



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

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Application of San Diego Gas & Electric Company (U902G) and Southern California Gas Company (U904G) for a Certificate of Public Convenience and Necessity for the Pipeline Safety & Reliability Project.

Application 15-09-013  
(Filed September 30, 2015)

**PROTEST OF SIERRA CLUB TO AMENDED APPLICATION**

MATTHEW VESPA  
ALISON SEEL  
Sierra Club  
85 Second St., 2nd Floor  
San Francisco, CA 94105  
Telephone: (415) 977-5753  
Email: [matt.vespa@sierraclub.org](mailto:matt.vespa@sierraclub.org)  
[alison.seel@sierraclub.org](mailto:alison.seel@sierraclub.org)

*Attorneys for Sierra Club*

Dated April 21, 2016

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Application of San Diego Gas & Electric Company (U902G) and Southern California Gas Company (U904G) for a Certificate of Public Convenience and Necessity for the Pipeline Safety & Reliability Project.

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On March 21, 2016, San Diego Gas & Electric and Southern California Gas Company (collectively “SDG&E”) filed the instant amendment to the application for a Certificate of Public Convenience and Necessity (“CPCN”) for the Pipeline and Safety Reliability Project (“Line 3602” or “Proposed Project”). Pursuant to Rule 2.6 of the Commission’s Rules of Practice and Procedure and the January 22, 2016 Joint Assigned Commission and Administrative Law Judge’s Ruling Requiring an Amended Application and Seeking Protests, Responses and Replies (“Amended Application Ruling”), Sierra Club submits this protest to SDG&E’s Amended Application.

**I. INTRODUCTION**

In its Amended Application, SDG&E seeks to substantially increase pipeline capacity at a time when California’s decarbonization trajectory will rapidly reduce reliance on fossil fuels and the demand for natural gas. The Amended Application also comes at a time when SDG&E’s corporate parent, Sempra, has indicated that liquefied natural gas (“LNG”) export presents a significant growth opportunity and that additional pipeline capacity is needed to enable exports from its existing LNG facility just south of San Diego in Baja, Mexico. Reducing fossil fuel reliance at home, only to facilitate its export for combustion abroad, makes a mockery of California’s climate change efforts. In addition to these serious potential environmental consequences, California ratepayers should not foot the bill for costly new fossil fuel infrastructure investments that are, or will soon become, stranded assets, and whose benefits appear primarily intended to flow to Sempra’s unregulated subsidiaries.

Despite the importance of understanding the relationship between a new gas pipeline and accelerated efforts to reduce reliance on fossil fuels, the Amended Application does not assess

demand in light of California’s decarbonization trajectory and does not provide clear information on how much, if any, pipeline capacity would be needed to meet planning criteria should Line 1600 be transitioned to distribution service. Instead, SDG&E’s effort to justify replacing the 16” Line 1600 with the proposed 36” Line 3602 is premised on the mistaken assertion that its gas transmission system requires complete system redundancy. The Commission’s adopted system planning criteria for gas transmission is not system redundancy, but meeting 1-in-35 year demand for core customers and 1-in-10 year demand for noncore customers. As SDG&E admits, its gas transmission system “currently has sufficient capacity to meet the Commission’s standards for core and noncore customers through the 2035/36 operating year.”<sup>1</sup> When accounting for the substantial reduction in gas demand that will occur as a result of increased renewable and efficiency requirements under Senate Bill (“SB”) 350, available capacity will increase further.

Indeed, the Amended Application’s failure to apply the established planning criteria to the need for Line 3602 and account for measures that will reduce reliance on fossil fuels colors the integrity of SDG&E’s entire analysis. For example, by assuming alternative energy options would need to be scaled to provide system redundancy rather than to the incremental level needed to meet system planning criteria, the alternative energy option is made to appear cost prohibitive. Similarly, the Amended Application grossly skews the cost-benefit analysis of pressure testing Line 1600 by assuming the need for full replacement in 20 years, when, by 2040, the need for additional gas transmission is highly unlikely given California’s aggressive greenhouse gas reduction trajectory.

The Commission must reject the Amended Application and order SDG&E to provide information on how much gas would be transported by the new pipeline to meet established planning criteria when properly accounting for SB 350 and related measures that will reduce gas demand. The Commission should also reject SDG&E’s cost-benefit analysis and require alternatives be assessed based on this incremental need. Only with this critical information can the need for the Proposed Project and potential alternative solutions be legitimately assessed.

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<sup>1</sup> Direct Testimony of David M. Bisi (March 21, 2016), p. 10 (“Bisi Testimony”).

## II. BACKGROUND

### A. California's Greenhouse Gas Reduction Commitments

In 2005, former Governor Schwarzenegger issued Executive Order S-03-05, which set a target for California to reduce greenhouse gas emissions to 1990 levels by 2020 and 80 percent below 1990 levels by 2050. At the time it was issued, the Executive Order tracked scientific consensus on the emissions reduction trajectory needed to avoid significant disruption of the climate. The Legislature subsequently enacted AB 32, the California Global Warming Solutions Act, to require the Air Resources Board to develop a plan and take sufficient action for California to meet the 2020 greenhouse gas reduction target. Measures adopted to help meet the target, such as the 33 percent Renewables Portfolio Standard (“RPS”) and increased rooftop solar and energy efficiency, have flattened demand for natural gas, with 0.2 percent annual declines expected for the next 20 years.<sup>2</sup> This projected decline assumes no further action is taken to meet post-2020 emission reduction targets.

With 2020 fast approaching, the state has turned its attention toward meeting the steep and accelerated reductions needed to achieve the Executive Order's 2050 greenhouse gas target. In May 2014, the Air Resources Board released its First Update to the Climate Change Scoping Plan, which found that “[r]educing energy-sector emissions to the near zero over the long-term will require wholesale changes to the State's current electricity and natural gas systems [and] electricity substitutes for fuels currently used for transportation, space heating and industrial processes.”<sup>3</sup> In April 2015, Governor Brown issued Executive Order B-30-15 which set a greenhouse gas reduction target of 40 percent below 1990 levels by 2030.<sup>4</sup> Executive Order B-30-15 also requires all state agencies “to take climate change into account in their planning and investment decisions, and employ full-life cycle cost accounting to evaluate and compare infrastructure investments and alternatives.”<sup>5</sup> In October 2015, Governor Brown signed into law Senate Bill (“SB”) 350, which increased California's RPS to 50% and required a doubling of cumulative statewide energy efficiency savings in electricity and natural gas final end uses by

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<sup>2</sup> 2014 California Gas Report p. 4, <https://www.sdge.com/sites/default/files/documents/2061011959/2014-cgr.pdf?nid=16736>.

<sup>3</sup> ARB, First Update to Climate Change Scoping Plan (May 2014) p. 36,

[http://www.arb.ca.gov/cc/scopingplan/2013\\_update/first\\_update\\_climate\\_change\\_scoping\\_plan.pdf](http://www.arb.ca.gov/cc/scopingplan/2013_update/first_update_climate_change_scoping_plan.pdf).

<sup>4</sup> Exec. Order B-30-15, <https://www.gov.ca.gov/news.php?id=18938>.

<sup>5</sup> *Id.*

2030. While the Amended Application claims the Proposed Project would help California meet its environmental goals by facilitating the switch from petroleum to natural gas for vehicle use, SB 350 identifies “widespread transportation electrification,” not fossil-fuel switching, as the means to achieve California’s aggressive climate goals.<sup>6</sup>

Local governments have also recognized their unique role in reducing greenhouse gas pollution and are leading efforts that are more aggressive than action at the state or national level. For example, in December 2015, the City of San Diego, for which the Proposed Project is primarily intended to serve, adopted a Climate Action Plan that calls for a 100 percent city-wide renewable energy supply by 2035.<sup>7</sup> San Diego’s Climate Action Plan was adopted as CEQA mitigation for greenhouse gas impacts from its General Plan Update and is a legally binding document.

Finally, climate change cannot be successfully addressed without the combined efforts of the international community. In the lead-up to the United Nations Climate Change Conference in Paris in November 2015, Governor Brown issued a “call to arms on climate change,” spearheading a first-of-its-kind agreement among sub-national governments to limit the increase in global warming average temperature to below 2 degrees Celsius (“Under 2 MOU”).<sup>8</sup> The agreement calls for parties to reduce greenhouse gas pollution to 80 to 95 percent below 1990 levels by 2050 and make measurable near-term progress toward reaching this goal.<sup>9</sup>

## **B. Sempra, Its Subsidiaries, and Its Focus on LNG Export**

Sempra Energy is the parent company of two regulated utilities, SDG&E and SoCalGas, and two unregulated arms, Sempra U.S. Gas and Power and Sempra International. Sempra U.S. Gas and Power owns solar, wind, and natural gas energy infrastructure (including pipelines and LNG export terminals) in the U.S. Sempra International, which is organized into two reportable

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<sup>6</sup> Amendment to Application of SDG&E and SoCalGas for a Certificate of Public Convenience and Necessity for the Pipeline Safety and Reliability Project (March 21, 2016), p. 8 (“Amended Application”); SB 350, adding Public Utilities Code § 740.12(a)(1)(D).

<sup>7</sup> City of San Diego, Climate Action Plan (Dec. 2015) p. 35, [https://www.sandiego.gov/sites/default/files/final\\_december\\_2015\\_cap.pdf](https://www.sandiego.gov/sites/default/files/final_december_2015_cap.pdf).

<sup>8</sup> *Governor Brown Issues Call To Arms On Climate Change, Appeals To Other States And Provinces To Join The Fight*, Office of Governor Edmund G. Brown Jr., July 8, 2015, <https://www.gov.ca.gov/news.php?id=19027>; Under 2 MOU, <http://under2mou.org/>.

<sup>9</sup> Global Climate Leadership Memorandum of Understanding (MOU), <http://under2mou.org/wp-content/uploads/2015/04/Under-2-MOU-English.pdf>.

segments, Sempra Mexico and Sempra South American Utilities, develops, owns, and operates energy infrastructure assets in Latin American and owns a controlling interest in IEnova, one of the largest private energy firms in Mexico.<sup>10</sup>

With the dramatic increase in domestic natural gas production from fracking, Sempra views LNG export as a significant growth opportunity. As stated in Sempra's 2014 Annual Report:

New drilling technologies have unlocked abundant supplies of natural gas and oil trapped in shale deposits. In the U.S. alone, there now is enough of a surplus to enable the country to become a net exporter of natural gas over the next decade. We are taking advantage of these export opportunities through our LNG business.<sup>11</sup>

Sempra Mexico owns the Energía Costa Azul LNG terminal approximately 35 miles south of San Diego in Baja, Mexico.<sup>12</sup> The Costa Azul terminal was designed for imports and is currently the only LNG terminal on the West Coast. In Sempra's 2014 Annual Report, Sempra indicated it was "evaluating the economics of converting our Energía Costa Azul LNG terminal into an export facility."<sup>13</sup> As part of a slide presentation for a March 27, 2014 Analyst Conference, Sempra Energy observed that converting Costa Azul to an export facility would provide a "first mover advantage on West Coast of North America" and a "location/shipping cost advantage for Asia" but would require "additional pipeline capacity."<sup>14</sup>

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<sup>10</sup> Sempra Energy, 2015 Annual Report p. 4, [http://www.sempra.com/pdf/financial-reports/2015\\_annualreport.pdf](http://www.sempra.com/pdf/financial-reports/2015_annualreport.pdf).

<sup>11</sup> Sempra Energy, 2014 Annual Report p. 1, [http://www.sempra.com/pdf/financial-reports/2014\\_AnnualReport\\_SRE.pdf](http://www.sempra.com/pdf/financial-reports/2014_AnnualReport_SRE.pdf).

<sup>12</sup> Sempra Energy, 2015 Annual Report p. 5.

<sup>13</sup> Sempra Energy, 2014 Annual Report p. 2.

<sup>14</sup> Sempra Energy, 2014 Analyst Conference, Mar. 24, 2014, Mark Snell, President, Sempra Energy, LNG Operations, Slide 13.

## Energía Costa Azul Liquefaction

### Benefits

- Brownfield project with first mover advantage on West Coast of North America
- Locational / shipping cost advantage for Asia
- Strong local presence with experience building large infrastructure projects

### Considerations

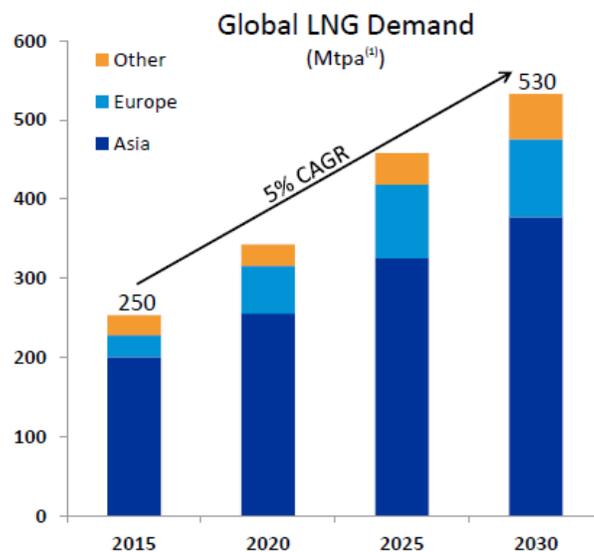
- Fully contracted until 2028
- Land position may limit size of project
- Additional pipeline capacity required



In another slide titled “Long-Term LNG Strategy,” Sempra stated that its goal was to “connect North American natural gas supply to markets without access to domestic resources” and projected significant growth in LNG demand in Asia.<sup>15</sup>

## Long-Term LNG Strategy

- Significant growth in global LNG demand will create opportunities that:
  - Support long-term growth targets
  - Fit strategy and risk profile
- Connect North American natural gas supply to markets without access to domestic resources
  - Provides opportunities across Sempra portfolio



<sup>15</sup> Sempra Energy, 2014 Analyst Conference, Mar. 24, 2014, Mark Snell, President, Sempra Energy, LNG Operations, Slide 16.

### III. GROUNDS FOR PROTEST

Sierra Club is in the preliminary stage of its investigation and continues to conduct discovery on the Amended Application. This Protest identifies the issues Sierra Club has identified to date on the Amended Application. Additional concerns may arise as Sierra Club continues to investigate the Application.

#### A. **The Amended Application’s Long-Term Demand Forecast, Information on Past Volumes, and Forecast of Future Volumes to Be Served by the Proposed Project Are Inadequate.**

A key question in this proceeding is what, if any, replacement capacity is needed for Line 1600 to meet gas transmission system planning standards after properly accounting for California’s decarbonization efforts. The Amended Application continues to fall short of providing the requisite information to answer this question. Before the Amended Application can be deemed complete, SDG&E must provide a long term gas forecast that accounts for the reduction in natural gas demand resulting from SB 350 and related decarbonization measures and identifies what, if any, additional pipeline capacity would still be needed to meet gas demand under the Commission’s established 1-in-35/1-in-10 year core/non-core gas transmission planning standard.<sup>16</sup>

#### 1. **Before the Application Can Be Considered, SDG&E Must Account for the Impact of SB 350 and Related Measures in Reducing Future Gas Demand.**

To properly determine the extent to which new gas transmission may be needed, the Amended Application’s load forecast must be as up-to-date and accurate as possible. Yet, in response to a Sierra Club data request, SDG&E admitted the Long-Term Demand Forecast provided on page 40 of the Amended Application does not account for the increase in the Renewables Portfolio Standard to 50% and the doubling of energy efficiency savings in electricity and natural gas final end uses of retail customers required under SB 350.<sup>17</sup> The demand forecast also ignores the more aggressive decarbonization commitments adopted by the

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<sup>16</sup> D.02-11-073, *Opinion on Adequacy of Southern California Gas Company’s and San Diego Gas and Electric Company’s Gas Transmission Systems to Serve the Present and Future Needs of Core and Noncore Gas Customers* (Nov. 21, 2002), pp. 32, 47-48.

<sup>17</sup> Data Request Sierra Club-SDG&E-01 Q4.

City of San Diego in its Climate Action Plan, including a 2035 target of 100 percent renewable energy.<sup>18</sup> These measures will substantially reduce future natural gas demand and must be incorporated into the load forecast before the Application can be considered.

Even without incorporating the additional reductions in demand resulting from SB 350, the Amended Application significantly overstates growth in peak demand. While the testimony of S. Ali Yari asserts that peak electric demand in SDG&E service territory will increase “around 1 percent per year through 2025,” SDG&E admitted in a data request that when Additional Achievable Energy Efficiency (“AAEE”) is accounted for, “managed peak demand would essentially stay flat from 2016 through 2025 with a compound annual growth rate of approximately -0.2%.”<sup>19</sup> In addition, the Yari testimony relies on the 2015-2025 CEC Forecast, not the 2016-2026 forecast the CEC adopted in January 2016, two months before the Amended Application was filed. The 2016-2026 Demand Forecast, which also does not yet account for SB 350, nonetheless estimates significant decline in peak electricity demand as compared to the 2015-2025 forecast. For example, 2025 mid-case 1-in-10 year peak demand for SDG&E service territory is estimated at 5,850 MW in the 2015-2025 CEC Forecast but over 10 percent lower, at 5,247 MW, in the 2016-2026 demand forecast.<sup>20</sup> In response to a Sierra Club data request, SDG&E stated it “encourages the use of the latest forecast” and “is agreeable to update its study based on the adopted [2016-2026] forecast.”<sup>21</sup>

Given that Line 1600 contributes little toward SDG&E transmission capacity and gas needs will decrease as California continues to move past fossil fuels, it may be that Line 1600 could transition to distribution service without any pipeline replacement at all. The testimony of David M. Bisi states that “[w]ith Line 3010 in service, Line 1600 contributes approximately 100 MMcfd of capacity to the SDG&E system.”<sup>22</sup> With Line 1600 out of service, the nominal capacity of Line 3010 increases from 530 MMcfd to 570 MMcfd, leaving only a small differential in total capacity with or without Line 1600.<sup>23</sup> However, the inadequacies of the Amended Application preclude a meaningful assessment of the alternative of simply moving

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<sup>18</sup> *Id.*

<sup>19</sup> Direct Testimony of S. Ali Yari (March 21, 2016), p. 14 (“Yari Testimony”); Data Request Sierra Club-SDG&E-01 Q11.

<sup>20</sup> Data Request Sierra Club-SDG&E-01 Q14.

<sup>21</sup> Data Request Sierra Club-SDG&E-01 Q12.

<sup>22</sup> Bisi Testimony, p. 5.

<sup>23</sup> Data Request Sierra Club-SDG&E-01 Q2.

Line 1600 to distribution service. Accordingly, SDG&E should be required to revise its Amended Application to include a Long-Term Demand Forecast that properly account for the impact of SB 350, the adopted City of San Diego Climate Action Plan, and the CEC 2016-2026 Forecast.

## **2. The Amended Application’s Statement of Past Historical Volumes Does Not Justify the Project.**

The Amended Application Ruling required SDG&E to provide “monthly volumes through Line 1600” as well as “daily and annual maximum volumes through Line 1600” over the last ten years.<sup>24</sup> SDG&E stated it could not provide this data because it “does not measure throughput by individual pipeline on its system.”<sup>25</sup> However, it appears data on the individual throughput of Line 1600 was provided to TURN in response to a data request. TURN asked SDG&E to provide “[d]aily flows on Line 1600” and “maximum hourly flow each year on Line 1600.”<sup>26</sup> SDG&E provided the annual maximum hour throughput of Line 1600 as a table, and stated that “daily throughput for this same period are available in the attached spreadsheet.”<sup>27</sup> Sierra Club has requested a copy of the spreadsheet provided to TURN in order to clarify what information it contains, but it has not yet been provided. If SDG&E does in fact have data on the daily or monthly throughput and maximum flows on Line 1600, it should be required to amend its Application and provide this information to the Commission as well.

The volume data that SDG&E has provided does not appear to justify the need for the Proposed Project. SDG&E provided data on the “combined daily throughput for Line 1600 and Line 3010, for the 2011-2014 time period” in Appendix E.<sup>28</sup> The transported volumes shown in Appendix E for both Lines 1600 and Line 3010 are very low: for the entire time period from 2011 to 2014, daily throughput ranges from 0.00 million cubic feet per day (MMcfd) to 128.56 MMcfd.<sup>29</sup> These totals are well below the total capacity of line 3010, estimated to be up to 570

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<sup>24</sup> Joint Assigned Commissioner and Administrative Law Judge’s Ruling Requiring an Amended Application and Seeking Protests, Responses, and Replies (Jan. 22, 2016), p. 16 (“Amended Application Ruling”).

<sup>25</sup> Amended Application, p. 41.

<sup>26</sup> Data Request TURN-SDG&E-01 Q11.

<sup>27</sup> *Id.*

<sup>28</sup> *Id.*

<sup>29</sup> Appendix E to Amended Application (“Volumes Statement”). Throughput of at or near zero MMcfd occurs on many days, including 1/30-31/2013, and 4/15 -18/2013. Maximum throughput of 128.56

MMcfd.<sup>30</sup> If the data in Appendix E is correct, the existing pipelines are significantly underutilized, and there is no need to replace Line 1600 with a significantly larger transmission pipeline.

### **3. The Amended Application Continues to Fail to Disclose the Volume of Gas Specifically to Be Served by the Proposed Project.**

Both Rule 3.1(k) and the Amended Application Ruling require SDG&E to provide “a statement of the volumes to be transported via *the proposed pipeline* including information on ... the maximum daily and annual average delivery rates.”<sup>31</sup> In its Amended Application, SDG&E does not provide the requisite information, claiming it “does not forecast throughput for individual pipelines on its system.”<sup>32</sup> The volume of gas the Proposed Project would actually carry is a fundamental data point in determining the necessity and size of the Proposed Project. If SDG&E cannot legitimately forecast or estimate throughput for the Proposed Project then it should provide a forecast for what, if any, additional pipeline capacity is needed to meet established reliability standards should Line 1600 transition to distribution service.

#### **B. Complete System Redundancy is Not the Reliability Standard for Gas Pipelines.**

The Commission’s established reliability criteria for local gas transmission is to meet 1-in-35 cold year core service and 1-in-10 cold year core plus noncore service.<sup>33</sup> The Commission has rejected calls for maintaining additional capacity beyond these requirements so as not to burden “customers with the cost of maintaining excess slack capacity.”<sup>34</sup> Nonetheless, the Amended Application now argues for a reliability standard that ensures complete redundancy in the local gas transmission system. Indeed, the Amended Application even claims a 36”

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MMcfd occurs on 01/14/2013. There are also a number of days where the entry is “N/A”. It is not clear what N/A signifies.

<sup>30</sup> Data Request TURN-SDG&E-01 Q1.

<sup>31</sup> Commission Rules of Practice and Procedure, Rule 3.1(k)(1)(A); Amended Application Ruling, p. 16 (emphasis added).

<sup>32</sup> Amended Application, p. 40.

<sup>33</sup> D.02-11-073, pp. 32, 47-48.

<sup>34</sup> D.02-11-073, p. 32; D.06-09-039, *Phase 2 Order Addressing Infrastructure Adequacy & Slack Capacity, Interconnection & Operational Balancing Agreements, An Infrastructure Working Group, Natural Gas Supply And Infrastructure Adequacy For Electric Generators, Natural Gas Quality, And Other Matters* (Sep. 21, 2006).

replacement pipeline is needed in the event of the loss of both Line 3010 and the Moreno Compressor Station.<sup>35</sup> Complete redundancy in gas transmission is costly, far in excess of established reliability criteria, and should be rejected.

Notably, while the Amended Application argues for the need for pipeline redundancy, SDG&E does not appear to be able to cite to a single instance of a partial or full unplanned shutdown of Line 3010. In response to a TURN data request for each “event that caused a partial or full shutdown of Line 3010,” SDG&E only provided instances of planned maintenance where it appears that only “noncore service was curtailed” and “noncore customers were allowed to maintain service by declaring an operating emergency and delivering supply to the Otay Mesa system receipt point.”<sup>36</sup> While SDG&E states that “there are an infinite number of scenarios that could cause an outage” of Line 3010, it makes no effort to forecast the probability of such an outage.<sup>37</sup> However, a comprehensive study commissioned by the Interstate Natural Gas Association of America (INGAA) calculated the likelihood of a natural gas pipeline rupture or major leak at 0.00034 per mile per year.<sup>38</sup> Even if such a highly unlikely event were to occur, it remains unclear why sufficient gas supplies could not be secured through Otay Mesa.

The Amended Application also asserts that the “Proposed Project is an investment in infrastructure that is necessary to integrate more renewable energy onto the electric grid, even as other technologies become more cost-effective or available.”<sup>39</sup> However, the Amended Application provides no actual analysis or citation to support the claim that California’s move to 50 percent renewables will require additional pipeline capacity. The Amended Application further ignores initiatives already underway such as a transition to time-of-use pricing and energy storage procurement that will help integrate higher levels of renewables without reliance on fossil fuels. Future measures, such as the electrification of water heating, are also reasonable to expect and would both reduce natural gas demand and serve as an integrative resource by heating water during periods of high renewable supply. The Amended Application’s suggestion that California requires expanded gas pipelines to enable higher levels of renewables is not

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<sup>35</sup> Bisi Testimony, p. 16.

<sup>36</sup> Data Request TURN-SDG&E-02 Q14.

<sup>37</sup> Direct Testimony of Jani Kikuts (March 21, 2016), p. 2 (“Kikuts Testimony”); Data Request TURN-SDG&E-02 Q15.

<sup>38</sup> INGAA, The Role of Pipeline Age in Pipeline Safety (Nov. 8, 2012) p.3, <http://www.ingaa.org/file.aspx?id=19307>.

<sup>39</sup> Amended Application, pp. 8-9.

supported and contrary to the many efforts California is currently undertaking to enable the non-fossil integration of renewable resources that are critical to achievement of state greenhouse gas reduction goals.

**C. The Relationship Between the Substantial Surplus Capacity Provided by the Proposed Project and its Facilitation of LNG Export at Sempra's Baja Facility is Properly Within the Scope of this Proceeding.**

The Amended Application Ruling references concerns raised by Sierra Club, Southern California Generation Coalition ("SCGS"), and the Office of Ratepayer Advocates ("ORA") that the surplus capacity provided by the Proposed Project would enable future LNG export at Sempra's Costa Azul facility.<sup>40</sup> However, the Ruling does not specifically determine that this issue is within the scope of this proceeding. The greenhouse gas implications of the Proposed Project are a required consideration under Executive Order B-30-15, part of CPCN public interest review, and cited by SDG&E as a purported project benefit. Accordingly, the Commission should expressly find that the connection between the Proposed Project and its potential facilitation of LNG export is squarely within the scope of this proceeding.

Executive Order B-30-15 requires all state agencies to "take climate change into account in their planning and investment decisions, and employ full life-cycle cost accounting to evaluate and compare infrastructure investments and alternatives" with priority given to actions that "reduce greenhouse gas emissions."<sup>41</sup> The potential relationship between the Proposed Project and realization of Sempra's ambitions to export LNG from its Costa Azul facility must be explored as part of this proceeding. This is not a speculative connection. As set forth in Section II.B, Sempra has cited the need for new pipeline capacity to enable LNG export from Costa Azul. Through its Under 2 MOU, California has committed to helping facilitate the aggressive decarbonization of the energy sector that must occur throughout the world to limit the most extreme impacts of climate change. California's international commitments are undermined if Commission action provides a pathway for LNG export and the long-term fossil fuel commitments typically entailed in LNG export contracts.

In addition, the Commission is required to consider a project's "influence on the

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<sup>40</sup> Amended Application Ruling, p. 10.

<sup>41</sup> Exec. Order B-30-15.

environment” when evaluating a CPCN.<sup>42</sup> In response to this statutory consideration, the Amended Application claims the Proposed Project would have a greenhouse gas benefit by creating so much surplus capacity that the need for the Moreno Compressor would be reduced.<sup>43</sup> Yet if this substantial surplus capacity created by this redundant pipeline is used to facilitate LNG export, the greenhouse gas impacts resulting from induced fracking and LNG combustion will overwhelm the nominal reduction in emissions from decreased operation of the Moreno Compressor. Further, California’s aggressive efforts to reduce reliance on fossil fuels mean little if the Commission simultaneously provides a vehicle for these fuels savings to be exported for combustion abroad. Sierra Club is continuing to evaluate the extent to which Line 3602 would facilitate LNG export and at this juncture, asks that the Commission explicitly find this issue to be within the scope of this proceeding.

**D. SDG&E Has Not Sufficiently Justified the Decision Not to Hydrotest Line 1600.**

Although hydrdotesting Line 1600 is “technically feasible,” SDG&E dismisses this option due to concerns that the test would be “extremely complicated, protracted, and costly.”<sup>44</sup> The decision not to hydrotest is a deviation from the Decision Tree established in D. 14-06-007, which requires all pipelines that were not hydrotested when installed to be tested now, so long as the lines can be taken out of service with “manageable customer impact.”<sup>45</sup> The Decision Tree was developed to establish a consistent process for cost-effectively verifying the safety of pipelines with missing safety records. A deviation from the Decision Tree appears unwarranted in this case.

SDG&E’s first justification is that hydrotesting would be “extremely complicated,” citing concerns with maintaining service to existing customers. But SDG&E has not demonstrated that the impacts from hydrotesting would be unmanageable – in fact, the evidence presented in the Amended Application suggests that performing the test and complying with the Decision Tree is feasible. SDG&E states customers on Line 1600 could be provided with compressed

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<sup>42</sup> Cal. Pub. Utilities Code § 1002 (a)(4).

<sup>43</sup> Amended Application, p. 9.

<sup>44</sup> Bisi Testimony, p. 5.

<sup>45</sup> Att. 1 to D. 14-06-007, *Decision Implementing a Safety Enhancement Plan and Approval Process for San Diego Gas & Electric Company and Southern California Gas Company; Denying the Proposed Cost Allocation for Safety Enhancement Costs; and Adopting a Ratemaking Settlement* (June 12, 2014).

natural gas deliveries, or interruptions could be avoided through the construction of bypasses.<sup>46</sup> The estimated cost to “ensure that all customers had sufficient gas supply during the hydrostatic testing period, including CNG cost and by-pass installation,” amounts to only 13% of the total project cost.<sup>47</sup> Even assuming testing could cause service interruptions or be inconvenient for some customers, the potential alternative – constructing a large new pipeline where one currently does not exist – is certain to be highly disruptive.

While SDG&E asserts that hydrotesting would be “costly,” it is by far the cheapest project alternative. SDG&E estimated that the cost of hydrotesting, including the cost of providing alternate service when necessary, would be \$91.6 million dollars.<sup>48</sup> The cost of the Proposed Project is 4.8 times as much, an estimated \$441.9 million dollars.<sup>49</sup> SDG&E asserts that additional costs may be incurred while hydrotesting because natural gas “may need to be supplied to the system via the Otay Mesa receipt point.”<sup>50</sup> However, these costs are speculative. The testing would occur during shoulder months, when demand is lowest.<sup>51</sup> SDG&E did not provide any data on demand levels during the shoulder months to demonstrate that Line 3010 would be unable to fully serve natural gas transmission needs during the testing period. In fact, based on the data on total throughput at the Rainbow Metering station provided in Appendix E, it appears that the volume of gas transported through Lines 3010 and 1600 is well within the capacity of Line 3010 alone. Given the trajectory of natural gas demand in Southern California, it is likely Line 1600 will soon no longer be needed for transmission service. It is a far less costly and more financially prudent decision to adhere to the Decision Tree, hydrotest Line 1600, and save Californian ratepayers 300 million dollars.

Finally, SDG&E asserts that hydrotesting will be a “protracted” and lengthy process. However, this critique seems to have no basis, as the estimated schedules SDG&E provided for the two project options appear roughly similar: the Proposed Project is estimated to finish construction at the end of 2020, while the Hydrotest Alternative will finish construction in the

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<sup>46</sup> Direct Testimony of Neil Navin (March 21, 2016), p. 28 (“Navin Testimony”).

<sup>47</sup> Data Request TURN-SDG&E-01 Q4 (giving total project cost of \$91.6 million) and Q5 (giving total cost for CNG delivery and by-pass construction of approximately \$11.6 million).

<sup>48</sup> Data Request TURN-SDG&E-01 Q5.

<sup>49</sup> Navin Testimony, p. 17.

<sup>50</sup> Data Request TURN-SDG&E-01 Q4.

<sup>51</sup> Navin Testimony, p. 30.

first quarter of 2021.<sup>52</sup>

SDG&E admits that after Line 1600 has been pressure-tested, it will meet all of the Commission's pipeline safety requirements.<sup>53</sup> Hydrotesting appears to be a very viable, cost-effective option which is consistent with the Commission's prior decision and should be considered seriously.

**E. The Application's Cost-Effectiveness Analysis Contains Multiple Material Flaws and Must Be Revised Before it Can Be Deemed Accepted by the Commission.**

The Amended Application Ruling required SDG&E to perform a "cost analysis comparing the project with any feasible alternative sources of power," in accordance with Public Utilities Code Section 1003(d).<sup>54</sup> The purpose of this analysis is to provide decision-makers with accurate and complete information about the relative cost of different energy supply options. In our initial review of SDG&E's Cost-Effectiveness Analysis (the "Analysis"), Sierra Club identified a range of unreasonable assumptions and omissions that appear designed to make the proposed project appear significantly more favorable than a number of very viable alternatives. In this Protest, we provide a non-exhaustive list of a few key instances where the analysis frames the question improperly or does not provide objective data. The Commission should require SDG&E to repeat its cost analysis under more realistic and transparent parameters.

**1. It Is Unreasonable to Assume a New Transmission Pipeline Will Be Needed to Replace Line 1600 After 20 Years.**

The Analysis improperly assumes that if Line 1600 is hydrotested and left in service, it will need to be replaced with a new transmission line in twenty years.<sup>55</sup> The cost of this replacement amounts to hundreds of millions of dollars.<sup>56</sup> Oddly, instead of including the

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<sup>52</sup> Navin Testimony, pp. 26-30.

<sup>53</sup> Data Request TURN-SDG&E-01 Q2.

<sup>54</sup> Amended Application Ruling, p. 11.

<sup>55</sup> Volume III to Amended Application ("Cost-Effectiveness Analysis"), p. 20.

<sup>56</sup> The estimated cost of replacing Line 1600 with a 16-inch transmission pipeline along the proposed route is \$337.1 million. Cost-Effectiveness Analysis, p. 29. After applying the "Applicant's

replacement price in the total costs for the Hydrotest Alternative, it is treated as an “avoided cost” of all other projects and used to make these projects appear less expensive.<sup>57</sup>

The assumption that Line 1600 would need to be replaced in 20 years has two fundamental flaws. First, it is inconsistent with SDG&E’s own assumptions about the lifespan of the Proposed Project, where it argues that “a well-maintained and periodically assessed pipeline can safely transport natural gas indefinitely.”<sup>58</sup> A report on pipeline age cited by SDG&E concludes, “The fitness of a pipeline for service does not necessarily expire at some point in time.”<sup>59</sup>

More importantly, assuming Line 1600 must be replaced in 2035 is inconsistent with the decarbonization trajectory of California and the San Diego area. As mentioned above, the alternatives analysis SDG&E performed was not informed by a long-term demand forecast that incorporated California’s SB 350 goals or the City of San Diego’s resolution committing to transition to 100% renewable energy by 2035.<sup>60</sup> Once this long-term reduction in demand is taken into account, it is reasonable to conclude Line 3010 will be able to serve the natural gas needs of the San Diego area, and Line 1600 will not be needed as a transmission asset. The Analysis should be re-done without this faulty and expensive assumption.

## **2. The Alternative Energy Options Analyzed Were Scaled to Meet an Inappropriate Redundancy Standard.**

The Analysis only evaluates one alternate energy solution, energy storage, and fails to apply the proper reliability standard to determine how much energy storage is needed. SDG&E should be required to reassess the ability of energy efficiency, storage, and demand response to meet any need shortfall due to the removal of Line 1600 from transmission service.

The ALJ’s Ruling required SDG&E’s Amended Application to evaluate “Alternate Energy Alternatives,” including battery storage and “other alternatives ... that do not require the

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methodology” for adjusting avoided costs, the avoided cost used in Table 8 appears to be \$100.3 million. Cost-Effectiveness Analysis, p. 32.

<sup>57</sup> Cost-Effectiveness Analysis, p. 32.

<sup>58</sup> Cost-Effectiveness Analysis, p. 27, citing Kiefner and Rosenfeld, “The Role of Pipeline Age in Project Safety.”

<sup>59</sup> Kiefner and Rosenfeld, *supra*, p. 5.

<sup>60</sup> Data Request Sierra Club-SDG&E-01 Q4; City of San Diego, Climate Action Plan (Dec. 2015) p. 35, [https://www.sandiego.gov/sites/default/files/final\\_december\\_2015\\_cap.pdf](https://www.sandiego.gov/sites/default/files/final_december_2015_cap.pdf)

installation of a new gas transmission pipeline.”<sup>61</sup> The Commission’s established reliability standard for natural gas supply, as discussed previously, is that resources should exist to supply core customers on a 1-in-35-year cold day, and noncore customers on a 1-in-10-year cold day.<sup>62</sup>

In the Analysis, SDG&E has unreasonably chosen to model the cost of energy storage sufficient to fully replace the electric generation capability of all natural gas generators in San Diego serving peak load.<sup>63</sup> SDG&E therefore asserts that it will require 2,082 MW of energy capacity, provided by 11,200 MWh of energy storage.<sup>64</sup> Buying enough lithium ion batteries to equal the capacity of the San Onofre Nuclear Generating Station is, unsurprisingly, not cheap. The report estimates this alternative will cost between 8 and 10 billion dollars.<sup>65</sup> By asserting clean energy options must meet system redundancy, rather than the Commission’s established reliability standard, SDG&E is unreasonably stacking the deck against alternate solutions. SDG&E should be required to base its analysis of alternatives to a new pipeline in a Long Term Demand Forecast that accounts for state and local decarbonization measures. Then, it should model alternative energy solutions that could meet any shortfall if Line 1600 were converted to distribution service.

The new analysis should evaluate a full range of alternate energy solutions. In the Amended Application, SDG&E does not evaluate any other alternative energy solutions besides battery storage, concluding that “[t]he Applicants could not identify any other reliable alternate energy options that do not require the installation of a new gas transmission pipeline.”<sup>66</sup> This conclusion is unreasonable. A very wide range of cost-effective alternative options exist. Energy efficiency and demand response, the top resources in California’s loading order, could be modelled in addition to energy storage. Gas end-uses could also be electrified to reduce gas demand. The Commission should explicitly clarify that in its cost analysis, SDG&E must model a suite of alternative energy options to address any identified gas shortfall.

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<sup>61</sup> Amended Application Ruling, p. 13.

<sup>62</sup> D.02-11-073, pp. 32, 47-48.

<sup>63</sup> Cost-Effectiveness Analysis, p. 14; Yari testimony, p. 16.

<sup>64</sup> Cost-Effectiveness Analysis, pp. 14 -15.

<sup>65</sup> Cost-Effectiveness Analysis, p. 32, Table 8.

<sup>66</sup> Cost-Effectiveness Analysis, p. 15.

### 3. Other Choices in Cost Effectiveness Analysis Are Vague and Unreasonable.

The report draws other unjustified conclusions or assumptions that deserve further scrutiny including the following:

- The Analysis states that, “[t]he estimated costs for the proposed Project and the Alternatives include contingency.”<sup>67</sup> However, it does not disclose original cost estimates before contingency was added, or the amount of contingency added to each alternative, or how contingency was estimated. While the Direct Testimony of Neil Navin provides specific figures for the contingency added to the Proposed Project, for the Hydrotest Alternative his testimony only states that the costs provided are “including contingency.”<sup>68</sup> With this lack of transparency, it is impossible to fairly evaluate the relative costs of the project alternatives.
- For the Hydrotest Alternative, SDG&E assumes service interruptions during pipeline testing would “require gas to be imported from the gas transmission system receipt point at Otay Mesa.”<sup>69</sup> However, it also assumes testing would occur in springtime shoulder months when demand is lowest.<sup>70</sup> It seems foreseeable that during low-demand shoulder months, Line 3010 would have the capacity to transmit sufficient supply, making imports from Otay Mesa unnecessary. It does not appear justified to include any additional costs of importing gas from Otay Mesa in this alternative.
- With regard to Alternative D, replacing Line 1600 along its current route, SDG&E states that the right-of-way acquisition costs for this alternative are “significantly greater” than for the proposed project.<sup>71</sup> The difference in costs is never explicitly stated, but the total cost of a new 16-inch pipeline along the current route of Line 1600 is shown to be \$556 million, while a 16-inch pipeline along the new route is only \$337 million. This \$200 million dollar difference is surprising, as one would assume SDG&E already owns the right-of-way for the

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<sup>67</sup> Cost-Effectiveness Analysis, p. 22.

<sup>68</sup> Navin Testimony, pp. 25, 29.

<sup>69</sup> Cost-Effectiveness Analysis, p. 11.

<sup>70</sup> *Id.*

<sup>71</sup> Cost-Effectiveness Analysis, p. 25.

current route of Line 1600, and would not need to undergo additional expenditures.

#### **IV. EFFECT OF THE APPLICATION ON THE PROTESTANTS**

Sierra Club is a non-profit, member-based, “public benefit” California corporation with over 600,000 members nationwide and more than 145,000 members living in California. Many of Sierra Club’s California members are residential customers of San Diego Gas and Electric and Southern California Gas Company. Sierra Club’s mission is to promote the responsible use of the earth’s ecosystems and resources and to protect and restore the quality of the natural and human environment. Given the climate imperative to leave most of the world’s fossil fuels unburned to limit the severe impacts of climate change on the natural and human environment, Sierra Club works both to limit fossil fuel demand through development of clean energy resources and to limit fossil fuel supply by scrutinizing substantial new investments in fossil fuel infrastructure that facilitate additional fossil fuel extraction. The instant proceeding harms the interest of Sierra Club members by resulting in an unnecessary and costly new fossil fuel infrastructure that would help facilitate export of natural gas through Sempra’s LNG terminal in Baja Mexico and undermine achievement of California’s climate commitments.

#### **V. NEED FOR EVIDENTIARY HEARINGS**

SDG&E’s Amended Application contains numerous issues of disputed material fact and will require evidentiary hearings.

#### **VI. SCHEDULE**

As set forth above, the Amended Application should not be deemed complete until the data gaps and defects identified above are cured.

#### **VII. COMMUNICATION OF SERVICE**

Sierra Club was granted party status on December 2, 2015 and is already on the service list for this proceeding.

## VIII. CONCLUSION

Sierra Club appreciates the opportunity to submit this protest.

Dated April 21, 2016

Respectfully submitted,

/s/

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Matthew Vespa  
Senior Attorney  
Sierra Club  
85 Second St., 2<sup>nd</sup> Floor  
San Francisco, CA 94105  
(415) 977-5753  
[matt.vespa@sierraclub.org](mailto:matt.vespa@sierraclub.org)