Q 1 Please state your name and business address.

A 1 My name is Jennifer E. Nelson, and my business address is Concentric Energy Advisors ("Concentric"), 293 Boston Post Road West, Suite 500, Marlborough, Massachusetts, 01752.

Q 2 Briefly describe your responsibilities at Concentric Energy Advisors.

A 2 I am among Concentric's professionals that provide expert witness testimony on regulatory and corporate finance issues in utility regulatory proceedings. Concentric is a management consulting and economic advisory firm that specializes in the North American energy and water industries. Concentric provides regulatory and litigation support, financial advisory services, energy market strategies, market assessments, energy commodity contracting and procurement, economic feasibility studies, and capital market analyses. In my role as Vice President and an officer at Concentric, I am responsible for providing thought leadership on regulatory and financial issues facing the utility industry, leading consulting engagements with our clients, and ensuring high quality service and work product.

Q 3 Please summarize your educational and professional background.

A 3 I have more than fifteen years of experience in the energy industry, having served as a consultant and energy/regulatory economist for state government agencies. Since 2013, I have provided consulting services on a range of financial and regulatory issues including the cost of capital, ratemaking policy, and regulatory strategy issues. Prior to consulting, I was a staff economist at the Massachusetts Department of Public Utilities, and a petroleum economist for the State of Alaska. I completed utility regulatory training offered by New Mexico State University's Center for Public Utilities and have earned the Certified Rate of Return Analyst designation from the Society of Utility and Regulatory Financial Analysts. I hold a Bachelor's degree in Business Economics from Bentley University and a Master's degree in Resource and Applied Economics from the University of Alaska. A summary of my professional and educational background, including a list

1 of my testimony filed before regulatory commissions, is provided as
2 Attachment A to my statement of qualifications.

3 Q 4 What is the purpose of your testimony?

4 A 4 I am sponsoring the following amended testimony in support of PG&E's
5 Application for Approval under Public Utilities Code Section 851 to Lease
6 Entitlements to Transmission Projects to Citizens Energy Corporation:

7 • Chapter 9, "Utility Financing Principles."

8 Q 5 Does this conclude your statement of qualifications?

9 A 5 Yes, it does.

JENNIFER E. NELSON
VICE PRESIDENT

Ms. Nelson is a Certified Rate of Return Analyst with more than fifteen years of experience in the energy industry. As an expert witness, she has testified to the cost of capital and alternative ratemaking proposals for electric, natural gas, and water utilities. In her time as a consultant, Ms. Nelson has provided consulting services on a variety of utility regulatory matters including ratemaking and regulatory policy, cost of service and revenue requirements, integrated resource planning, renewable power contracts, natural gas pipeline development, utility supply planning issues, and merger and acquisition transactions. Ms. Nelson has extensive experience performing statistical analyses, developing economic and financial models, and providing policy analyses and recommendations.

Prior to joining Concentric, Ms. Nelson was a Director at ScottMadden, Inc., and a managing consultant at Sussex Economic Advisors, LLC. Prior to consulting, she was a staff economist at the Massachusetts Department of Public Utilities and a petroleum economist for the State of Alaska. Ms. Nelson holds a Master of Science degree in Resource and Applied Economics from the University of Alaska and a Bachelor of Science degree in Business Economics from Bentley University.

AREAS OF EXPERTISE**Cost of Capital**

- Submitted expert testimony on behalf of electric utilities before regulatory commissions in Arkansas, New Hampshire, New Mexico, North Carolina, South Carolina, and Texas regarding the cost of capital.
- Submitted expert testimony on behalf of natural gas utilities before regulatory commissions in Florida, North Carolina, Ohio, Oregon, South Carolina, Utah, West Virginia, and Wyoming regarding the cost of capital.
- Submitted expert testimony on behalf of a water utility before the Kentucky Public Service Commission regarding the appropriate capital structure and cost of debt.
- Supported expert testimony regarding the cost of capital before numerous state utility regulatory commissions and the FERC on behalf of electric and natural gas utilities through research, financial analysis and modeling, and testimony development.

Alternative Ratemaking Mechanisms

- Submitted expert testimony on behalf of electric utilities and a water utility before the Arkansas Public Service Commission regarding the utilities' proposed Formula Rate Plans.
- Submitted expert testimony on behalf of an electric utility before the Oklahoma Corporation Commission regarding the utility's proposed Formula Rate Plan.
- Submitted expert testimony on behalf of an electric and natural gas utility before the Delaware Public Service Commission regarding the utility's proposed performance-based rate plan.



- Submitted expert testimony on behalf of an electric and natural gas utility before the Montana Public Service Commission regarding the utility's proposed alternative rate mechanisms.
- Co-sponsored expert testimony on behalf of a natural gas utility before the Maine Public Utilities Commission regarding the utility's proposed capital investment cost recovery mechanism.
- Supported expert testimony and performed research and analysis on alternative ratemaking frameworks.

Resource and Supply Planning

- Supported expert testimony on the reasonableness of utility resource supply portfolio decisions.
- Assisted in a benchmarking analysis on behalf of a Northeast U.S. natural gas utility regarding its supply planning standards and design day demand forecast process.
- Supported rebuttal testimony filed on behalf of an Alaska natural gas utility regarding the utility's gas supply planning standards.
- Supported the development of a New Hampshire electric utility's Integrated Resource Plan filed with the New Hampshire Public Utility Commission.
- Performed research and financial analysis to evaluate the benefits, costs, and policy options associated with natural gas expansion by Massachusetts natural gas utilities as part of a prepared report for the Massachusetts Department of Energy Resources.
- Developed a dynamic natural gas demand forecast model for in-state use for the State of Alaska, which included forecasting demand from both existing and anticipated natural gas utilities, power consumption, and large commercial operations.
- Conducted research and prepared analyses for a natural gas pipeline Open Season.

Other Regulatory Financial Issues

- Supported expert testimony on the appropriate level of remuneration associated with the Massachusetts electric utilities' long-term contracts for wind power through research, financial analysis and modeling, and testimony development.
- Provided research and analytical support estimating financial damages incurred as a result of construction delays for an electric transmission company.
- Prepared a Feasibility Study for an electric cooperative utility supporting a utility-owned solar project.

Mergers & Acquisitions

- Performed buy-side benchmarking and regulatory analysis for utility acquisitions.



RELEVANT PROFESSIONAL HISTORY

Concentric Energy Advisors, Inc. (2021-present)

Vice President

Assistant Vice President

ScottMadden, Inc. (2016-2021)

Director

Manager

Sussex Economic Advisors, LLC (2013-2016)

Managing Consultant

Massachusetts Department of Public Utilities (2011-2013)

Economist, Electric Power Division

State of Alaska Department of Revenue, Tax Division (2007-2010)

Petroleum Economist

Federal Reserve Bank of Boston (2000-2002)

Research Assistant, Economic Research Department

EDUCATION AND RELEVANT COURSEWORK

University of Alaska

Master of Science, Resource and Applied Economics

Bentley University (formerly Bentley College)

Bachelor of Science, Business Economics

Graduated *magna cum laude*

New Mexico State University

Center for Public Utilities, Regulatory Basics

ISO New England

Wholesale Energy Markets (WEM-101)

Colorado School of Mines

Petroleum Engineering SuperSchool

EUCI

Course Instructor – Performance-Based Ratemaking

DESIGNATIONS AND PROFESSIONAL AFFILIATIONS

Certified Rate of Return Analyst, Society of Utility and Regulatory Financial Analysts

Member, Society of Utility and Regulatory Financial Analysts

SPONSOR	DATE	CASE/APPLICANT	DOCKET	SUBJECT
Arkansas Public Service Commission				
Oklahoma Gas & Electric	10/21	Oklahoma Gas & Electric	21-087-U	Formula Rate Plan
Liberty Utilities (Pine Bluff Water)	10/18	Liberty Utilities (Pine Bluff Water)	18-027-U	Formula Rate Plan and tariff
Entergy Arkansas, LLC	11/20	Entergy Arkansas, LLC	16-036-FR	Sponsored testimony evaluating the Return on Equity included in Rider FRP
Delaware Public Service Commission				
Delmarva Power & Light Company	08/24	Delmarva Power & Light Company	24-0868	Alternative Ratemaking Proposal
Florida Public Service Commission				
Pivotal Utility Holdings, Inc. d/b/a Florida City Gas	05/22	Pivotal Utility Holdings, Inc. d/b/a Florida City Gas	20220069-GU	Cost of Capital
Kentucky Public Service Commission				
Bluegrass Water Utility Operating Company, LLC	09/20	Bluegrass Water Utility Operating Company, LLC	2020-290	Capital Structure and Cost of Long-Term Debt
Maine Public Utilities Commission				
Unitil Corporation	06/19	Northern Utilities, Inc.	19-00092	Co-sponsored testimony supporting a proposed CIRA capital tracking mechanism
Montana Public Utilities Commission				
NorthWestern Corporation	08/22	NorthWestern Corporation	2022-7-78 (elect.) 2022-7-78 (gas)	Alternative Ratemaking Proposals
New Hampshire Public Utilities Commission				
Unitil Energy Systems, Inc.	04/21	Unitil Energy Systems, Inc.	DE 21-030	Cost of Capital
New Mexico Public Regulation Commission				
El Paso Electric Company	07/20	El Paso Electric Company	20-00104-UT	Cost of Capital
North Carolina Utilities Commission				
Virginia Electric & Power Co., d/b/a Dominion Energy North Carolina	03/24	Virginia Electric & Power Co., d/b/a Dominion Energy North Carolina	E-22, Sub 694	Cost of Capital



SPONSOR	DATE	CASE/APPLICANT	DOCKET	SUBJECT
Public Service Company of North Carolina d/b/a Dominion Energy North Carolina	04/21	Public Service Company of North Carolina d/b/a Dominion Energy North Carolina	G-5, Sub 632	Cost of Capital
Public Utilities Commission of Ohio				
The East Ohio Gas Company d/b/a Dominion Energy Ohio	11/23	The East Ohio Gas Company d/b/a Dominion Energy Ohio	23-0894-GA-AIR	Cost of Capital
Oklahoma Corporation Commission				
Oklahoma Gas & Electric	12/21	Oklahoma Gas & Electric	PUD202100164	Formula Rate Plan
Public Utility Commission of Oregon				
Northwest Natural Gas Company dba NW Natural	12/23	Northwest Natural Gas Company dba NW Natural	UG 490	Cost of Capital
Northwest Natural Gas Company dba NW Natural	12/24	Northwest Natural Gas Company dba NW Natural	UG 520	Cost of Capital
Public Utilities Commission of South Carolina				
Dominion Energy South Carolina	03/24	Dominion Energy South Carolina	2024-34-E	Cost of Capital
Dominion Energy South Carolina	04/23	Dominion Energy South Carolina	2023-70-G	Cost of Capital
Public Utilities Commission of Texas				
Wind Energy Transmission Texas, LLC dba WETT	12/24	Wind Energy Transmission Texas, LLC dba WETT	52799	Cost of Capital
El Paso Electric Company	06/21	El Paso Electric Company	52195	Cost of Capital
Sharyland Utilities L.L.C.	12/20	Sharyland Utilities L.L.C.	51611	Cost of Capital
Utah Public Service Commission				
Dominion Energy Utah	05/22	Dominion Energy Utah	22-057-03	Cost of Capital
Public Service Commission of West Virginia				
Hope Gas, Inc. d/b/a Dominion Energy West Virginia	11/20	Hope Gas, Inc. d/b/a Dominion Energy West Virginia	20-0746-G-42T	Cost of Capital
Wyoming Public Service Commission				
Dominion Energy Wyoming	03/23	Dominion Energy Wyoming	30010-215-GR-23	Cost of Capital

PACIFIC GAS AND ELECTRIC COMPANY
STATEMENT OF QUALIFICATIONS OF DIVYA RAMAN

Q 1 Please state your name and business address.

A 1 My name is Divya Raman, and my business address is Pacific Gas and Electric Company (PG&E), 300 Lakeside Drive, Oakland, California.

Q 2 Briefly describe your responsibilities at PG&E.

A 2 I am a Manager in the Economic Analysis section of the Finance and Risk Department, where I am responsible for producing and supervising the preparation of various economic analysis, development of financial forecasting models and sponsoring related testimony.

Q 3 Please summarize your educational and professional background.

A 3 I received my Bachelor of Science degree in Management from Birla Institute of Technology and Science, India in 2005. I also received my Master of Science degree in Finance from London Business School in 2009. I completed the three levels of Chartered Financial Analyst certification in 2008.

I started my career at PG&E in 2012 as a Senior Analyst on the Capital Recovery and Analysis team and was promoted to Expert Analyst in 2013. My responsibilities included analysis and presentation of Depreciation Expense, Plant and Rate base in various rate cases. I was the Plant and Rate base, Depreciation Expense witness in PG&E's first formula rate Transmission Owner filing.

In 2018, I was promoted to Principal Analyst in the Financial Forecasting and Revenue Requirements team. My focus in this position included reviewing PG&E's revenue requirement in the 2019 Gas Transmission and Storage, 2020 General Rate Case (GRC), as well as PG&E's 2018 and 2019 Catastrophic Event Memorandum Account filings. In 2020, I was promoted to Manager of the Revenue Requirement and Regulatory Results of Operations team. My responsibilities in this position include production and supervision of revenue requirement calculations for regulatory filings and being the expert witness for revenue requirements including the 2023 GRC and various Wildfire Mitigation and Catastrophic Event applications. In 2022, I started my current role as the Manager of Economic Analysis team

1 where I focus on long term financial forecasting for the company and
2 performing economic analysis for specific projects and investments.

3 Q 4 What is the purpose of your testimony?

4 A 4 I am sponsoring the following amended testimony in support of PG&E's
5 Application for Approval under Public Utilities Code Section 851 to Lease
6 Entitlements to Transmission Projects to Citizens Energy Corporation:

7 • Amended Chapter 3, "Investment Program Rate Implications."

8 Q 5 Does this conclude your statement of qualifications?

9 A 5 Yes, it does.

PACIFIC GAS AND ELECTRIC COMPANY
STATEMENT OF QUALIFICATIONS OF PETER F. SMITH

Q 1 Please state your name and business address.

A 1 My name is Peter F. Smith, and my business address is Citizens Energy Corporation, 2 Seaport Lane, Suite #5C, Boston, Massachusetts.

Q 2 Briefly describe your responsibilities at Citizens Energy Corporation.

A 2 I am the Chief Executive Officer. In this role, I report directly to the Chairman and Founder, Joseph P. Kennedy II, and am responsible for all aspects of Citizens' business and charitable activities. I am currently leading Citizens' efforts to develop high-voltage electricity transmission lines in California to facilitate the delivery of energy, including renewable energy sources. Additionally, I directly oversee Citizens' renewable energy development division, which works to develop, construct, own, and operate renewable energy generation projects in the United States (U.S.) and Canada.

Q 3 Please summarize your educational and professional background.

A 3 Prior to joining Citizens, I was a Manager at the Boston Consulting Group, an international strategy and general management consulting firm focused on helping leading corporations create and sustain competitive advantage. I also spent five years on active duty with the U.S. Coast Guard. I hold a Bachelor of Science in Economics from the U.S. Coast Guard Academy and a Master of Business Administration from Harvard Business School.

Q 4 What is the purpose of your testimony?

A 4 I am sponsoring the following amended testimony in support of PG&E's Application for Approval under Public Utilities Code Section 851 to Lease Entitlements to Transmission Projects to Citizens Energy Corporation:

- Amended Chapter 5, "Citizens Energy – Introduction and Participation in Investment Program.

Q 5 Does this conclude your statement of qualifications?

A 5 Yes, it does.

STATEMENT OF QUALIFICATIONS OF SUSAN F. TIERNEY

Q 1 Please state your name and business address.

A 1 My name is Susan F. Tierney, and my business address is Analysis Group, 180 North Stetson Avenue, #2300, Chicago, Illinois 60601.

Q 2 Briefly describe your responsibilities at Analysis Group.

A 2 I am a Senior Advisor in the Chicago office of Analysis Group, an economics consulting firm headquartered in Boston, where I worked for several decades in state and federal government and as a consultant focused on the electric industry.

Q 3 Please summarize your educational and professional background.

A 3 Formerly, I worked in Massachusetts state government in various roles on matters related to the electric industry—including as economist for the state’s energy office, Executive Director of the Energy Facilities Siting Council, Commissioner of the Department of Public Utilities, and Secretary of Environmental Affairs. At the U.S. DOE, I served as Assistant Secretary of Policy with responsibilities that included a range of matters related to the nation’s electric industry. I co-chaired the DOE transition team for the Obama/Biden Administration, chaired DOE’s Electricity Advisory Commission, and chaired the External Advisory Council of DOE’s National Renewable Energy Laboratory.

For nearly three decades, I have consulted to energy companies, consumers, government entities, grid operators, non-profit organizations, charitable foundations, tribes, and others, and served as an advisor and expert witness on electric industry economics, policy, regulation, and ratemaking. I have previously testified before the Commission.

Among the many pro-bono activities I have undertaken since leaving government are: serving as a member of several committees of the National Academies of Sciences, Engineering and Medicine (“National Academies”), including co-authoring the National Academies’ studies on the Future of Electric Power, on Net Metering, and on Decarbonizing the U.S. Energy System; chairing the National Academies’ Board on Energy and Environmental Systems; and chairing or otherwise serving on the boards of directors of several non-profit organizations and foundations (including the

1 Energy Foundation, Sloan Foundation, Resources for the Future, and the
2 Coalition for Green Capital).

3 I was raised in Southern California, taught at the University of California
4 at Irvine, received a B.A. from Scripps College in Claremont, California, and
5 have a Ph.D. and a Master's degree in regional planning from Cornell
6 University.

7 Q 4 What is the purpose of your testimony?

8 A 4 I am sponsoring the following amended testimony in support of PG&E's
9 Application for Approval under Public Utilities Code Section 851 to Lease
10 Entitlements to Transmission Projects to Citizens Energy Corporation:

- 11 • Chapter 8, "Citizens Energy – Public Interest Analysis";
- 12 • Chapter 8, Attachment SFT-1, "Maps of California: Disadvantaged
13 Communities, Low-Income Communities, Electric Areas of Affordability
14 Concern, PG&E Service Territory, California Electric Climate Zones,
15 Counties With a Majority of Hispanic Residents Composite Map"; and
- 16 • Chapter 8, Attachment SFT-2, "CV of Susan F. Tierney."

17 Q 5 Does this conclude your statement of qualifications?

18 A 5 Yes, it does.