

**BEFORE THE PUBLIC UTILITIES COMMISSION  
OF THE STATE OF CALIFORNIA**



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Application of Pacific Gas and Electric Company for  
Approval of 2024-2031 Energy Efficiency Business  
Plan and 2024-2027 Portfolio Plan.

Application 22-02-005  
(Filed February 15, 2022)

And Other Matters.

Application 22-03-003  
Application 22-03-004  
Application 22-03-005  
Application 22-03-007  
Application 22-03-008  
Application 22-03-011  
Application 22-03-012  
(Consolidated)

**COMMENTS OF LOCAL GOVERNMENT SUSTAINABLE ENERGY COALITION ON  
ADMINISTRATIVE LAW JUDGE’S RULING REGARDING GAS INCENTIVES AND  
CODES AND STANDARDS**

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For THE LOCAL GOVERNMENT SUSTAINABLE ENERGY COALITION

## About LGSEC

The Local Government Sustainable Energy Coalition (LGSEC) represents ten cities, ten Counties, four Council/Association of Governments, four Regional Agencies, two Community Choice Aggregators, one Academia, and seven Nonprofits. Collectively, LGSEC members represent up to 65% of California's population and nearly two-thirds of California's electrical energy demand. LGSEC members serve as administrators, designers and lead implementers of a host of energy efficiency, demand response, building decarbonization, transportation electrification and other energy management programs.

Local governments have authority over development, land use, permitting, infrastructure, local codes and programs, municipal programs and facilities. Local governments are the first line of defense and the providers of last resort when it comes to disaster preparedness and emergency response.<sup>1</sup>

## Introduction

LGSEC commends California Public Utilities Commission (CPUC) staff for working to achieve the State's climate goals by helping to orchestrate an orderly and equitable retreat from fossil gas. While the *Administrative Law Judges' Ruling Seeking Responses to Specific Questions in Intervenor Testimony* identifies a series of complex issues for stakeholders to grapple with, LGSEC believes that a central challenge is how to ensure that decarbonization is realized without further damaging disadvantaged and vulnerable communities (DVCs).

In many cases it will be difficult and expensive to electrify individual homes and entire communities. Absent thoughtful action, it is quite likely that many families and geographies will be left behind, tied to gas for the foreseeable future, while other households more rapidly electrify. The CPUC will need to adopt a staged plan that reflects readily available cost-effective decarbonization, infrastructure subsidies for DVCs to electrify where appropriate, and a more comprehensive

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<sup>1</sup> LGSEC 2023-2023 Policy Platform. <https://lgsec.org/wp-content/uploads/2022/04/LGSEC-2022-2023-Policy-Platform.pdf>

electrification approach that includes smart-enabled distributed energy resources (DER) or microgrid deployment that benefits the grid, environment, economy and/or society. Even then, LGSEC cautions that there will likely be islands of gas dependency for extended time periods, an outcome that must be carefully managed so as to not saddle those last in line with onerous costs.

As indicated in a recent peer-reviewed article in *Sustainable Cities and Society*,

If we are truly serious about creating a more equitable energy system, one which improves the quality and reliability of energy services accessible within DVCs while simultaneously reducing the financial burdens and pollutant exposures that must be endured - we need to look beyond market-based solutions alone. Rather, it may in fact be necessary to additionally undertake more direct, redistributive investments within these communities. If we rightly acknowledge that the residents of DVCs have been disproportionately burdened by the historical development and operations of the energy system, then we must similarly accept that this harm can only be undone by disproportionate future investments. These investments must be used both to accelerate the adoption of new [distributed energy resources] DER technologies and the electrification of existing gas end-use appliances with DVC homes as well as to accelerate the decommissioning of the fossil [electrical generation units] EGUs which negatively impact the health of their residents and the condition of their local environment.”<sup>2</sup>

The CPUC staff’s ambitious proposal must be accompanied by coordinated deployment of state assets to ensure that our most vulnerable residents have access to the necessary resources to decarbonize. The CPUC should exercise its authority to “better the lives of all Californians through our recognized leadership in innovative communications, energy, transportation, and water policies and regulation.”<sup>3</sup> Innovation is especially needed to enable non-investor-owned utility (IOU) program administrators (PA) to serve vulnerable communities in ways that have historically been constrained by regulatory interpretations. Non-IOU PAs should be charged with providing DVCs with a head start in a decarbonized energy transition, by offering market support and equity programs that incorporate

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<sup>2</sup> Fournier, E. D., Federico, F., Cudd, R., Pincetl, S., Ricklefs, A., Costa, M., Jerrett, M., & Garcia-Gonzales, D. (2022). Net GHG emissions and air quality outcomes from different residential building electrification pathways within a California disadvantaged community. *Sustainable Cities and Society*, 86, 104128. <https://doi.org/10.1016/j.scs.2022.104128>

<sup>3</sup> <https://www.cpuc.ca.gov/about-cpuc/cpuc-overview/about-us>

Integrated Demand-Side Management (IDSM) options, reflecting coordination across multiple state agency programs, with dedicated analysis and swift action.

## **Staff Proposal Questions**

*1. Are there additional criteria that should be taken into account in the staff proposal?*

Put simply, we need a plan. LGSEC suggests that the CPUC assign an Evaluation, Measurement and Verification (EM&V) contractor to conduct an analysis in parallel with the *Potential and Goals Study* to quantify the magnitude of investment needed to transition DVCs to a decarbonized future, and identify characteristics that will make it especially difficult for some geographies to do so. Such a study should start by evaluating deferred maintenance and technical potential for electrification and smart-enabled DER within geographically and socioeconomically constrained communities. The study would then identify least-cost, beneficial program interventions to address necessary upgrades that may not meet total system benefit (TSB) or total resource cost (TRC) thresholds in resource acquisition programs. To the extent possible, residential measures to install heat pumps for space and water conditioning should be analyzed and cost-loaded to understand the financial resources needed to overcome DVC income constraints.

Bill impacts associated with electrification should be considered in the context of different service regimes, including smart-enable DER deployment and full or partial reliance on grid power. That is, the study should consider available DER options strategically deployed alongside electrification as a means to minimize adverse energy bill impacts, identifying the public and private investment necessary to ensure equitable, economically sound, and resilient outcomes. For example, as demonstrated by recent California Independent System Operator (CAISO) stage 1, 2, and 3 emergencies, provision of grid-shaping smart inverters alongside DER can bolster resiliency.

Findings from this inquiry could inform the High DER and rate reform proceedings.

Tight collaboration between (and within) the CPUC, California Energy Commission (CEC), and the California Air Resources Board (CARB) is essential.<sup>4</sup> For example, in CARB’s 2022 Scoping Plan “alternative scenarios” propose buy-back programs to replace gas appliances before their end of life; execution of this strategy would require electrification investments. Additionally, Governor Gavin Newsom’s letter<sup>5</sup> to CARB Commissioner Liane Randolph urged development of three million climate-friendly homes as part of a \$54 billion investment away from fossil fuels. A logical sequencing of similar expenditures is needed across residential and non-residential buildings, starting with the most vulnerable populations who lack income and access to programs to offset site-level infrastructure costs, which are typically prohibited from resource acquisition programs.

*a. Does the California Public Utilities Code, including Section 890(d), and prior Commission policy, including Decision 11-10-014, allow gas utility ratepayer funds to be used for electric energy efficiency programs?*

Section 890, Subdivision (d) references natural gas-related programs, which are referred back to Subdivision (a). This subdivision references CA Pub Util Code § 739.1 (2021), which focuses on low-income customers, with language open to further CPUC regulation. LGSEC recommends that CARE programs reflect the marginal costs of electrification as proposed in the Clean Energy Financing (CEF) proceeding.<sup>6</sup> Pending approval of LGSEC’s Decarbonization Incentive Rate<sup>7</sup> in that docket, the CPUC should consider updating CARE to ensure that increased energy burdens are neutralized to reflect a regulatorily-determined need level.

Furthermore, CA Pub Util Code § 2790(e) (2021) states that,

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<sup>4</sup> [ww2.arb.ca.gov/sites/default/files/2022-05/2022-draft-sp.pdf](http://ww2.arb.ca.gov/sites/default/files/2022-05/2022-draft-sp.pdf). p44-46

<sup>5</sup> <https://www.gov.ca.gov/wp-content/uploads/2022/07/07.22.2022-Governors-Letter-to-CARB.pdf?emrc=1054d6>

<sup>6</sup> R.20-08-022

<sup>7</sup> <https://docs.cpuc.ca.gov/PublishedDocs/Efile/G000/M486/K437/486437916.PDF>

... energy management technology may include a product, service, or software that allows a customer to better understand and manage electricity or gas use in the customer's home.

In this context, LGSEC recommends that use of smart electrical panels be interpreted as an eligible measure for qualifying low-income customers in need of such upgrades. The incremental costs of viable electric alternatives that contain "energy management technology" may also be considered under this definition. For example, appliances that meet, but do not exceed, code per various efficacy standards have the potential to operate beyond code when used in a 'smart' mode (e.g., standards such as CTA 2045<sup>8</sup>, IEEE2030.5<sup>9</sup> which squarely meet the definition of energy management), and therefore may be inclusive of CA Pub Util Code § 2790(e) (2021).

*b. Public Utilities Code Section 454.56(d) provides that if gas energy efficiency targets "pose potential adverse impacts to public health and safety," the Commission is not required to double gas efficiency savings as required in Public Resources Code Section 25310(c). Reports, including California Air Resources Board's (CARB) 2020 Resolution 20-32, discuss the detrimental public health effects of natural gas appliances. What other information should be taken into account in supporting the claim that there are adverse public health impacts from natural gas appliances?*

LGSEC points to the American Medical Association House of Delegates Resolution 439,

... noting the increases in nitrogen oxides in household air due to the use of gas stoves are well documented as is increased asthma among children living in the home. It was also noted that

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<sup>8</sup> ANSI/CTA-2045 specifies a modular communications interface (MCI) to facilitate communications with residential devices for applications such as energy management. The MCI provides a standard interface for energy management signals and messages to reach devices.[https://standards.cta.tech/apps/group\\_public/project/details.php?project\\_id=192#:~:text=features%20and%20functions.-,ANSI%2FCTA%2D2045%20specifies%20a%20modular%20communications%20interface%20\(MCI,and%20messages%20to%20reach%20devices.](https://standards.cta.tech/apps/group_public/project/details.php?project_id=192#:~:text=features%20and%20functions.-,ANSI%2FCTA%2D2045%20specifies%20a%20modular%20communications%20interface%20(MCI,and%20messages%20to%20reach%20devices.)

<sup>9</sup> IEEE 2030.5 is a standard for communications between the smart grid and consumers. The standard is built using Internet of Things (IoT) concepts and gives consumers a variety of means to manage their energy usage and generation. Information exchanged using the standard includes pricing, demand response, and energy usage, enabling the integration of devices such as smart thermostats, meters, plug-in electric vehicles, smart inverters, and smart appliances.  
<https://smartgrid.ieee.org/resources/webinars/non-bulk-generation/ieee-2030-5-smart-energy-profile-2-0-an-overview-and-applicability-to-distributed-energy-resources-der>

asthma disproportionately burdens communities of color and economically disadvantaged populations.<sup>10</sup>

The resolution<sup>11</sup> has twenty additional references on the topic that could be beneficially taken into account in this proceeding.

A 2020 report by Seals and Krasner<sup>12</sup> concludes that “[o]ver 40 years of evidence indicates that gas stoves, common in kitchens across the United States, can lead to unhealthy levels of indoor air pollution.” The report further explains that:

- “Indoor pollution from gas stoves can reach levels that would be illegal outdoors,
- There are well-documented risks to respiratory health from gas stove pollution,
- Children are particularly at risk of respiratory illnesses associated with gas stove pollution, and
- Lower-income households may be at higher risk of gas stove pollution exposure.”

In addition to indoor air quality impacts, gas combustion in buildings is responsible for substantial emissions of NO<sub>x</sub> and other toxic air pollutants that degrade ambient air quality. Per the CARB 2022 Scoping Plan, Appendix F<sup>13</sup>,

Combustion of natural gas in residential and commercial buildings in California is projected to contribute to 66.3 tons of NO<sub>x</sub> per day in 2022, about four times the emissions from power plants and nearly two-thirds those from petroleum-fueled light-duty vehicles<sup>14</sup>. In addition, natural gas burned in residential and commercial buildings is projected to contribute to 55.1 and 7.7 tons of CO and PM<sub>2.5</sub> per day in 2022, respectively<sup>15</sup>.

*2. How should “viable electric alternative” be defined?*

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<sup>10</sup> <https://www.ama-assn.org/system/files/a22-refcmte-d-report-annotated.pdf>

<sup>11</sup> <https://www.ama-assn.org/system/files/a22-439.pdf>

<sup>12</sup> Brady Seals and Andee Krasner, Health Effects from Gas Stove Pollution, Rocky Mountain Institute, Physicians for Social Responsibility, Mothers Out Front, and Sierra Club, 2020, <https://rmi.org/insight/gasstoves-pollution-health>.

<sup>13</sup> <https://ww2.arb.ca.gov/resources/documents/2022-scoping-plan-documents>

<sup>14</sup> CARB. 2022. CARB Criteria Emission Inventory CEPAM 2022 v1.01 - Standard Emission Tool. Available at: <https://www.arb.ca.gov/app/emsinv/fcemssumcat/fcemssumcat2016.php>.

<sup>15</sup> Ibid.

Consistent with the CPUC's Potential and Goals study framework, viable electric alternatives should encompass all technical potential associated with measure level interventions for end-uses involving gas consumption. However, it would be short sighted to limit measures to those that meet TSB, TRC, or cost-effectiveness test (CET) thresholds. The CPUC should consider the interactive benefits of electrification measures combined with on-site renewable generation and storage as part of a viability assessment.

Electrification deployed alongside DERs has the potential to reduce circuit level load demands, and more importantly, lower annual energy bill burdens to customers. The value of resiliency, as discussed in the microgrid proceeding,<sup>16</sup> also contributes to the viability of electrification.

The CPUC should also consider viability in the context of survivability: the ability of a customer to live in extreme heat conditions without adequate heating or cooling. The CEC and Strategic Growth Council oversee the Cal-Adapt platform<sup>17</sup> which contains climate change data in 30 year planning horizons. Use of such a tool would help identify geographies that may soon require heating or cooling that currently are mild in temperature, as well as communities that risk extreme heat-related deaths if not afforded the opportunity to adequately *add* heat pumps to survive emerging climate characteristics.

*a. How should infrastructure costs, such as electric panel upgrades, be included in determining what constitutes a viable electric alternative?*

Given increasing demand for electrical panel upgrades, and the likelihood that customers are unaware of available allowances, the CPUC should examine Rule 16 allowance levels, presently set at \$2,154, and conveyance methods, particularly for DVCs. *Service Upgrades for Electrification*

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<sup>16</sup> R.19-09-009: Order Instituting Rulemaking Regarding Microgrids Pursuant to Senate Bill 1339 and Resiliency Strategies.

<sup>17</sup> <https://cal-adapt.org/tools/local-climate-change-snapshot>



*Retrofits*<sup>18, 19</sup> found that typical infrastructure costs range between \$3,000 and \$30,000.<sup>20, 21</sup> It is unreasonable to saddle ratepayers with authorized returns on equity associated with electric panel upgrades. Market support and equity programs would be better served by regional energy networks (RENs) through Energy Savings Assistance (ESA) programs.

A secondary component of infrastructure costs involves supply-side constraints, particularly on four kilovolt (kV) and distribution level secondary line segments. As a University of California, Berkeley Study<sup>22</sup> found, there is a high correlation between grid constraints and DVCs. The technological potential for smart, grid-forming, inverters has generally been omitted as a strategy to increase hosting capacity and avoid grid violations in DER proceedings. A reality identified by this study is as follows:

Disadvantaged communities, as identified by the CalEnviroScreen sensitive and linguistically isolated population indicators, also experience inequitable circuit capacity for PV deployment. Some of the starkest trends occur for the population indicators: median generation hosting capacity decreases with sensitive populations above the 50–60th (for PG&E) and 30–50th (for SCE) percentiles, and decreases with linguistic isolation above the 20th (for PG&E) and 40th (for SCE) percentiles. The most disadvantaged populations in the state therefore face systematically lower circuit hosting capacity for PV. Opportunities for future DER deployment, especially of technologies that can shift electricity consumption patterns, such as solar plus storage, may be particularly salient for these communities, which tend to bear disproportionate local pollution impacts from California’s natural gas peaker plants.... Grid capacity may also limit the amount of new load that can be added to residential distribution circuits through electrification programmes, EV adoption or increased air-conditioning demands. In PG&E’s territory, 39% of households lack access to even the least power-intensive new loads (space and water heating or level 1 EV charging), while 64% lack access to level 2 EV charging. Household access results are sensitive to the size capacity of the DERs deployed per household and, for generation, to whether OpFlex constraints are enforced.<sup>23</sup>

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<sup>18</sup> NV5 Inc.. Service Upgrades for Electrification Retrofits Study Final Report May 27, 2022. CALMAC STUDY ID: PG&E0467.01. <https://pda.energydataweb.com/api/view/2635/Service%20Upgrades%20for%20Electrification%20Retrofits%20Study%20FINAL.pdf>

<sup>19</sup> Ibid p 5

<sup>20</sup> Ibid p 6

<sup>21</sup> A.21-12-009

<sup>22</sup> Brockway, Anna M;Conde, Jennifer;Callaway, Duncan. Inequitable access to distributed energy resources due to grid infrastructure limits in California. 2021. <https://escholarship.org/uc/item/6pc2k2tv>

<sup>23</sup> Ibid p.8-9

Given the need for DVC electrification, bill affordability, and capital cost minimization, LGSEC urges the CPUC to consider the following catalytic steps:

- Increase Rule 15 and 16 infrastructure allowances.
- Address grid constraints in DVCs, principally through DER-based strategies.
- Distribute funding to enable DVCs to adopt DERs as a primary tool of electrification, including adequately funding solar+storage.
- Accelerate use of distributed energy management systems (DERMS) platforms to communicate with smart inverters.

*b. What would be the fastest and most accurate way to gather accurate data on infrastructure costs for electrification measures statewide?*

LGSEC points the CPUC to the previously referenced *Retrofits*<sup>24</sup> study. Additionally, LGSEC recommends coordination and incremental funding as needed in response to party comments to CARB’s *Equitable Electrification of Existing Buildings: A Pathway to Decarbonization*<sup>25</sup> a collaboration between the Air Board and the University of California, Los Angeles. This project will, among other tasks, apply a data-driven approach to understanding the scale of challenges associated with electrical service panel upgrades to support full electrification retrofits in existing buildings. Leveraging this effort would be an expeditious way to gather necessary statewide data.

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<sup>24</sup> NV5 Inc.. Service Upgrades for Electrification Retrofits Study Final Report May 27, 2022. CALMAC STUDY ID: PG&E0467.01.  
<https://pda.energydataweb.com/api/view/2635/Service%20Upgrades%20for%20Electrification%20Retrofits%20Study%20FINAL.pdf>

<sup>25</sup> CARB Agreement Number 21STC0230.

The Technology and Equipment for Clean Heating (TECH) Initiative is doing a good job capturing data; the Commission should consider reporting data on every rebate or program in a similar fashion.<sup>26</sup>

*3. How should “exempt measures” be defined?*

Exempt measures should generally be defined as interventions where no technical potential currently exists to otherwise electrify. In addition, LGSEC recommends specifying income-qualified exemptions. If a customer meets CPUC defined income-qualifications, an electrification measure requires on-site infrastructure upgrades, and the total cost of installing and operating a publicly subsidized electric appliance is greater than or equal to the subsidized cost of a fossil gas appliance, an exemption may be warranted. This condition would enable DVCs and/or low-income households to choose a practical pathway to ensure basic habitability standards are met. This approach would allow the CPUC to encourage all financial and technical resources to be deployed to provide customers the opportunity to select electrification or efficient gas appliances on equal footing.

*4. Do you agree with the proposed steps and associated timeframes included in the staff proposal? If not, what should the transition timeline away from natural gas energy efficiency incentives be?*

LGSEC suggests that the CPUC strive to understand bass diffusion models<sup>27</sup> at the measure level to establish trackable metrics for each electrification measure. Typically, the diffusion model includes an innovation communicated through a network over time. If the CPUC were to construct such technology adoption models, it may be able to better sync the transition away from certain gas measures to the pace of market adoption. This concept was included in the California Energy Efficiency Coordinating

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<sup>26</sup> <https://techcleanca.com/>

<sup>27</sup> <http://www.bassbasement.org/BassModel/Default.aspx>

Committee (CAEECC) Market Transformation Working Group Framework.<sup>28</sup> These economic models would benefit from including data from the TECH<sup>29</sup> program, as well as information from the *California Heat Pump Market Characterization Baseline Study*.<sup>30</sup>

5. Which assessment metric (total resource cost, total system benefit, others) should be used to assess cost effectiveness in the relevant steps in this proposal in determining the eligibility of gas measures for receiving incentives?

LGSEC anticipates that TRC, TSB, and CET metrics will not reasonably characterize the full costs and benefits needed to meet state goals. With so many building types, unknown infrastructure costs, and unique conditions for each building premise, it is unreasonable to set a single threshold metric for assessment. For this reason, LGSEC recommends that such measures, particularly for DVCs, are aligned with program indicators and metrics associated with market support and equity program portfolios.

6. Do gas appliances serve a market support and/or equity function given the state's goals and progress towards electrification?

Gas appliances generally do not serve a market support or equity function. According to the CEC's most recently published *Residential Appliance Saturation Survey* (RASS), reproduced here in Table 1, gas appliances have high penetration levels across all households where gas service is available.<sup>31</sup>

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<sup>28</sup> CAEECC. MT Recommendations 3.6.19 Final Draft Clean. [https://4930400d-24b5-474c-9a16-0109dd2d06d3.filesusr.com/ugd/849f65\\_a33c12dcf36342ba96f8627ef4b36818.docx?dn=MTWG%20Recommendations%20%203-6-19%20Final%20Draft](https://4930400d-24b5-474c-9a16-0109dd2d06d3.filesusr.com/ugd/849f65_a33c12dcf36342ba96f8627ef4b36818.docx?dn=MTWG%20Recommendations%20%203-6-19%20Final%20Draft) p15-16

<sup>29</sup> <https://energy-solution.com/tech/>

<sup>30</sup> Opinion Dynamics. California Heat Pump Market Characterization and Baseline Study April 4, 2022. <https://pda.energydataweb.com/api/view/2610/OD-CPUC-Heat-Pump-Market-Study-Report-final-4-2022.pdf>

<sup>31</sup> C. Palmgren, M. Goldberg, B. Ramirez, C. Williamson. California Energy Commission 2019 California Residential Appliance Saturation Survey, 2, Results. Tech. Rep, Sacramento, CA (2021)

Table 1. California statewide average gas appliance penetration rates by appliance category (in areas where gas service is available).

<i>Gas Appliance Category</i>	<i>Estimated Penetration Level</i>
<i>Primary Heating</i>	77%
<i>Auxiliary Heating</i>	53%
<i>Water Heating</i>	86%
<i>Clothes Dryer</i>	45%
<i>Range/Oven</i>	75%
<i>Pool Heating</i>	4%
<i>Spa Heating</i>	5%
<i>Miscellaneous</i>	10%

D.21-05-031 defines market support as,

Programs with a primary objective of supporting the long-term success of the energy efficiency market by educating customers, training contractors, building partnerships, or moving **beneficial technologies** towards greater cost-effectiveness.<sup>32</sup>

If the CPUC accepts LGSEC recommendations related to Question 1.b, concerning adverse health and safety impacts, then electrification measures should be considered ‘beneficial technologies.’ Given the high penetration of non-beneficial gas appliances in the RASS report, electrification of those end-uses directly aligns with market transformation activities.

D.21-05-031 defines equity programs as,

Programs with a primary purpose of providing energy efficiency to hard-to-reach or underserved customers and disadvantaged communities in advancement of the Commission’s Environmental and Social Justice (ESJ) Action Plan;<sup>3</sup> Improving access to energy efficiency for ESJ communities, as defined in the ESJ Action Plan, may provide corollary benefits such as increased

<sup>32</sup> D.21-05-031 p14

comfort and safety, improved indoor air quality, and more affordable utility bills, consistent with Goals 1, 2, and 5 in the ESJ Action Plan.<sup>33</sup>

If the CPUC accepts LGSEC recommendations on Questions 1.b, and 2.a regarding inequities of electrification, electrification measures would comport with the definition of equity programs.

*7. What are the other options for uses of the gas incentives that staff proposes to phase out?*

D.21-05-031<sup>34</sup> adopted a new metric, Total System Benefit (TSB). As an ‘apex’ metric, the CPUC states,

.... fortunately, it is possible to capture the full stream of benefits within the estimates already embedded in the calculations currently conducted to determine cost-effectiveness, using the ACC and the CET.... Use of a single, lifecycle TSB metric, expressed annually, will tie the goals for the program administrators directly to the avoided cost value of energy efficiency savings, which should encourage achievement of savings that deliver high value. Another advantage of this single metric is that it is agnostic as to fuel, which facilitates fuel substitution as an option, without the need to convert savings from one fuel to the other.”<sup>35</sup> The TSB affords the CPUC the opportunity to provide guidance as well as evaluation methods for fuel-agnostic interventions, including fuel substitution. Consistent with the 2021 Potential and Goals (P&G) Updated Results Memo on July 21, 2021, the study has updated the assumptions and mechanics to increase the fuel substitution potential.<sup>36</sup>

LGSEC recommends that gas incentives primarily be used for fuel substitution, as indicated in option ‘c’ below. Future P&G studies should reflect anticipated impacts in additional achievable energy efficiency that may result from this ruling.

*a. Decrease gas energy efficiency collections?*

Given that the CPUC is concerned with total system benefits, current gas collections that result in beneficial TSB, or achievement of Environmental and Social Justice Action Plan (ESJAP) goals, are justified. Gas EE funds as currently collected should remain in place as they are already aligned with

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<sup>33</sup> Ibid. p 14-15

<sup>34</sup> <https://docs.cpuc.ca.gov/PublishedDocs/Published/G000/M385/K864/385864616.PDF>

<sup>35</sup> Ibid p.9

<sup>36</sup>2021 PG Study Updated Results Memo\_7\_22\_21 (2021 ACC).pdf <https://file.ac/56AkVk-48hU/>

programs captured by TSB. Gas EE collections will decline over time as electrification occurs, while EE electricity collections should rise. These trends, as modified by Commission decisions, should be captured in subsequent Potential and Goals Studies.

*b. Use for other measures? i. Examples: wildfire-proof soffits, passive solar houses, awnings*

LGSEC encourages parties to propose and create innovative workpapers through CalTF that expand the array of interventions that contribute to resource acquisition, market support, and equity programs.

*c. Provide to gas ratepayers for fuel substitution?*

See answer to Question 7 regarding TSB and fuel substitution. LGSEC strongly encourages fuel substitution as the primary use of gas EE collections.

*d. Use the gas incentives for electric measures? If you recommend this option, explain any legal implications.*

See answer to question 7 regarding TSB and fuel substitution.

*8. What other options should the Commission examine for promoting electrification through the staff proposal, beyond redirecting incentives from gas measures?*

LGSEC recommends that the Market Transformation Administrator<sup>37</sup> accelerate the timelines for ordering paragraphs 8, 9, and 10 to align the Market Transformation Advisory Board (MTAB) launch, budget authorization, and Market Transformation Initiatives (MTIs) with the proposed schedule for an

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<sup>37</sup> D.19-12-021

orderly transition to phase out gas incentives. Failure to align MTA activities, alongside the EE Rolling Portfolios, with a new direction to phase out such incentives may result in a disorderly retreat.

An example of where MTA can support such goals is described in the CEC's Heat Pump and Decarbonization Goals presentation.<sup>38</sup> Only 600,000 residential heat pumps are installed in California; manufacturing capacity constraints indicate that just 104,000 heat pump water heaters were shipped nationwide in 2020. With 14.5 million housing units and 13.1 million households in California<sup>39</sup> it would take 125 years for every home to receive a heat pump water heater at current manufacturing rates, assuming California were the only state to receive these appliances. While this does not account for multifamily buildings where central domestic hot water systems are warranted, the order of magnitude of extant manufacturing capacity indicates the need for substantial market transformation initiatives, including clear market signals, sound data analysis, and well-resourced programs.

An additional recommendation is to weigh the actions resulting from this proceeding alongside the Aug 26, 2022 Ruling,<sup>40</sup> which generally seeks input on how PAs can effectively advance market support and equity programs, perform holistic IDSM activities, and be positioned to act as vehicles for Inflation Reduction Act funds.

Lastly, LGSEC underscores the need for CPUC leadership to coordinate multiple state agencies to adequately resource the unprecedented magnitude of efforts needed to transition away from fossil gas.

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<sup>38</sup> 22-DECARB-01: Heat Pump and Decarbonization Goals. <https://lnks.gd/l/eyJhbGciOiJIUzI1NiJ9.eyJidWxsZXRpb9saW5rX2lkfjoxMDEsInVyaSI6ImJwMjppbGJjayIsImJ1bGxldGluX2lkIjojImJyMjA0MDYyNTYyNDk4MTEiLCJ1cmwiOiJodHRwczovL2VmaWxpbmcuZW5lcmd5LmNlLmdvdi9HZXREb2N1bWVudC5hc3B4P0RvY3VtZW50Q29udGVudElkPTc2MTE5JnRuPTI0MjU4OCZldG1fbWVkaXVtPWVtYWlsJnV0bV9zb3VyY2U9Z292ZGVsaXZlcnkifQ.bCIrTGN79UUCVxov-kX6wVDYvvr1pgXGknrOVB4Wus8/s/2143725106/br/129455378167-l>. Slide 6

<sup>39</sup> <https://www.census.gov/quickfacts/fact/table/CA/RHI725221>

<sup>40</sup> ADMINISTRATIVE LAW JUDGES' RULING SEEKING RESPONSES TO SPECIFIC QUESTIONS IN INTERVENOR TESTIMONY



## 9. Custom Projects

*a. How should the CPUC determine what aspects of custom projects are feasible for electrification? Is it more appropriate to make this determination at a more overarching equipment/process level (i.e., instead of on a case-by-case basis)?*

LGSEC reserves the opportunity to provide reply comments.

*b. What should the difference in incentives between gas and electric custom measures be? Over what duration should that difference be phased in?*

LGSEC reserves the opportunity to provide reply comments.

*c. What more can be done to encourage electrification and decarbonization in custom projects?*

LGSEC reserves the opportunity to provide reply comments.

*10. How does the transition and timeline to phase out energy efficiency gas incentives align with other related proceedings?*

In Question 2, LGSEC recommended pairing solar with electrification to de-risk energy burden in DVCs. In this context the NEM-3 decision should be coordinated to ensure the public and private sectors direct DERs to DVCs as ‘low hanging fruit.’ There needs to be a multi-pronged effort to rectify grid capacity constraints in disproportionately DVC communities,<sup>41</sup> as reflected in Distribution Resource Plans, General Rate Cases, Integrated Resource Plans, as well as the candid acknowledgement that smart, grid forming inverters<sup>42</sup> can increase hosting capacity while minimizing distribution system upgrade costs.

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<sup>41</sup>See LGSEC response to question 2.a

<sup>42</sup> <https://www.cpuc.ca.gov/industries-and-topics/electrical-energy/infrastructure/rule-21-interconnection/smart-inverter-working-group>

*11. How does the transition to phase out energy efficiency gas incentives align with the nine objectives of the CPUC's Environmental and Social Justice Action Plan?*

LGSEC has established that electrification efforts are aligned with the EE Rolling Portfolio definition of Equity program market segmentation. The definition of Equity programs contains references to the CPUC ESJ Action Plan Goals 1, 2, and 5.

Within ESJ Action Plan Goal 2, objective 2.5 specifies prioritization of clean energy investments. Expenditures on non-clean energy conflicts with this objective. Investing in EE through electrification, as well as simultaneously pairing electrification with on-site clean energy generation and storage, is justified by the ESJ Action Plan. PA programs that simultaneously deliver electrification, solar and storage would align with the staff proposal to phase out gas incentives, the NEM-3 proceeding, and the ESJ Action Plan. However, such a combination of efforts would not likely be deliverable by an EE PA, nor would an approach be authorized under current resource acquisition programs. For these reasons, LGSEC recommends that PAs are best positioned to maximize equity and market support programs that meet the criteria above.

If DER pairings are ultimately authorized as a solution to equitable electrification, ESJ Action Plan Goal 4 should also be added to the list of synergies. Climate resiliency, according to the Action Plan, includes vulnerability assessments. Such activities are aligned with LGs' role; LGSEC recommends close collaboration with the public sector to achieve this goal. As part of Goal 4 in the ESJ Action Plan, LGSEC recommends that the CPUC place emphasis on programs that ensure that DVCs are provided with the opportunity to generate on-site energy.

In cases where there is no viable electric alternative, LGSEC recommends that the CPUC examine interventions to reduce or offset fossil gas consumption through gas-related DERs. For example, solar hot water devices would benefit gas customers.

12. How does the transition to phase out energy efficiency gas incentives align with the vision and benefits of the CPUC's Distributed Energy Action Plan? 13. Are there any legal implications of phasing out energy efficiency gas incentives?

LGSEC reserves the opportunity to provide reply comments.

#### *Codes and Standards Questions*

1. Describe how the Codes and Standards Advocacy programs should expand their scope to address additional clean energy goals, such as transportation electrification and decarbonization.

Local governments serve a primary role in permitting and enforcement of the state's codes and standards (C&S). As vehicle to grid, building, and everything (V2X) expands, the potential increases for customers to host on-site DERs that offset grid electrification. Local governments need resources, training, and education to expedite permitting of such activities.

Jurisdictions that wanted to accelerate achievement of clean energy goals have typically created and passed reach codes and building performance standards. These activities have been proposed by RENs; LGSEC supports approval of EE Rolling Portfolio Business Plans that bolster them, as well as increased investments in codes and standards (C&S) programs that help permit streamlining for electrification.

An additional aspect for C&S expansion is for PAs and the CPUC to engage CARB in finalizing and operationalizing the Scoping Plan, which includes alternative scenarios for early retirement of vehicles, appliances, and industrial equipment.<sup>43</sup> A systematic approach to securing California carbon neutrality as early as 2035 requires that CPUC EE PAs shape their programs to align with the final plan.

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<sup>43</sup> <https://ww2.arb.ca.gov/sites/default/files/2022-05/2022-draft-sp.pdf>

*2. Should the non-resource Codes and Standards sub-program budgets increase commensurate with increases in the advocacy budget, or vice versa? Should the non-resource Codes and Standards budgets be limited to a maximum percentage of a program administrator's portfolio budget, or in some other way?*

LGSEC does not recommend limiting funding to a maximum budget percentage for non-IOU PAs. Instead, LGSEC urges the CPUC to evaluate the amount of additional achievable energy efficiency (AAEE) required to meet SB 350 goals<sup>44</sup>, as defined in the EE Potential and Goals Study. The onus should be on IOU PAs to propose portfolios that meet SB 350 goals while balancing the need for C&S activities.

*3. For non-resource Codes and Standards sub-programs, describe what milestones or minimum performance requirements should be met in order to increase or substantiate the proposed budget allocations.*

LGSEC reserves the opportunity to provide reply comments.

Dated: September 23, 2022  
Respectfully submitted,

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<sup>44</sup> <https://www.cpuc.ca.gov/industries-and-topics/natural-gas/implementation-of-sb-350>