BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA

Application of Pacific Gas and Electric Company
Proposing Cost of Service and Rates for Gas
Transmission and Storage Services for the Period

And Related Matter.

Application No. 13-12-012
(Filed December 19, 2013)

Investigation 14-06-016

RESPONSE OF THE SACRAMENTO MUNICIPAL UTILITY DISTRICT
TO THE PETITION FOR MODIFICATION OF DECISION 16-06-056

Joy Mastache
Senior Attorney
Office of General Counsel
Sacramento Municipal Utility District
6301 S Street, Mail Stop A311
Sacramento, CA 95817
(916) 732-5906
Joy.Mastache@smud.org

David Peffer
Braun Blasing Smith Wynne, P.C.
915 L Street, Suite 1480
Sacramento, CA 95814
(916) 326-5812
peffer@braunlegal.com

Attorney for the
Sacramento Municipal Utility District

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RESPONSE OF THE SACRAMENTO MUNICIPAL UTILITY DISTRICT TO THE PETITION FOR MODIFICATION OF DECISION 16-06-056

Pursuant to Rule 16.4 of the California Public Utilities Commission’s (“Commission”) Rules of Practice and Procedure (“Rule”), the Sacramento Municipal Utility District (“SMUD”) respectfully submits this response to the petition for modification of Decision (“D.”) 16-06-056 filed on June 23, 2017 (“Petition”) by the Northern California Generation Coalition (“NCGC”). As set forth below, the Petition fails to provide valid factual support for its positions, fails to establish new facts or changed circumstances that would justify modification of D.16-06-056, constitutes an inappropriate attempt to re-litigate a resolved matter, and is based entirely on a flawed study\(^1\) that should be disregarded as procedurally improper. As such, the Commission should deny the Petition.

I. RESPONSE

The Petition seeks, among other things, to revisit and modify the Gas Transmission and Storage ("GT&S") rate design for electric generation ("EG") customers approved by the Commission in D.16-06-056 (the “Decision”). This rate design, which was approved in accordance with established Commission precedent relating to the allocation of cost between

\(^1\) Petition, Exhibit A, entitled, “Study on the Effect of the August 1, 2016 PG&E Gas Transmission Rate Increase on Electricity Generation in California.”
EG-local transmission ("EG-LT/AOC") and EG backbone ("EG-BB") service is anchored in the principle of cost causation and results from years of Commission precedent and an extensive case record from this instant proceeding (including testimony, petitions, ex parte discussion, etc.). Based on a flawed and erroneous study put forward by NCGC, and included as an attachment to its petition (the "NCGC Study" or "Study"), NCGC claims that:

1. The GT&S rate design approved in D.16-06-056 has caused "many electric generators located within the [California Independent System Operator Corporation ("CAISO")] balancing authority in PG&E’s EG-LT/AOC rate class [to experience] a significant decrease in the amount of time those plants are dispatched."\(^3\)

2. This decreased dispatch has shifted generation from economically efficient, lower emissions facilities in PG&E’s territory to less efficient, higher emissions facilities outside it.\(^4\)

3. The shift to less economically efficient generation is a "new fact" or "changed circumstance" that justifies modification of D.16-06-056. The Decision approved the disputed rates on the assumption that the rates would not impair the economic efficiency of the overall market. The shift has impaired the economic efficiency of the overall market, rendering this assumption incorrect.\(^5\)

4. The shift to higher emissions generation is a "new fact" or "changed circumstance." The record did not address increased statewide greenhouse gas ("GHG") emissions from the

\(^2\) See D.16-06-056 at 320-338 (for discussion of party positions with citations to testimony); SMUD Response to Application for Rehearing at 5 (August 16, 2016)(for discussion of application of cost causation principle); SMUD Reply Comments at 2-3 (May 31, 2016) (for cost causation principle discussion referencing past Commission decisions); See also NCGC Supplemental Comments at 2-3 (June 2, 2016); NCGC Ex Parte Notice at 2-3 (December 14, 2015); NCGC Reply Brief at 19-20 (May 20, 2015) (for examples of past NCGC discussion of issues raised in the petition).

\(^3\) Petition at 2-4.

\(^4\) Id. at 3.

\(^5\) Id. at 4-5.
approved rates.\textsuperscript{6} The shift has caused increased GHG emissions across the state, in violation of the state’s GHG reduction policies.\textsuperscript{7}.

As set forth below, the Commission should deny the Petition, as it is procedurally flawed and based on an inconclusive and overly simplistic study containing significant factual errors and misstatements.

A. **NCGC’s Petition Is Procedurally Flawed And Should Be Denied**

   i. **The Commission Should Disregard NCGC’s Study And The Petition’s Factual Allegations Based On The Study As Inconsistent With Rule 16.4(b)**

   As a threshold matter, the Commission should disregard the NCGC Study on procedural grounds alone. Rule 16.4(b) requires that:

   Any factual allegations [made in a petition for modification] must be supported with specific citations to the record in the proceeding or to matters that may be officially noticed. Allegations of new or changed facts must be supported by an appropriate declaration or affidavit.

   The NCGC Study does not provide valid support for the Petition for modification under Rule 16.4(b). The NCGC Study is not part of this proceeding’s evidentiary record. Additionally, the Study is not officially noticeable. Under Rule 13.9, the Commission may take official notice of matters that are judicially noticeable under California Evidence Code Section 450 et seq. The NCGC Study, however, is not judicially noticeable under these provisions.\textsuperscript{8} In addition, NCGC’s Study is not “an appropriate declaration or affidavit” setting forth allegations

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\textsuperscript{6} Id. at 5.

\textsuperscript{7} Id.

\textsuperscript{8} The Study is not an official government document that would meet any of the Section 452(a-f) criteria, and the Study’s assertions and conclusions are reasonably subject to dispute, and as such do not meet the requirements of Section 452(g), which permits notice of “facts and propositions that are of such common knowledge . . . that they cannot reasonably be the subject of dispute,” and Section 452(h), which permits notice of “facts and propositions that are not reasonably subject to dispute and are capable of immediate and accurate determination by resort to sources of reasonably indisputable accuracy.”
of new or changed facts. Although NCGC did submit a declaration along with its petition that provides a high-level description of some of the Study’s arguments and conclusions, the Study itself is not part of the declaration, and the Study includes factual assertions that are significantly broader in scope and more detailed than the facts attested to in the declaration.

Nothing in Rule 16.4 authorizes parties to base petitions for modification on assertions of new facts or changed circumstances that are not directly attested to in the required declaration, nor does Rule 16.4 authorize parties to use the declaration as a mechanism for incorporating additional, extra-record, non-noticeable materials into the record. Because the Study is not part of the record, is not officially noticeable, and is not a declaration or affidavit, both NCGC’s inclusion of the Study as an attachment and NCGC’s reliance on the Study to support points beyond those directly attested to in the Speer declaration are inconsistent with Rule 16.4(b).

More broadly, the Study provides technical analysis and interpretation of complex issues of fact and policy in support of NCGC’s arguments in this proceeding, and as such is indistinguishable in source, purpose, and substance from testimony in a Commission proceeding. The Commission should not allow NCGC to misuse the petition for modification process by submitting a study that is, for all intents and purposes, a second round of testimony for NCGC. Giving NCGC a second bite at the apple would place all other parties at a significant disadvantage, as parties have not had the opportunity to conduct discovery, submit rebuttal testimony, or cross-examine witnesses with regard to the Study.
ii. The Commission Should Disregard The Speer Declaration’s Discussion of the NCGC Study.

The Speer Declaration’s description of the NCGC Study should be disregarded for similar reasons. Just as it would be unfair for the Commission to modify the Decision based on the Study (which is effectively a second round of testimony) without giving the parties the opportunity to conduct discovery, offer rebuttal testimony, and cross-examine witnesses, it would be equally unfair to modify the Decision based on a description of the Study and its results without giving the parties these opportunities.

iii. NCGC’s Petition Fails To Establish New Facts Or Changed Circumstances That Would Justify Modification Of D.16-06-056

A petition for modification is the procedural vehicle specifically designed to ask the Commission to revise a prior decision.10 As such, it is an extraordinary remedy that must be exercised with care and in keeping with the principles of res judicata, since the petition for modification process “represents a departure from the standard that settled expectations should be allowed to stand undisturbed.”11 Before addressing the merits of a petition for modification, the Commission must determine whether the petition “provides ample support of allegations of new or changed facts.”12

NCGC argues that its request for modification of D.16-06-056 is justified based on “new facts” and “changed circumstances” that have developed in the handful of months since the Commission’s approval of D.16-06-056. Specifically, NCGC claims that the GT&S rate design authorized in D.16-06-056 has caused a decreased dispatch of resources from PG&E’s service territory, which, in turn, has shifted generation from more efficient, lower-emissions generators.

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10 D.17-03-020 at 8.
11 D.16-04-005 at 8, quoting 4 CPUC2d 139, 149-150 (1980).
12 D.14-08-029 at 5.
in PG&E’s service territory to less efficient, higher emissions generators outside it. NCGC argues that the claimed shift to less economically efficient generation is a new fact or changed circumstance because the Commission approved the new rate based on the assumption that the rate would not impact the market’s overall economic efficiency, and NCGC’s “evidence” contradicts this assumption. In addition, NCGC argues that the claimed shift to higher emissions generation is a new fact or changed circumstance because the GHG impacts of the rates were not part of the record for the proceeding.

NCGC’s arguments are not new and do not present or address “new facts” or “changed circumstances.” Rather, these arguments have already been raised by NCGC in the proceeding, were litigated by the parties, were given due consideration by the Commission, and were ultimately unanimously rejected by the Commission (either explicitly or implicitly) in D.16-06-056’s approval of the rates in question. The Petition must be viewed for what it is – an impermissible attempt to re-litigate matters that have already been conclusively resolved by the Commission.

In its Petition, NCGC claims that the Decision’s increased rate for EG-LT customers has reduced dispatch for NP15 gas-fired plants.\(^\text{13}\) However, this issue has already been thoroughly litigated in this proceeding. Repeatedly throughout the multi-year process leading up to the Decision, NCGC argued that an increase in the LT rate would cause LT-connected EGs to be dispatched less.\(^\text{14}\) In D.16-06-056, the Commission addressed and conclusively resolved this issue. The Commission recognized NCGC’s argument that “if EG customers served by the local transmission system are required to pay more than EG customers connected to the backbone system, backbone-level units will be dispatched more often than comparable (or more efficient)

\(^{13}\) Petition at 3.
\(^{14}\) See, e.g., NCGC Supplemental Comments at 5-6 (June 2, 2016); NCGC Ex Parte Notice at 2 (December 14, 2015); NCGC Reply Brief at 19-29 (May 20, 2015).
units on the local transmission system.”15 After review and discussion, and despite NCGC’s arguments regarding expected reduced dispatch, the Commission concluded that the adopted rate structure was just and reasonable.16 The Commission stated that “it is reasonable and appropriate to charge [EG-BB] customers a separate backbone-level transportation rate that does not include the costs of the local transmission system which they do not use.”17 Though PG&E’s increase in revenue requirement was “unprecedented,” it was “necessary to comply with new federal and state safety mandates.”18

Thus, NCGC’s assertion that the rate structure has caused reduced dispatch is not a “new fact” or “changed circumstance.” The Commission has already considered the possibility of reduced dispatch as a consequence of the rate structure, and approved the rate structure despite this possibility. Thus, even if NCGC was able to establish that the rate structure has caused reduced dispatch, D.16-06-056 has already found that fact irrelevant to the reasonableness of the rate structure.

NCGC claims that the rate structure approved in the Decision has impaired the efficiency of the overall electricity market by shifting dispatch from more economically efficient NP-15 gas-fired plants to less economically efficient SP-15 plants.19 This issue too has already been raised and fully litigated in this proceeding. In NCGC’s June 2, 2016 Supplemental Comments and May 25, 2016 Comments on the Proposed Decision, NCGC offered a similar argument, asserting that PG&E’s rate increase would result in adverse impacts on the electricity market.20 In D.16-06-056, the Commission dismissed NCGC’s argument, stating “we are not persuaded

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15 Decision at 323.
16 Id. at 326.
17 Id. at 328.
18 Id. at 31.
19 Petition at 3.
20 NCGC Supplemental Comments at 6 (June 2, 2016); NCGC Comments on the Proposed Decision at 8 (May 25, 2016).
that the current rate design should be changed to protect the ability of certain EG customers to compete. EG rates are not the sole gas transportation cost incurred by EG plants.”21 The Commission explicitly rejected NCGC’s overly simplistic characterization of the impact of gas transportation costs on electricity market conditions, stating that “the drivers of competition in electricity markets are complex and reflect multiple factors in addition to gas transportation rate levels”22 and that “gas-fired EG plants do not compete solely on the basis of the efficiency with which they produce electricity.”23 There are many other sources of revenue that impact competitiveness. As an example, Dynegy received $6.6 million from the CAISO in late 2014 to be available as a capacity resource to support grid reliability for 60 days.24 In the Decision, the Commission highlighted the effect of these payments “on individual plant economics and competitiveness,” finding NCGC had “failed to account for such complexities in asserting that transmission rate differentials create impediments to their ability to compete.”25

The Petition re-raises this argument without addressing the Commission’s grounds for rejecting it. As discussed below, the NCGC Study relies on a similarly overly-simplistic characterization of market conditions that fails to take into account the complex and numerous factors that drive the electricity market. Worse, even a cursory study of the facts and circumstances occurring around the timeframe of the Study shows that it is misleading. The shift in dispatch could very easily (perhaps even more so) be explained by the other changes that the market was and is still undergoing, among them, unprecedented shifts in the electric energy market toward renewable resources, a doubling of hydro-electric generation from 2015 to 2016, and the expansion of regional markets such as EIM. In addition, NCGC’s restatement of this

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21 Decision at 330.
22 Id. at 330-331 (referencing SMUD).
23 Id. at 332-333.
24 Id. at 325.
25 Id. at 330-331.
flawed argument does not establish that the rates in question have reduced the efficiency of the overall electricity market. As such, the NCGC has failed to provide adequate grounds for revisiting the Commission’s approval of the rates.

Based on the NCGC Study, the Petition asserts that the new rates have caused a shift in dispatch to higher-GHG emissions plants, impacting the state’s GHG emissions. NCGC characterizes this assertion as a “new fact” or “changed circumstance” that justifies modification of D.16-06-056. NCGC claims that GHG emissions were not addressed in the proceeding’s record, and that NCGC’s “evidence” of increased emissions justifies modification of the Decision in order to bring the Decision into compliance with the State’s GHG-reduction policies.26 This assertion, however, is not new. NCGC raised its GHG-emissions argument in the record ahead of the Decision in its opening brief27 and comments on the proposed decision,28 as well as following the Decision in its Application for Rehearing.29 These claims were challenged – SMUD and Calpine addressed and rebutted these claims in Ex Parte meetings leading up to the Decision.30 Although the Commission did not directly address these claims in the Decision, and declined to act on NCGC’s Application for Rehearing,31 the Decision did explicitly recognize that the State of California has compliance instruments in place to account for these very emissions.32

26 Petition at 2-3.
27 NCGC Opening Brief at 32, fn. 156 (citing PG&E-133, NCGC Response Q4).
28 See, e.g., NCGC Comments on the Proposed Decision at 8 (citing NCGC Response Q4); NCGC Notice of Ex Parte Communication at 2 (December 14, 2015).
30 See, e.g., SMUD Ex Parte at 2-3 (March 25, 2016); Calpine Ex Parte Attachment at 20 (March 17, 2016) (for discussion concerning NCGC greenhouse gas claims).
31 NCGC App. at 4.
32 Decision at 219 (discussing GHG compliance instrument costs).
Given the fact that NCGC’s GHG argument has already been raised in this proceeding on multiple occasions, and the fact that the Commission approved the rates despite this argument having been raised on the record, NCGC’s GHG argument cannot reasonably be characterized as a “new fact” or “changed circumstance.”

The Commission should not allow NCGC to re-litigate these matters through its petition for modification, nor should the Commission accept NCGC’s attempt to characterize its re-hash of rejected assertions and arguments as “new facts” or “changed circumstances.”

B. NCGC’s Petition Does Not Provide An Adequate Factual Basis For Modification Of D.16-06-056

   i. NCGC’s Petition Is Based On A Methodologically Flawed Study

   NCGC’s petition is based entirely on a Study that is not only procedurally improper, but also methodologically flawed. The Study’s claim that the rate increase caused a shift in dispatch from more economically efficient, lower emissions NP15 facilities to less economically efficient, higher emissions SP15 facilities is based on two approaches: 1) a “Historical Survey” that compared plant utilization from before the rate increase (the period August 1, 2015 through December 31, 2015) with plant utilization after the rate increase (August 1, 2016 through December 31, 2016); and 2) a “What-If Analysis” that compares the actual post-increase generation profile with NCGC’s “estimate” of what the generation profile would look like had the rate increase not been approved. Both of these approaches have serious methodological flaws.

   The NCGC Study’s “Historical Survey” is based on a comparison of capacity factors for a selection of gas-fired plants for the period August 1 through December 1, 2015 against the capacity factors for these plants for August 1 through December 1, 2016. It is clear that the “Historical Survey” has only presented a limited historical data sampling that supports NCGC’s
request and it is therefore quite misleading. A simple comparative analysis of Energy Information Administration (“EIA”) generation data on the Lodi Energy Center (“LEC”) operations for the periods January 1, 2015 through July, 2015 and January 1, 2016 through July, 2016 shows that most of the reduction in the LES capacity factor between 2015 and 2016 happened before the revised PG&E EG rates went into effect on August 1, 2016. Therefore, the inference by NCGC that this drop in the LEC capacity factor was caused by the new gas transportation rate is, at best, a gross exaggeration. Certainly any conclusions drawn from the so-called “historical survey” are nearly meaningless.

The selective and narrow window used in the Study also demonstrates that any estimates of a generation profile had the rate increase not been approved (i.e., the “What-If-Analysis”) is clearly erroneous. In fact, this problem is even more egregious in the case of the What-If Analysis, which attempts to project what the generation mix and GHG emissions would be if under the unrealistic scenario in which the rate increase had not been approved. As discussed in detail below, this analysis has a number of fatal methodological flaws, including the use of a clearly inadequate sample of only five days, and the use of a limited data set of plants, among others.

The NCGC Study is a gross oversimplification of a complex energy market in which many factors other than relative gas prices determine market generation dispatch. The NCGC Study is therefore both flawed and misleading, as it omits critical contextual data showing that the significant downward trajectory with respect to the LEC (and other gas-plant) capacity factors had started well in advance of the rate increase.

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33 Attachment A to this reply is SMUD’s analysis of EIA data by month for 2015 and 2016. It shows that the capacity factor for LES from January 1, 2015 through July 31, 2015 was 71.62%, and for January 1, 2016 through July 31, 2016 was 27.44%. Clearly, much of the 2015 to 2016 capacity factor drop that LES has indicated in their analysis had already occurred prior to the new PG&E EG rates going into effect August 1, 2016.
More broadly, the Study, tainted by these serious methodological flaws, cannot be accepted as an objective assessment of the Decision’s market impacts. Indeed, the NCGC Study evidences serious bias problems: the Study was commissioned by a NCGC member,\(^{34}\) selectively uses and excludes data in order to support NCGC’s position, and relies on such a narrow selection of dates and data so as to render any conclusions meaningless. And, as described in detail below, the concerns raised by NCGC can be explained by other market factors far more significant than changes in gas transportation costs – factors which were not adequately accounted for in the Study methodology.

ii. NCGC Has Not Established That The Rate Increase Caused The Decreased Dispatch

NCGC argues that the rate changes approved in D.16-06-056 are the primary cause of the reduced dispatch of gas-fired generation located in NP15, and, by extension, the GHG emissions and market efficiency consequences that NCGC asserts have resulted from the reduced dispatch. NCGC’s argument for modification hinges on this causal link - if the new rates aren’t the primary cause of the reduced dispatch, then NCGC’s core arguments (and asserted new facts or changed circumstances) do not provide a valid basis for modifying the Decision: if NCGC’s claims of increased GHG emissions and reduced market efficiency are not caused by the rates adopted in the Decision; these issues won’t be remedied by modifying the Decision.

NCGC has failed to establish a causal link between the rate changes approved in D.16-06-056 and the reduced dispatch of gas-fired generation located in NP15. NCGC bases its position on the NCGC Study’s Historical Comparison, which points to publicly available data indicating that, comparing the period August 1, 2015 through December 31, 2015 with the period August 1, 2016 through December 31, 2016, generation located in NP15 has seen a general

\(^{34}\) See Speer Declaration at 2-3.
reduction in dispatch, while generation in SP15 has generally had an increase in utilization. NCGC’s attempt to imply a causal relationship between the rate increase and the reduced dispatch is fatally flawed. As pointed out above, the Study fails to explain the substantial reduction in LES capacity factor that occurred between 2015 and 2016, prior to the adjusted EG rates going into effect. In addition, the NCGC Study fails to account for a number of factors that impacted generator dispatch during the periods in question.

First, the Study fails to account for the impact of significantly increased renewable generation. Both NP15 and SP15 continue to see growth in the amount of renewable generation installed in their respective regions. The change was particularly stark in the 2015 to 2016 time-period (the same year-over-year comparison used in the NCGC Study). For example, the CAISO Department of Market Monitoring (“DMM”) 2016 Annual Report, published on May 8, 2017 (“DMM 2016 Annual Report”), states that “[s]olar energy increased by more than 32% compared to 2015.” According to the DMM’s “Q4 2016 Report on Market Issues and Performance,” published on March 6, 2017 (“DMM 2016 Q4 Report”), solar generation alone increased over 1300 MW between Q4 2015 and Q4 2016. Moreover, year-over-year (2015-to-2016) solar set a new peak of 8400 MW and went from a mid-day average of 5600 MW in 2015 to 7600 MW in Q3 2016. As a result of this renewable generation growth, there has been a significant decrease in the utilization/capacity factor of gas-fired generation in both NP15 and SP15. When renewable energy is available, its variable cost is usually zero or very low cost,

38 See Platt’s Gas Daily market analysis entitled, “Calif. Capacity Factors May Indicate Retirement Risk,” Monday, November 28, 2016 at 4-5 (“Platt’s”). According to Platt’s analysis (with respect to the 2016 market trend regarding gas-fired generation): “Renewables output continue to grow, exacerbating the ‘duck’ curve – which signifies the drop in mid-day net load associated with solar generation and evening load ramp as the sun goes down – threatening the economics of natural gas-fired capacity important to reliability.” Id. at 5. Elsewhere the analysis observes:
whereas gas-fired generation has to buy the gas and transport the gas, making it difficult to compete against renewable generation on a cost of energy basis.

Second, the Study fails to account for the difference in hydro conditions in NP15 and SP15 and resulting hydro generation output between the periods in question. In 2015, California was still in drought conditions and the hydro-generation resources produced much less energy during the August 1, 2015 to December 31, 2015 period as a result. In 2016, water conditions changed with substantially more snowpack and precipitation in northern California relative to 2015, resulting in much more hydro generation in NP15 in 2016, displacing gas-fired generation in NP15. While SP15 has much less hydro-generation than NP15, it further had much less precipitation than NP15 in 2016, largely remaining in drought conditions. The displacement of gas-fired generation by hydro in NP15 in the 2016 period was based upon weather conditions, not the PG&E EG-AOC/LT rate. This, in fact, is fully supported by DMM data. In the DMM 2016 Annual Report, it states that “[t]otal hydro-electric production in 2016 more than doubled from the prior year . . . .” 39 Thus, while NCGC paints a picture that gas prices alone decreased NP15 gas-fired generation, the abundance of hydro-electric generation, the majority of which resides in NP15, as well as the significant increases in renewable penetration discussed below, were likely the largest contributors to the decline.

With growing renewables output continuing to weigh on mid-day net load, gas capacity factors remain under scrutiny as the California Independent System Operator has proposed this metric for early retirement risk in its ongoing 2016-2017 transmission planning process. [T]he median capacity factor for natural gas-fired plants in Cal-ISO that have submitted operating data to the Energy Information Administration for January [2016] through August [2016] is currently just 20% -- about four percentage points below the prior 10-year average. Id. at 4.

Similar to our own conclusions’ through the review relevant EIA data, Platt’s also confirms that the gas capacity factors for LEC dropped precipitously before the gas price increases had been assimilated by the market (from 52.7% in 2015 to 19.1% during the 2016 reporting period of January through August). Id

Third, the Study fails to account for increased dispatch of generation resources outside of California to meet California load as a result of the Western Energy Imbalance Market. The CAISO’s Energy Imbalance Market (“EIM”) is a real-time bulk power trading market, the first of its kind in the western United States. The EIM’s market systems automatically find the lowest-cost energy to serve real-time customer demand across a wide geographic area (i.e., the multiple balancing authority areas participating as EIM Entities). EIM has therefore increased the supply of power in real time by providing access to this broader, multi-balancing authority area footprint. This can result in the potential displacement of LEC and other NP15 and SP15 gas-fired generation, from time to time. Of note, significant new entrants joined EIM late in 2015 and in 2016. On December 1, 2015, Nevada Energy joined EIM, followed by Arizona Public Service Corporation (“APS”) and Puget Sound Energy in October of 2016. APS is a large player in the EIM market and is a “net exporter” of energy from its system into the CAISO.40 Thus, EIM is adding one additional layer of complexity to the competitive energy market by broadening the footprint of available resources to serve California load. Again, the NCGC Study uses a time-period which is entirely coincident with this significant expansion of the EIM. Moreover, the expansion of EIM will continue, as the CAISO has announced several additional new participants between 2017 and 2020,41 adding further to the expected changes in the generation dispatches both inside the CAISO as well as within participating EIM Balancing Authorities. While it is not being asserted that EIM has caused this change, it certainly does add another facet to this complex assessment of electricity market drivers and underscores that the NCGC Study is far too simplistic to draw any meaningful conclusions.

40 Id. at 73.
41 See https://www.westerneim.com/Pages/About/default.aspx.
Fourth, the Study fails to account for the impact of congestion. Congestion can occur between CAISO zones and even between nodes within a localized area, resulting in congestion pricing. This can be caused by a number of factors, including insufficient transmission, excess generation in one zone, and generation outages. This congestion pricing can result in the dispatch of less efficient plants located in the zone impacted, and may also explain why some of the less efficient plants cited in the NCGC Study were running while more efficient NP15 plants were not. Indeed, as explained further below, gas prices alone cannot explain some of the dispatches of the extremely high heat rate power plants used to support the NCGC Study.

Each of these factors clearly had a significant impact on the dispatch rate for NP15 plants, and once these factors are properly taken into account, it is not clear that the rate increase had any meaningful causal relationship to the reduced dispatch, much less being its sole or primary cause, as argued by NCGC.

In addition, two of the six SP15 plants NCGC claims to have been dispatched due to the fee increase cannot possibly been dispatched for that reason alone, given their respective heat rates. These units, AES Redondo Beach and AES Alamitos, have heat rates of 15.42 kBtu/kWhr and 12.99 kBtu/kWhr respectively. For AES Alamitos to be dispatched based on gas prices would require the NP15 plants to have nearly 1.85 times the gas cost over those in SP15 (and for Redondo 2.19 times), which was not the case. Thus, while these two SP15 generators are certainly less efficient, their dispatch cannot be solely due to the higher gas costs in NP15 — again evincing the fact that electricity markets are complex and are not usually driven by a single element. We should note also that the other plants only vary slightly in their GHG rates from that of LEC.42

42 See NCGC Study (table) at 8.
iii. NCGC Has Not Established That The Decreased Dispatch Is Causing A Shift to Higher-Emissions Generators, Leading to Higher Statewide GHG Emissions

Based on the NCGC Study’s simplistic “Historical Comparison,” NCGC claims that the LEC generator, as well as other NP15 gas-fired generators, are being displaced by SP15 gas-fired generation with higher heat rates, resulting in increased GHG emissions for California. This claim, and the Historical Comparison that the claim is based on, has several fundamental flaws.

First, NCGC’s claim is contradicted by the fact that, during the NCGC Study period, GHG emissions did not increase for the generation sector as a whole, irrespective of changes in individual gas-fired generators dispatched in NP15 and SP15 during these periods. This is due to the fact that the emissions from the generation sector are capped under the California Cap and Trade program, with all generators needing to procure emission allowances and offsets for all of their emissions. Moreover, given the current trend in state policy, it should be expected that overall GHG emissions will continue to decrease.

Second, NCGC fails to point out that both NP15 and SP15 gas-fired generation experienced drops in their respective capacity factors from 2015 to 2016, including those SP15 units that NCGC cites in its Study.

Third, NCGC’s Historical Comparison fails to account for the fact that LEC and other NP15 gas-fired generators were likely displaced by zero emission hydroelectric and renewable generation as described above.

43 See Health and Safety Code Section 38500 et seq.
44 See Pub. Util. Code Sections 454.52(a)(1)(A) (adopting an IRP procurement planning process, requiring that each load serving entity’s procurement plan meet the GHG emissions standards adopted by the Air Resources Board, in coordination with the Commission and the California Energy Commission, for the electric sector and each load-serving entity, to achieve economy-wide GHG emissions reductions to 40% below 1990 levels by 2030).
45 See Platt’s at 4. Of note, two of the six generators called out in the NCGC Study (p.8), AES Redondo Beach and AES Alamitos both showed decreases in their capacity factors during the January 2016 through August 2016 Energy Information Administration reporting period. Id.
Fourth, NCGC’s Historical Comparison fails to recognize that, even if gas-fired generation in NP15 were to be displaced by gas-fired generation in SP15, Cap and Trade and procurement through the Commission’s Integrated Resource Planning process, which prioritizes low-GHG procurement, ultimately will result in all state GHG emissions from electric utility generation declining over time, which is its primary intent. So, while NCGC’s attempt to characterize the occasional operation of a less efficient SP15 located peaking turbine in favor of a more efficient NP15 located combined cycle power plant as contrary to state GHG policy, that is simply not the case. As we point out, it is unlikely LEC and other NP15 gas-fired generation was displaced by SP15 gas-fired generation simply because of higher gas transportation costs for the NP15 generators. At a minimum, the data produced in the Study is inconclusive.

NCGC also points to the Study’s “What-If Analysis” as evidence of a “shift” in generation from lower-emissions NP15 plants to higher-emissions SP15 plants, resulting in increased overall emissions for California. The What-If Analysis makes the radical claim that the rate increase may have increased California’s GHG emissions by 356,000 to 1,100,000 metric tons per year, or approximately 1% of the electricity sector’s total annual GHG emissions.\(^{46}\) For several reasons, this claim, and the What-If Analysis as a whole, are fundamentally flawed and should be disregarded by the Commission.

First, as discussed above, the Study’s What-If Analysis reaches its broad conclusions by extrapolating from a sample of only five days. Such a small sample size is entirely inadequate to provide a meaningful representation of dispatch and emissions over the time period in question. Even more problematically, neither the Study nor the Speer Declaration indicates how the specific five days used in the Study were selected. Given the extremely small sample size used,

\(^{46}\) NCGC Study at 8.
it would be easy to cherry-pick enough outliers to support NCGC’s position, regardless of how accurate or inaccurate that position is.

Second, the What-If Analysis compares dispatch under the current rate structure to dispatch under a hypothetical scenario *without any increase whatsoever* to PG&E’s EG-LT/AOC rate. This scenario is not a reasonably possible outcome of this proceeding – the costs associated with PG&E’s significant cost recovery for system upgrades were inevitably going to be allocated.

Third, the What-If Analysis is based on data from a limited set of gas-fired plants. Among those plants that were excluded from the Analysis were a number of cogeneration facilities. The exclusion of a large number of plants makes it impossible for the Analysis to provide an accurate picture of overall dispatch and GHG emissions and renders its conclusions invalid.

Fourth, the What-If Analysis fails to account for Cap and Trade. Specifically, the Analysis doesn’t even acknowledge the existence of Cap and Trade, much less explain how its claim of radically increased statewide GHG emissions could occur under a Cap and Trade system specifically designed to prevent such increases.

In light of these significant flaws, the NCGC Study’s What-If Analysis should be disregarded.

iv. NCGC Has Not Established That The Decreased Dispatch Is Causing a Shift To Uneconomic Generators, Impairing Market Efficiency

NCGC claims, based on its Study, that the decreased dispatch represents a shift from more economic generation in NP15 to less economically efficient generation in SP15, and thus impairs the efficiency of the electricity market. This claim is fundamentally flawed and should be rejected. The fact that some NP15 gas-fired plants, including NCGC’s member LEC, have
experienced reduced utilization/capacity factor, while other plants have seen increased
utilization, is not evidence of economically inefficient utilization. To the contrary, shifting
utilization, particularly when there is an ever-increasing pool of lower variable cost resources
such as hydroelectric, wind and solar, in addition to other system conditions (e.g., such as local
and interregional transmission constraints, outages or other factors), is exactly what is expected
in a centralized locational marginal pricing market such as that operated by the CAISO. More
importantly, there have been no market shortages, blackouts, extreme shortage pricing or other
such symptoms that would indicate market dysfunction of the level claimed by NCGC.

II. CONCLUSION

While SMUD certainly understands the stress of higher gas costs and is even
sympathetic, the alleged impacts raised by NCGC are entirely unsupported. Therefore, for the
reasons provided herein, SMUD respectfully urges the Commission to deny the petition for
modification of D.16-06-056.

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Respectfully submitted,

/s/

David Peffer
Braun Blaising Smith Wynne, P.C.
915 L Street, Suite 1480
Sacramento, CA 95814
(916) 326-5813
peffer@braunlegal.com

Attorney for the
Sacramento Municipal Utility District