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Mr. Chris Gallenstein, Staff Air Pollution Specialist
California Air Resource Board
1001 "I" Street
Sacramento, CA 95814

RE: SDG&E Comments. October 2 Workshop on EPA Clean Power Plan

Dear Mr. Gallenstein:

San Diego Gas & Electric Company (SDG&E) appreciates the work that the California Air Resources Board (ARB) has invested in the discussion paper on the Clean Power Plan (CPP). The reliable and efficient operation of the electricity grid in the western United States will depend on the decisions of several states with respect to the CPP. SDG&E therefore requests that ARB analyze and receive public comment on a range of design options for California's State Implementation Plan, with grid reliability, interstate cooperation, and retail provider customer costs in mind.

Below, SDG&E has provided its initial responses to the questions posed in the discussion paper:

1. Do stakeholders agree that a mass-based, state measures plan, based primarily on the continued operation of the Cap-and-Trade Regulation, and recognizing the emissions-reducing consequences of the State's complementary energy sector policies, is an appropriate compliance plan design for California?

SDG&E's Initial Response: A mass-based, state measures plan, based primarily on the Cap-and-Trade Regulation, is a viable option that would potentially avoid duplicative regulations for power plants in California. A mass-based, state measures plan, however, could present hurdles to efficient regulations that require further analysis.

Since the Cap-and-Trade Regulation applies an economy-wide cap on greenhouse gas (GHG) emissions, it may not ensure that the emissions specific to the baseload generating facilities

covered by the CPP would decline significantly. While renewable energy will replace a significant portion of fossil generation, imports will likely decline as coal contracts expire. This might increase the use of combined cycle gas turbine (CCGT) generation covered by the CPP. Building and transportation electrification and economic growth could also increase the use of the existing generation covered by the CPP. Under the economy-wide cap, least cost GHG reductions do not guarantee significant reductions in the use of the existing CCGTs covered by the CPP. Therefore, under the state measures approach, a federally-enforced backstop may be necessary and could impact the reliability of the electricity market if not designed properly.

The state measures approach also raises legal and economic efficiency issues with electricity imports that are subject to the CPP in their home state. For example, SDG&E's Desert Star Energy Center is physically located in Nevada but is directly connected to the California Independent System Operator's (CAISO) grid. The legal issue is whether California can apply a GHG allowance cost if Nevada takes an emissions standard approach and requires Desert Star to obtain GHG allowances or Emission Reduction Credits (ERCs) for generation to comply with the CPP. The economic efficiency issue is whether the dispatch of Desert Star would be inefficient simply because of its location if duplicative regulations were to apply.

Tracking imports under the cap-and-trade program may also be difficult given CAISO's potential expansion under Senate Bill 350 to multiple western states, unless other states become linked. But if most western states become linked under the cap-and-trade program, then the state measures approach is an attractive option with a single price for GHG emissions across states in the same regional grid.

2. What other compliance plan designs, if any, hold significant promise?

SDG&E's Initial Response: The CPP provides pathways for states like California to still participate in mass-based trading programs that develop under the CPP. These may hold promise.

3. How might ARB and air districts ensure that any permit terms developed for federal enforceability reasons are appropriately designed, and protect the confidentiality of market-sensitive data?

SDG&E's Initial Response: No comment.

4. What lessons may be learned from permit terms enforcing other trading programs?

SDG&E's Initial Response: No comment.

5. Assuming that the Cap-and-Trade Regulation is used to support a state measures plan, what backstop designs might integrate best with the design of the Cap-and-Trade Regulation? If a market response is appropriate, what compliance instruments, or pools of compliance instruments, might be appropriate for use within the backstop?

SDG&E's Initial Response: Since the state measures approach is mass-based, it is unclear how a mass-based backstop would work without potentially causing significant inefficiencies in the electricity market unless trading with other states could occur, as with a mass-based emissions standard approach. A rate-based backstop is another alternative because California can easily comply with the EPA's rate-based emission standard approach given California's 50 percent target for renewable energy by 2030 and the resulting incremental change in renewables between 2012 and 2030 of 30 percent of consumed electricity. With this approach, California could define the emissions rate for generation owned by retail providers as the actual covered generation emission rate less the amount of Emission Reduction Credits (ERCs) required to meet the EPA standard on average for all generators in California. There is enough generation owned by retail providers that this state-defined emissions standard approach would meet the overall EPA-defined average rate of 828 lbs./MWh for covered facilities. This approach would require creating ERCs from the Western Renewable Energy Generation Information System's Renewable Energy Credits in case the backstop is invoked. ERCs could also be created from energy efficiency measures.

6. What other backstop design options are available, inside or outside of the market?

SDG&E's Initial Response: No comment.

7. Are there particular glide paths that might best integrate the backstop into the larger California carbon market and the economy-wide emissions reductions trajectory?

SDG&E's Initial Response: No comment.

8. What data sources, analytic processes, and model types should ARB and its partners consider in developing the required demonstrations? How best might ARB and its partners integrate analysis processes and data used in the Greenhouse Gas Inventory, IEPR, and update to the Scoping Plan?

SDG&E's Initial Response: ARB already receives annual GHG emission data from individual power generation sites under the Regulation for the Mandatory Reporting of GHG Emissions (MRR). In addition, aggregated energy output from the plants (MWhs) is supplied to the California Energy Commission (CEC) and other state agencies. This data provides an accurate calculation of GHG mass emissions and emissions rates (lbs./MWh).

The discussion paper states that this information in conjunction with PLEXOS model and other tools used by the CEC will enable accurate forecasts of GHG mass emissions and comparison with the federal intermediate and final CPP targets for California. However, any forecast depends on assumptions about the future. There are five highly uncertain aspects that make any forecast subject to second-guessing by the EPA: (1) the amount of coal plant shutdowns in other states, (2) the amount of hydroelectric generation, (3) the level of economic growth, (4) the amount transportation and building electrification, and (5) the ARB default emissions factor for imports.

9. Are there particular scenarios that staff should investigate in the demonstrations? For instance, are there particular "stress" or "policy" cases—including those associated with various IEPR demand forecasts—that should be considered?

SDG&E's Initial Response: A high GHG reduction scenario could lead to high levels of GHG emissions at existing baseload generation facilities in California covered by the CPP. A scenario built on a large number of coal shutdowns in the Western Electricity Coordinating Council (WECC), a high level of economic growth in the WECC, low hydro conditions in the WECC, and a large amount of transportation and building electrification in California would be useful to investigate the probability of not meeting EPA 2030 mass-based targets for California generation covered by the CPP.

10. Do stakeholders agree that ARB's Mandatory Reporting Regulation requirements, and incorporated Part 75 requirements, will enable existing reporting to comply with most of CPP's reporting and recordkeeping requirements? Are amendments to ARB's reporting regulations appropriate to more fully integrate the programs?

SDG&E's Initial Response: The data provided to ARB under the MRR is subject to close scrutiny, undergoing third party verification and certification. The verifiers are provided with backup documentation (e.g. CEMS, natural gas usage, and HHV records). The CEMS systems at power plants subject to the Part 75 (Acid Rain) requirements must meet stringent quality assurance and calibration requirements, and natural gas fuel flow meters must be certified annually. This regimen should be adequate to meet the CPP's reporting and recordkeeping requirements, and ARB should ensure that reporting remains consistent with minimal overlap.

11. What steps might be appropriate to ensure that Cap-and-Trade Regulation compliance processes, periods, and reports sufficiently support compliance with CPP? In particular, what options does ARB have to align relevant compliance dates, given U.S. EPA's deadlines?

SDG&E's Initial Response: No comment.

12. What options should ARB consider for best involving members of affected communities in the CPP compliance planning process?

SDG&E's Initial Response: Existing processes at the California Public Utilities Commission, at Local Governing Boards, and at ARB are sufficient.

13. How can existing tools, including the Adaptive Management program, best be used to support California's CPP compliance plan? What other tools might be considered?

SDG&E's Initial Response: No comment.

14. How can ARB and its coordinating agencies best use existing processes to ensure reliability during CPP implementation? Are any additional analyses warranted?

SDG&E's Initial Response: Past analysis has indicated that the Renewables Portfolio Standard of 50% may create integration issues as noted in the Scoping Plan Update. One of the measures to address integration calls for increasing regional coordination at the time of over-generation. ARB should consider whether a proposed approach to CPP implementation will increase or restrict the ability of California generators to export power during periods of over-generation. ARB should also consider whether the approach to CPP implementation increases or decreases regional reliability solutions in general.

15. Should California submit a nonbinding statement of interest in participating in the Clean Energy Incentive Program? What advantages and disadvantages do stakeholders see for such participation?

SDG&E's Initial Response: Yes, there does not appear to be any downside. The Clean Energy Incentive Program is aligned with current state programs.

16. If so, what mechanisms might be necessary to integrate the program with California's Cap-and-Trade Regulation? How should compliance instruments associated with the federal program be treated? Are there other options for participating in the Clean Energy Incentive Program that would not require such integration?

SDG&E's Initial Response: ARB could integrate the Clean Energy Incentive Program as an offset since the Clean Energy Incentive Program would not affect the state's 2030 GHG emissions goal and would only affect the glide path. Alternatively, the generated allowances or ERCs could be held and applied to the backstop if it became enforceable.

17. What analytic tools and venues are appropriate for assessing the emissions and compliance cost opportunities and concerns, including any emissions leakage or accounting concerns, associated with various regional compliance options?

SDG&E's Initial Response: Since other western states may choose a rate-based emissions standard for CPP compliance, ARB should enforce the MRR's provisions that require RECs for directly delivered renewable electricity to avoid double counting renewable energy imports.

18. What regional compliance options should ARB staff evaluate? Which of these options are more or less consistent with the state measures plan design ARB staff have identified as a strong compliance option?

SDG&E's Initial Response: No comment.

19. Are there features of the proposed model state and federal plans that California should highlight as particularly important to retain, or to modify, in the finalized version of these proposals?

SDG&E's Initial Response: No comment.

20. What potential interactions between these proposed plans and California's compliance strategy should ARB staff consider in the planning process?

SDG&E's Initial Response: As indicated previously, the issue of electricity imports into California is critical. In addition, as the plans of neighboring states become increasingly clear, the coal plant shut downs that result from the CPP in other states may impact the power flow on the WECC grid. These shut downs should be considered in ARB's planning process and in the planning studies of California state agencies.

21. What issues and processes do stakeholders believe to be most important for coordination?

SDG&E's Initial Response: ARB should publicly analyze the option of the state measures approach, as well as other viable options proposed by stakeholders. The different approaches will lead to different potentials for grid reliability, collaboration with other states in the WECC, and retail provider electricity costs. Deciding on a compliance direction in collaboration with other states should be ARB's initial focus.

SDG&E appreciates the opportunity to provide these comments and ARB's proactive approach to obtaining stakeholder input on the best way to demonstrate compliance with the federal EPA Clean Power Plan. We look forward to continuing to work with ARB through this process and look forward to reviewing additional materials as they are developed.

Sincerely,

Tamara Rasberry