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California Air Resources Board (CARB)
1001 I Street
Sacramento, CA 95814

RE: San Diego Gas & Electric Company Comments on the June 8-10, 2021 Public Workshop Series to Commence Development of the 2022 Scoping Plan Update

Dear CARB Staff and Board Members,

San Diego Gas & Electric Company (SDG&E) appreciates the opportunity to submit comments regarding the June 8-10, 2021 Public Workshop Series to Commence Development of the 2022 Scoping Plan Update.

SDG&E is committed to enabling and accelerating the transition to zero-carbon electricity in every feasible way on behalf of our customers and the communities we serve. We support the 2022 Scoping Plan Update as well as other efforts that aim to reduce California's emissions and eventual achievement of carbon neutrality by 2045 such as: the Cap-and-Trade Program, the Low Carbon Fuel Standard Program (LCFS), Renewable Portfolio Standard (RPS), the Senate Bill (SB) 100 report, the California Public Utilities Commission (CPUC)'s Integrated Resource Planning (IRP) Process, and the California Independent System Operator (CAISO)'s 20-Year Transmission Outlook.

SDG&E is encouraged by CARB's focused attention to multiple different sectors and stakeholders via three days of Scoping Plan workshops. SDG&E also appreciates that the 2022 Scoping Plan Update will take a long-view approach, simultaneously modeling 2030 goals and 2045 carbon neutrality goals. The Scoping Plan's cross-sectoral long-view modeling will need to incorporate reliability. Looking at the decarbonization challenge from a reliable, cross-sectoral, and long-view lens will result in reliable scenarios, highlight the need for all sectors to contribute to and have equitable responsibility for GHG emission reduction efforts, and identify cross-sectional opportunities to help achieve the most efficient and effective net carbon reductions available to Californians. SDG&E is also pleased to see that the 2022 Scoping Plan Update process was launched with robust stakeholder engagement, including the ability for verbal and written stakeholder comments. SDG&E encourages CARB to continue this transparent and collaborative effort throughout the Scoping Plan Update process. In particular,

CARB should ensure that the Scoping Plan modeling process be transparent and be shared with stakeholders early enough in the process that stakeholders can review and provide feedback to CARB, which can then be incorporated. Finally, SDG&E is encouraged by CARB's focused attention on ratepayer costs at the workshops, we encourage CARB to include electricity rate impacts and upfront costs as inputs and constraints to modeling and scenario development to ensure cost minimization.

SDG&E played a role in helping deliver the success of reaching Assembly Bill (AB) 32 goals four years prior to the 2020 target. SDG&E is proud of its contribution in helping California decarbonize; however, SDG&E urges CARB to incorporate reliability in its modeling, shift its focus to other sectors of the economy, and explore cross-sectoral opportunities in the new Scoping Plan Update. It is also imperative that this Update process be transparent and incorporate stakeholder feedback. SDG&E offers the following 2022 Scoping Plan Kick-Off workshop comments focused on these issues.

The electric sector modeling should incorporate reliability.

The 2017 Scoping Plan assigned the largest share of emission reductions to the electric sector as compared to all other Scoping Plan sectors¹. However, the 2022 Scoping Plan can no longer over-rely on the electric sector. Continuing to do so could lead to an unreliable electric grid. The California August 2020 unplanned rotating outages show how important it is to ensure abundant reliable, dispatchable resources are available 24 hours a day for all days of the year. Without reliable power necessary to provide grid support, California is at risk of additional blackouts. Currently, this capacity is provided by natural gas generation. The SB 100 report states: "Natural gas capacity is largely economically retained in the SB 100 core scenario, but fleetwide utilization decreases by half compared to a 60 percent RPS future. The gas fleet is primarily retained because natural gas capacity is the most economic option to provide capacity for reliability needs."² In addition, the CPUC's Mid-Term Reliability Decision on page 42 states: "Having [natural gas plants] available, but running at their minimum levels or not running at all, still acts as an insurance policy during the operational transition to more renewables and energy storage on the system, as we make steady and significant progress towards the SB 100 decarbonization goals for 2045."³ Until clean, reliable, firm dispatchable resources are abundantly available, the electricity grid needs natural gas-fired generation capacity and its infrastructure to ensure reliability.

SB 100 Study scenarios such as the *No Combustion* or the *Expanded Load Coverage* scenarios would over-rely on the Electric sector to achieve decarbonization goals and risk grid reliability by limiting natural gas capacity that both the SB 100 report and the IRP Proposed Decisions deem necessary for grid reliability. Further, it is worth noting that CAISO and the

¹ Table 3: Estimated Change in GHG Emissions by Sector (MMTCO₂e) in California's 2017 Climate Change Scoping Plan; November 2017; page 31

² 2021 SB 100 Joint Agency Report; March 2021; page 103

³ Decision (D.)21-06-035, pg. 41

CPUC are re-calibrating reliability requirements considering the August 2020 unplanned rotating outages. The CPUC's new proposed planning reserve margin (PRM) for Mid-Term Reliability in D.21-06-035, increases the PRM from 15% (finalized in 2004 before the current influx of intermittent resources) to 22%. CAISO is also increasing the PRM for its Resource Adequacy program. These higher PRMs are a direct result of increased need for reliability to ensure that the California grid continues to consistently deliver electricity to its residents. Yet, the SB 100 RESOLVE capacity expansion model used the outdated 15% PRM as a modeling constraint.⁴ Further, a true reliability analysis has not been incorporated in the SB 100 modeling as the SB 100 report itself acknowledges that its scenarios require additional analysis to determine if they are reliable.⁵ The lack of reliability assessments calls to question the reliability of these two Study scenarios that run counter to the CPUC's Mid-Term Reliability Decision. Thus, SDG&E urges CARB to support reliability by disregarding the SB 100 Study scenarios, assigning the Electric Sector no more than its pro-rata share, aligning with the SB 100 Core scenario which covers 100% renewable and zero-carbon resources for retail sales, and ensuring that Scoping Plan modeling incorporates adequate reliability analysis when setting targets for the Electric Sector.

The electric sector modeling target range should be limited to its pro rata share of emission reductions.

In 2018, the most recent inventory year published by CARB, the Electric Sector emitted 42% below 1990 levels, the Residential and Commercial Sector emitted 6% below 1990 levels and the Industrial Sector was 9% below 1990 levels by 2018. **All other sectors emitted above 1990 levels in 2018.** Yet due to the significant contribution of the Electric Sector, AB 32 targets were met in 2016, four years ahead of schedule, and statewide emissions levels remained below 1990 levels through 2017 and 2018, again due to over-compliance by the Electric Sector. CARB's 2022 Scoping Plan should not continue the status quo of leaning on the Electric Sector to meet the next set of targets, 40% below 1990 levels by 2030 and carbon neutrality by 2045. The potential for the Electric Sector to over-deliver enough to compensate for the under-performance of other sectors has come to an end. This can be seen by the fact that the Electric Sector contributed 15%, (or 63.1 MMTCO₂e) of 2018 statewide emissions, as illustrated in CARB's 2018 inventory graph below.⁶ The 2017 Scoping Plan shows that California emissions need to reach 260 MMTCO₂e or below to attain the 2030 goal of 40% below 1990.⁷ Reaching this 2030 goal will require a reduction of 165.3 MMTCO₂e, or 39%, from the 2018 inventory, which is substantially more than the entire Electricity 2018 inventory contribution. It is now time for other sectors to do their part. Thus SDG&E asks that the Scoping Plan shift its focus to

⁴ Input & Assumptions - CEC SB 100 Joint Agency Report; June 2020; page 5

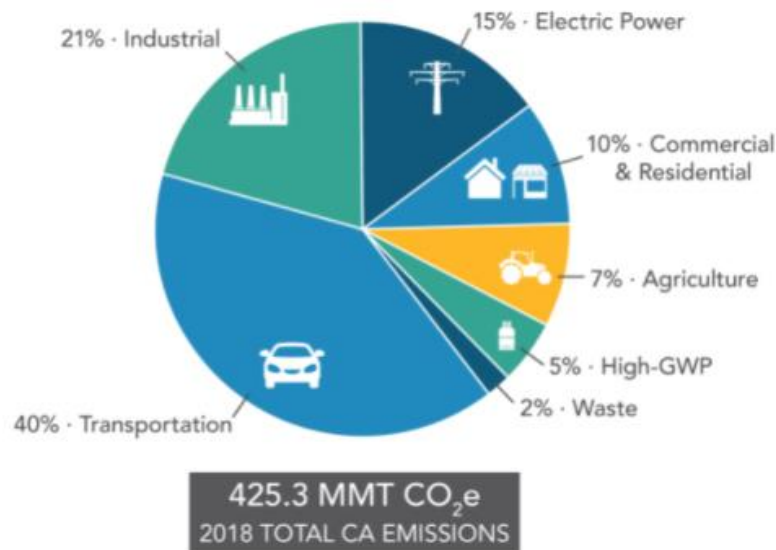
⁵ 2021 SB 100 Joint Agency Report; March 2021; page 18 "The joint agencies plan to evaluate resource portfolios developed in this report in a multistep process to ensure reliability for all hours of the year in line with state planning requirements while meeting clean energy and climate goals."

⁶ <https://ww2.arb.ca.gov/ghg-inventory-graphs> and https://ww3.arb.ca.gov/cc/inventory/data/tables/ghg_inventory_scopingplan_sum_2000-18.pdf

⁷ https://ww2.arb.ca.gov/sites/default/files/classic/cc/scopingplan/scoping_plan_2017.pdf

sectors that have not made substantial contributions. Without significant contributions by these other sectors, California will not reach its goals.

2018 GHG Emissions by Scoping Plan Category



CARB should focus on Transportation Electrification as a cross-sectoral opportunity to help decarbonize the Transportation Sector.

The Electric Sector has also exceeded compliance obligations by helping other sectors decarbonize. In the June 8, 2021 Scoping Plan workshop CARB staff posed the following question to stakeholders: “What approaches to Carbon Neutrality exist that are technologically feasible, cost-effective, and have minimal impacts to households and jobs? How quickly can sectors transition?” SDG&E believes that transportation electrification is a feasible and cost-effective approach to carbon neutrality with minimal impacts to households and jobs. Electric vehicles (“EV”) and charging infrastructure are both established technologies that are currently available for passenger vehicle drivers in California. Through its Power Your Drive (“PYD”), Priority Review Programs, and Power Your Drive for Fleets programs, SDG&E has helped to enable the transition to transportation electrification by building EV charging stations in workplaces, multi-unit dwelling, ride and drives, and several industry related sectors. In terms of cost effectiveness, SDG&E’s Power Your Drive pilot program has produced savings for drivers due to the lower cost of electricity compared to gasoline. Based on the findings of SDG&E’s

2021 PYD Research Report⁸, an electric vehicle owner that drives an equivalent number of miles as an internal combustion engine owner would save on average 0.26 cents per kWh or the equivalent to \$1.42 per gallon of gasoline. In addition, SDG&E continues to improve EV charging infrastructure availability with over 3,000 charging stations installed to date. As battery technology continues to improve within electric vehicles, electric vehicle efficiency and range continue to improve over time. The current rate of transition within this sector is largely dependent on the rate of customer adoption of electric vehicles. Over the last several years, EV adoption has been growing, with zero-emission vehicles (ZEVs) outpacing internal combustion engines (ICE) sales by 11% in 2020, and EVs making up about 9% of sales in California based on Q1 2021 data from the California Energy Commission (CEC).

CARB should create a transparent modeling process that will accept and incorporate stakeholder feedback.

At the workshop, CARB staff indicated that emissions modeling must be completed at least 5 months prior to publication of drafts to allow sufficient time for air quality, health, economic, and other analyses. This statement raised concerns that the 5-month buffer would prevent stakeholder input from being incorporated into the modeling effort. CARB should take steps to ensure that stakeholders have ample opportunity to inform the modeling effort. Many stakeholders have the expertise to provide much needed vetting and additional context based on their own modeling experiences. CARB should leverage that expertise. First, CARB should host an inputs and assumptions workshop whose purpose is to allow stakeholders to review and comment on data and assumptions that will ultimately be used for modeling. Second, CARB should follow the CPUC's request that Scoping Plan modeling use common planning assumptions, such as a Loss of Load Expectation (LOLE), to ensure reliability and policy alignment. Third, CARB should ensure transparency of the model and its inputs and assumptions. CARB should follow the example set by its fellow California agencies: for example, the SB 100 Report, led by the CEC process, was a very transparent process that thoroughly documented the inputs and assumptions of the SB 100 modeling effort, made available excel spreadsheets of modeling outputs and was forthcoming about the model's limitations and shortcomings such as the lack of robust reliability assessments in modeling and the lack of land-use constraints. The CPUC's Avoided Cost Calculator (ACC) process is also transparent and publicly releases the excel model for stakeholder review and comment. The ACC modeling is further reviewed annually by stakeholders and often changes to inputs, assumptions and calculations are made due to feedback and analysis by stakeholders. The Scoping Plan Update is a very involved and long process, but since CARB is at the beginning of the process, stakeholder engagement should start now. The Update can only be improved if CARB is willing to offer a transparent process that incorporates stakeholder feedback.

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<https://www.sdge.com/sites/default/files/regulatory/SDG%26E%20FINAL%20Power%20Your%20Drive%20Research%20Report%20April%202021.pdf>

In summary, SDG&E urges CARB to include reliability in its modeling, allocate emission reduction responsibility on a pro-rata share basis, include cross-sectoral opportunities such as Transportation Electrification, and provide a transparent process that allows for robust stakeholder participation and review of scenario selection, inputs, assumptions, and modeling. SDG&E believes that these considerations will help lead to a Scoping Plan that can help California achieve its 2030 goals and ultimately carbon neutrality by 2045.

Sincerely,

/s/ Miguel Romero

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