

December 16, 2016

Ms. Rajinder Sahota  
Chief, Climate Change Program Planning & Management Branch  
California Air Resources Board  
1001 I Street  
Sacramento, CA 95812-2828

**Re: Discussion Draft 2030 Target Scoping Plan Update**

Dear Ms. Sahota,

Pacific Gas and Electric Company (PG&E) appreciates the opportunity to provide comments on the Discussion Draft 2030 Target Scoping Plan Update (Discussion Draft).

PG&E strongly supports California's clean energy goals, and is committed to partnering with the Air Resources Board (ARB) to chart a cost-effective and sustainable path to Senate Bill (SB) 32's goal of reducing greenhouse gas (GHG) emissions 40 percent below 1990 levels. In 2015, PG&E also supported Senate Bill 350, which serves as a roadmap for implementing many of the clean energy policies put forth by Governor Brown.

Moving forward, we believe the best path to achieving the state's long-range environmental goals is through sustainable policies that result in cost-effective GHG emissions reductions throughout the state's economy. By achieving these goals in a way that manages costs for Californians, we can ensure that our state continues to make substantive progress and creates model programs others will want to follow.

The key points of PG&E's comments are as follows:

I. Comments on the Proposed Scoping Plan Scenarios

A. PG&E supports the inclusion of Cap-and-Trade in the Draft Scoping Plan. The final Scoping Plan should include California's Cap-and-Trade Program.

B. Relying solely on direct measures for GHG emissions reduction, as Alternative 1 does, will be costlier than market-based climate solutions, and could result in failure to meet the State's environmental goals.

C. Alternative 2 relies on a carbon tax that can be politically difficult to set at a price that motivates markets to account GHG emissions. Conversely, too high a price would unduly harm California's economic health.

D. PG&E urges ARB to consider a fourth Scoping Plan option (or third alternative), which relies on the Cap-and-Trade Program, other existing

commitments, and an expanded and sustainable Low Carbon Fuel Standard (LCFS) Program to achieve the additional reductions necessary to achieve the 2030 goals.

E. Scoping Plan measures should achieve cobenefits when possible but must not lose focus on the primary goal of greenhouse gas emissions reductions.

II. Suggestions on the presentation of data and associated policy analysis for the January Discussion Draft.

A. General suggestions on the Discussion Draft policy analysis.

B. ARB should release the PATHWAYS data that supports the Scoping Plan process for stakeholder review and input.

C. ARB should invest in new modelling capabilities that allow for direct modelling of different carbon pricing policies.

III. Comments on Specific Policy Recommendations and Program Measures

A. The Scoping Plan and the Integrated Resource Planning Process.

B. Opportunities for renewable natural gas.

C. Zero-Emission vehicles are critical to reaching the State's goals,

IV. Conclusion

**I. PG&E COMMENTS ON THE PROPOSED SCOPING PLAN SCENARIOS**

PG&E supports California's environmental goals and, as noted above, strongly supports well-designed and sustainable Cap-and-Trade and LCFS programs, as well as other existing complementary measures like the Renewables Portfolio Standard (RPS), to help achieve the 2030 GHG reduction goals. We agree with ARB that Assembly Bill (AB) 197 does not preclude any specific mechanism for achieving the 2030 GHG goals, including the Cap-and-Trade Program.

**A. PG&E Supports the Inclusion of Cap-and-Trade in the Draft Scoping Plan**

Of the three policy scenarios presented, PG&E recommends the "Draft Scoping Plan Policy Scenario" (Draft Scenario) as the scenario best suited for further study, incremental modification,

and eventual adoption as the 2030 Scoping Plan. The Draft Scenario relies mainly on a suite of direct measures already in place in California supported by the existing Cap-and-Trade Program, and as such offers a number of advantages over the alternatives.

For one, by building on existing regulations, the Draft Scenario avoids increased administrative burden that would be required to develop and implement entirely new regulatory programs. Additionally, the existing policies are well developed, and are already achieving meaningful GHG emissions reductions.

Additionally, a major advantage of the Draft Scenario is its inclusion of Cap-and-Trade, a critical measure in California's effort to reach a 40 percent reduction in GHG emissions by 2030. By providing flexibility in how and when GHG reductions are achieved, the program helps ensure that reductions are achieved cost-effectively while still ensuring that GHG emissions stay under the cap. Cap-and-Trade also offers the opportunity for additional economic and environmental benefits through linkage with other carbon markets, and serves as a de facto environmental backstop should other program measures underperform.

Cap-and-Trade's value as a backstop is a merit worth repeating because of the uncertainty in GHG emissions forecasting that was highlighted by ARB's economic advisor at the workshop. Because of the inherent uncertainties involved in modeling the next 15 years and beyond, even ARB's business-as-usual forecasting could diverge widely from actual emissions going forward, meaning that direct measures designed to achieve proscribed amounts of GHG reductions, even if they perform as planned, could still result in the state not achieving its goals. Cap-and-Trade provides an emissions reduction backstop that dynamically drives the state towards its GHG reduction goals, which is a critical component in such a complex and uncertain future.

Finally, as the incoming federal administration appears to be turning away from a focus on climate policy, California's climate leadership is more important than ever. The Cap-and-Trade Program will allow California to link to subnational jurisdictions' emerging carbon markets for an expanded environmental impact while enjoying the economic benefits of a larger and more efficient market. The 2030 Scoping Plan must include Cap-and-Trade as the pathway to accomplishing the most ambitious goal of AB 32, which is to "facilitate the development of integrated and cost-effective regional, national, and international greenhouse gas reduction programs."

### 1. Specific Changes to the Cap-and-Trade Program

The Discussion Draft includes reference to potential changes to the Cap-and-Trade Program that would limit the usage of offsets and change allowance allocation provisions. ARB should not limit the use of offsets post-2020 as these instruments help reduce GHG emissions and GHG compliance costs. For one, offsets represent a real environmental benefit. ARB has set up a strict

regime to ensure that offset credits represent a real, quantifiable, enforceable, verifiable, additional, and permanent GHG reduction. Offsets also often achieve these reductions in tandem with environmental and economic cobenefits.<sup>1</sup>

Second, offsets help lower GHG compliance costs to customers as there can be compliance cost savings from purchasing offsets. Offsets also provide additional sources of compliance instrument supply, which helps reduce the overall cost of compliance instruments in the market. This important cost-containment function will become even more important as the Cap-and-Trade Program becomes more stringent through 2030. Any consideration of reducing the offset limit must include a thorough analysis of the effects on the Cap-and-Trade market, compliance costs, and emissions. As part of any such review, PG&E encourages ARB to present the results of scenarios with offset usage limits higher than eight percent as well as lower usage limits. A higher offset usage limit may be appropriate post-2020 as a cost-containment tool amidst an increasingly stringent program.

Additionally, PG&E opposes the identified changes in allowance allocation to the extent that they could affect allocations that benefit customers of electric and gas distribution utilities. Such allocations are critically important for mitigating customer cost impacts and the changes would have a negligible effect on emissions reductions at electric and natural gas covered facilities. If the State can achieve the necessary emission reductions more affordably for Californians, it should design its policy to do so.

## **B. Alternative 1 – Direct Measures**

The Alternative 1 Scoping Plan scenario proposes both new direct measures and enhancements to existing requirements in order to reach the 2030 goals in the absence of a market-based compliance mechanism. This scenario suffers relative to the Draft Scoping Plan Scenario in both its cost to the California economy - almost five times as expensive in 2030 as the cost of the Draft Scenario according to ARB analysis - and its inability to guarantee the desired level of emissions reductions.

There is broad consensus among environmental economists that market-based mechanisms that put a price on GHG emissions provide the most cost-effective path to lowering those emissions. Market-based mechanisms are ideally suited to respond automatically to unexpected changes in the market (including technology development and costs) and provide rational incentives for compliance entities to invest in least-cost abatement opportunities in real-time. Alternative 1

---

<sup>1</sup> Pacific Gas and Electric Company's Comments on the Air Resources Board's Proposed Modifications to the 2016 Cap-and-Trade Amendments. November 4, 2016. <https://www.arb.ca.gov/lists/com-attach/57-ct-amendments-ws-VyddPFMNUmRWDwRn.pdf> p. 5-6.

includes no such flexible, market-based mechanism, and as such will inevitably be more expensive as entities work to comply on a prescribed timeline with administratively predetermined compliance requirements. The lack of compliance flexibility also increases the risk of GHG leakage as entities that could comply under Cap-and-Trade but cannot meet the prescribed requirements cost-effectively relocate out of state.

Additionally, direct measures can fail to achieve their expected emission reduction goals. In the absence of an economy-wide cap like that provided by Cap-and-Trade, there is no backstop to ensure that the economy-wide emission goal is reached even if certain program measures fail to perform.

Finally, PG&E notes that Alternative 1 also lacks a mechanism for generating revenue that can be used for climate mitigation activities, like the Greenhouse Gas Reduction Fund that currently is funded by Cap-and-Trade and earmarked for climate mitigation projects, including projects in disadvantaged communities.

### **C. Alternative 2 – Carbon Tax**

The Alternative 2 Scoping Plan scenario replaces Cap-and-Trade with a carbon tax at unspecified levels. While a carbon tax is technically a “market-based mechanism,” it does not offer the same degree of environmental certainty as Cap-and-Trade.

The primary advantage of a carbon tax relative to other carbon regulation regimes is that it provides a high level of carbon price certainty. Once a tax is set, businesses have a reasonable expectation of their carbon costs, which can support low-carbon investment. We also note that a carbon tax could be used for Clean Power Plan (CPP) compliance under a state measures plan and would require similar administrative steps as ARB’s Proposed CPP compliance plan (e.g., modeling to demonstrate CPP covered power plants would hit CPP targets, a CPP backstop mechanism).

However, it is difficult to set a carbon price that achieves the desired level of emission reductions. British Columbia, for example, has had a carbon tax of \$30 per tonne in place since 2008. However, the most recent data available shows that taxed emissions have continued to rise year-to-year from 2011-2014. While the obvious solution in a situation like this might be to increase the carbon tax, such action would likely face political opposition.

A carbon tax would also preclude California’s ability to link with other jurisdictions and thus deprive the state of potential to achieve greater compliance cost savings and broader GHG reductions. It would also reduce the likelihood of consistent carbon pricing in the Western electricity market, potentially introducing distortions into the electricity market that would reduce the GHG reduction benefits of regional electricity market integration.

Finally, PG&E notes that ARB currently lacks legislative authority to develop a new carbon tax program, and gaining that authority would require a supermajority vote in California's legislature for such a program which has thus far never been proposed. It would be imprudent to make California's 2030 Scoping Plan and the goals it is designed to achieve contingent upon a yet unknown legislative outcome.

#### **D. PG&E Supports Studying a 3rd Scoping Plan Alternative**

As ARB recognizes, California's 2030 GHG goals are among the most aggressive in North America. To achieve the aggressive GHG goals at acceptable costs to California households and businesses, it is imperative that California's suite of policy mechanisms is as economically efficient as possible. This certainly includes policies, such as carbon pricing, which ensure economy-wide investment decisions incorporate consideration of GHG emissions and provide flexibility to emission sources in their compliance strategies.

We acknowledge that there may also be a role for additional complementary measures where there are market failures or other compelling justification, such as the LCFS. However, the three portfolios of policies included in the Discussion Draft are overly prescriptive. This is illustrated in figure III-2, which shows the limited role of carbon pricing in driving GHG reductions even in ARB's most-flexible alternative. We encourage the ARB to include in the draft 2030 Scoping Plan another alternative in which California's Cap-and-Trade Program drives a larger share of the GHG reductions. Specifically, we recommend a new scenario that includes the Cap-and-Trade Program and known commitments where targets are already specified (e.g., Renewable Portfolio Standard, energy efficiency), and an expanded and sustainable LCFS program; this alternative would not otherwise increase the stringency of known commitments where targets have not been specified in legislation or rulemaking (e.g., Integrated Resource Planning (IRP) requirements) nor include new measures. It is likely that a more flexible alternative like this would lower the costs of achieving the 2030 goal, both as modeled and in practice; at minimum, modeling such an alternative would help provide additional information regarding the tradeoffs policymakers face in determining how prescriptive to be regarding GHG abatement pathways.

We appreciate that California already has many known commitments that will support achievement of the 2030 GHG goals. However, we encourage ARB to only include programs in the known commitments category where the stringency of the program has already been determined (e.g., 50 percent RPS). Programs for which modified stringency is being considered as part of the Scoping Plan itself or in future rulemakings (e.g., IRP requirements, LCFS) belong in a separate category so that policymakers and stakeholders can directly evaluate the proposed stringency levels as part of ARB's 2030 Scoping Plan analysis.

### **E. Scoping Plan Measures Should Achieve Cobenefits Where Possible but Must Not Lose Focus of Primary Goals**

Environmental justice concerns have been an important element of California’s climate policy since its inception. PG&E agrees with the Discussion Draft that, “The capacity for climate resilience is significantly driven by living conditions and the forces that shape them, such as income, education, housing, transportation, environmental quality, and access to services.” Similarly, PG&E agrees that strategies to address these underlying factors will help make communities more resilient in the face of climate change, and likely reduce health and other inequities that are a reality in our state.

Many of the policies that comprise the Scoping Plan offer opportunities for environmental and economic cobenefits that help address the underlying conditions listed above, and those opportunities should be seized. However, PG&E also notes that issues like poverty, education, housing, and others are significant issues that demand their own suite of policies for reducing inequities and improving the lives of Californians. While achieving cobenefits is a key element of the Scoping Plan, the pursuit of such cobenefits should not jeopardize the ability of program measures to effectively achieve the emission reduction goals that the Scoping Plan is designed to reach. Additionally, repurposing Scoping Plan programs as levers for achieving other policy goals may result in costs that ultimately negate any social benefit achieved.<sup>2</sup> PG&E looks forward to the additional AB 197 analysis in the January Discussion Draft and to continuing the discussion on how California can achieve its climate goals in an equitable manner.

## **II. POLICY ANALYSIS AND MACROECONOMIC MODELLING**

### **A. Suggestions on Policy Analysis in the Discussion Draft**

We appreciate ARB for laying out in some detail the criteria it uses to evaluate Scoping Plan alternatives and for providing qualitative evaluations of the three alternatives. While all are relevant criteria, we believe particular emphasis is warranted on achievement of the GHG emission goal (including protecting against leakage), cost-effectiveness (including compliance flexibility), and leadership (including programs that can be exported to other jurisdictions). In addition, while cost will be addressed in more detail in Chapter V, we encourage its inclusion in some form (e.g., cost-effectiveness or total cost) as its own column in Table III-3 to help provide additional clarity to the tradeoffs across alternatives. This would be similar to ARB’s current treatment of GHG reduction, which is included in Table III-3 in a summary manner and will be addressed in more detail in Chapter V.

---

<sup>2</sup> *Ibid*

In addition, we have several suggestions regarding the Table templates in Chapter V. First, we encourage ARB to include the same rows in the emissions table as it does in the cost table; this is not the case in the discussion draft version. Second, we support the discussion draft's approach to include both known commitments and new and modified measures in the row; this detailed information by measure is critical to assessing the tradeoffs across measures and broader plan alternatives. Third, on the cost metric, we encourage ARB to include both estimates of total (or average) cost as well as estimates of marginal cost. The latter can be particularly helpful in judging the proposed stringency of measures, so it is critical to include. After all, policymakers' choices include both which measures to include as well as the stringency level of each measure.

Regarding the initial evaluation itself, as reflected in Table III-3, we encourage ARB to bring into its evaluation of the "ability to reduce GHGs to meet 2030 target" criteria a discussion of uncertainty that ARB itself (through the sensitivity analysis) and its academic advisors have highlighted. There is much uncertainty in both the business-as-usual GHG emission forecast and the expected GHG abatement from complementary measures. This uncertainty is important to include in reasonably evaluating the Scoping Plan alternatives on the "ability to meet the 2030 GHG target" criteria. In particular, Alternative 1 would provide significantly less certainty than the Draft Scoping Plan Scenario even if the 5 MMT CO<sub>2</sub>e shortfall in the Pathways modeling is closed.

### **B. Access to Macroeconomic Modelling**

ARB and E3 utilize a variety of crucial input data in the PATHWAYS model that together determine the estimated impacts of the Scoping Plan scenarios. In order for stakeholders to fully evaluate the assumptions and results of Scoping Plan scenarios, stakeholders need access to data inputs and outputs. Only with full data transparency would stakeholders be able to perform robust and accurate analysis on the proposed scenarios and potential alternatives. Timely access to all data utilized in the modeling is crucial for enabling all stakeholders to provide informed and productive feedback. In prior stakeholder processes, the ARB released all PATHWAYS modeling files. We urge the ARB to follow precedent in releasing all modeling data to maintain data-transparency and the integrity of the stake-holder process.

### **C. Enhancing ARB's Modelling Capability**

We also reiterate PG&E's comments on the November 7<sup>th</sup> ARB workshop regarding enhanced modeling for improved public discussion.<sup>3</sup> In particular, we encourage ARB to invest in new

---

<sup>3</sup> Pacific Gas and Electric Company Comments Re: 2030 Target Draft Scoping Plan Workshop held November 7, 2016. November 21, 2016. <https://www.arb.ca.gov/lists/com-attach/51-sp2030scenarios-ws-UijSMwFfAzUExVU2.pdf> p. 8-9.



modeling capabilities that enable it to model carbon pricing policies (e.g., cap-and-trade, carbon taxes) directly. We continue to believe this is a major gap in ARB's current modeling approach and that remedying this gap would lead to a more robust and informed public discussion regarding 2030 Scoping Plan alternatives.

### **III. COMMENTS ON SPECIFIC POLICIES AND PROGRAM MEASURES**

#### **A. The Scoping Plan and Integrated Resource Planning Process**

As the Discussion Draft recognizes, the electric sector has already made significant strides in reducing GHG emissions; this will continue through 2030 as the sector integrates increasing generation from renewables, expands energy efficiency, and reduces imports from coal-fired power plants, while supporting GHG reduction in other sectors through electrification. Accordingly, load-serving entities (LSEs) are already planning for significant GHG reduction, encouraged by a suite of policies including RPS, energy efficiency, and cap-and-trade. PG&E has supported, and continues to support, these goals and policies, including SB350.

At the same time, PG&E and other LSEs have also encouraged the development of new approaches that provide greater flexibility in how LSEs go about achieving California's clean energy and climate goals. We appreciate and support the ARB's recognition that the intent of the new IRP process is to provide this flexibility, with the ultimate goal of allowing GHG reductions to be achieved cost-effectively. A greater focus on cost-effectiveness is needed for the 2030 Scoping Plan and its individual measures such as the IRP. This focus is critical to ensuring affordable electric customer bills in the future. This focus can also help ARB maintain public support for California's 2030 GHG reduction program, and satisfy the SB350 requirement that the IRP process deliver reductions in the electric sector emissions, minimize impacts on ratepayers' bills, and maintain electric service to customers at just and reasonable rates.

#### 1. Recommendations

In the preliminary scenarios presented at the November 7, 2016 workshop, and further explained in additional documentation provided on December 2, ARB does not demonstrate how the electric sector emission modeling results are consistent with the SB 350 requirement that the IRPs minimize impacts on ratepayers' bills and maintain electric service to customers at just and reasonable rates. The following details how ARB could address these concerns and provide for a successful implementation of the IRP process.

SB 350 makes ARB responsible for setting electric sector targets for the CPUC and CEC IRP processes.<sup>4</sup> Although SB 350 does not provide a particular approach for ARB to allocate emission reduction targets among sectors of the economy, SB 350 does provide some guidance in the form of objectives for the IRP processes. The most notable objective is that the LSE IRPs minimize impacts on ratepayers' bills and maintain electric service to customers at just and reasonable rates. As a result, PG&E recommends that ARB:

1. Determine the cost of reducing emissions in different sectors of the economy and via different measures in those sectors as part of the Scoping Plan Update. Essentially, the results can be expressed as sector abatement supply curves.
2. Use the available supply and cost of CO<sub>2</sub> abatement in each sector to determine the least cost combination of measures that can achieve the state's GHG reduction goal.
3. Translate this optimal combination of least-cost measures into sector targets for use in planning, including the CPUC and CEC IRP processes.
4. Work collaboratively with other state agencies and the CAISO to ensure that the electric sector GHG reduction targets are operationally feasible and deliver least-cost solutions considering the cost of maintaining system and local reliability and operating flexibility needed to operate the system reliably.

## 2. Achieving Cost-Effectiveness GHG Reductions is Critical to Electrification and Will Require Flexibility

The issue of cost-effectiveness is particularly important for the electric sector, which is fundamental to supporting economy-wide decarbonization through electrification. Programs that require cost-ineffective resources or that saddle the electric sector with higher abatement costs relative to other sectors will undermine California's efforts to reduce emissions through electrification.

Achieving cost-effectiveness will require at least three kinds of flexibility:

1. Flexibility for individual LSEs to determine the optimal way to reduce GHG emissions, beyond existing mandates,
2. Flexibility to ensure abatement is efficiently allocated across LSEs within the electric sector, and

---

<sup>4</sup> See Section 454.52 of the Public Utilities Code with respect to the CPUC IRP process, and Section 9621 with respect to the CEC IRP process.

3. Flexibility to ensure abatement is efficiently allocated between the electric sector and other sectors.

As the state agencies continue to move forward with fleshing out the new IRP process, we encourage a focus on implementation approaches that harness all of these flexibilities. In particular, we are concerned that IRP implementation approaches that allocate emissions across sectors or across LSEs through an administrative process – by establishing mass or rate based sector or LSE-specific GHG targets –rather than through a market-based process (i.e., through the operation of the Cap-and-Trade Program) are ill-suited to achieving cost-effective outcomes.

Instead, we support IRP implementation approaches that utilize GHG prices<sup>5</sup>. We prefer GHG prices that reflect the marginal cost of achieving the economy-wide goal (i.e., from the Cap-and-Trade Program), which would utilize all three flexibilities. Even GHG prices that reflect the marginal cost of achieving a sector goal would utilize the first two flexibilities, an improvement over alternatives that only capture the first flexibility. In addition to better facilitating cost-effective outcomes, we expect these GHG price-based approaches to be administratively easier to implement for the relevant state agencies.

As the agencies develop the new requirements associated with the IRP program we highlight that California’s policy suite already encourages consideration of GHG reduction in LSE planning. The ARB well-summarizes the features of the Cap-and-Trade Program that encourage this consideration in the Discussion Draft section on the Industry sector (p.45):

*“The Cap-and-Trade Regulation establishes a declining limit on major sources of GHG emissions, and it creates a powerful economic incentive for major investment in cleaner, more efficient technologies... The increasing annual floor price for allowances and reduction in annual allowance budgets creates a steady and sustained pressure for covered entities to reduce their GHGs.*

*The Cap-and-Trade Program is designed to achieve the most cost-effective statewide GHG emission reductions; there are no individual or facility-specific GHG emission reduction requirements. Each entity covered by the Cap-and-Trade Regulation has a compliance obligation that is set by its GHG emissions over a compliance period, and entities are required to meet that compliance obligation by acquiring and surrendering allowances in an amount equal to their compliance obligation.*

*Facilities that emit more GHG emissions must surrender more allowances or offset credits, and facilities that can cut their emissions need to surrender fewer compliance instruments. Entities have flexibility to choose the lowest-cost approach to achieving*

---

<sup>5</sup> Option 4a in the CPUC Energy Division whitepaper.

*program compliance; they may purchase allowances at auction, trade allowances and offset credits with others, or take steps to reduce emissions at their own facilities.”*

This description of the Cap-and-Trade Program clearly applies to the electric sector as well.

If greater emissions reductions are asked of electric sector, a new, load-based GHG program is not the preferred mechanism. California actively considered the merits of a load-based GHG approach relative to a source-based one as part of the initial Scoping Plan and wisely chose the source-based approach. Load-based approaches are significantly more complex, requiring tracking contracts and market transactions to assign clean and emitting resources to loads. In addition, there is currently significant change in the customer loads themselves (e.g., the growth of community choice aggregators), so any load-based GHG program would need to frequently revise its targets as loads shift among LSEs. Also, California is obviously not working from a blank slate; ARB and covered sources have invested significant resources in establishing a source-based GHG reporting infrastructure. Any new GHG program should utilize existing GHG program infrastructure from the Cap-and-Trade and mandatory reporting programs.

### 3. ARB Should Clarify the Venues and Timelines that Will Shape the IRP Process

Finally, we encourage ARB to provide additional clarity regarding the process and venues where decisions will be made that shape the IRP process. In particular, we encourage ARB to clarify whether any sector target range will be determined in the Scoping Plan process itself or through a stand-alone ARB rulemaking. If the ARB seeks to establish a sector planning target range through the Scoping Plan, we encourage ARB to include the IRP sector planning target itself as a Scoping Plan measure and to provide the same suite of information on abatement and cost that it is planning to release for other measures so that it can be properly assessed. We also encourage ARB to clarify which agency (and associated process) will determine the range of any LSE-specific planning targets.

## **B. Renewable Natural Gas**

While significant technical hurdles remain to be addressed, PG&E is committed to investigating opportunities to reduce carbon emissions in the state by utilizing renewable natural gas (RNG). PG&E supports the cross-sector relationships illustrated on pages 35 and 36 of the Discussion Draft which denote the ways in which various feedstocks can be utilized to decarbonize the energy and transportation sectors.

However, there are real barriers that must be overcome if more RNG is to be utilized in the state, including cost, safety, and reliability concerns. Renewable electricity has made great strides in California in part, as the Discussion Draft notes, because of funding programs that have incented

utility and consumer-scale renewable energy projects. A similar suite of incentive programs will be critical in spurring the development of RNG.

Finally, the Discussion Draft should consider the opportunities for renewable compressed natural gas and liquid natural gas (R-CNG and LNG) to displace traditional fossil fuels in the transportation and shipping sectors. Not only do these fuels have a lower carbon footprint, they result in fewer criteria pollutant emissions, providing air quality cobenefits that are particularly important in disadvantaged communities near ports and shipping hubs.

### **C. Zero-Emission Vehicles and Electric Vehicle Infrastructure**

PG&E strongly supports California's ambitious goals for the adoption of natural gas and electric vehicles (including hydrogen fuel cell electric vehicles) as part of the effort to reduce emissions from the transportation sector. We agree that California must accelerate the deployment of alternative fueling infrastructure in order to catalyze greater consumer adoption of electric vehicles, and to that end we are pleased to have recently received the CPUC's final decision on PG&E's proposal to build 7,500 EV. Furthermore, we agree that the transportation sector can be electrified using both electric and hydrogen technologies.

PG&E cautions against providing "low cost, and potentially free, electricity" for EVs as a measure to encourage EV adoption.<sup>6</sup> For one, other utility customers would bear the cost of subsidizing the electricity, which is particularly problematic considering that lower-income customers are less likely to own EVs and thereby benefit from the cost shift. Additionally, free electricity inoculates drivers from time-of-use price signals and encourages inefficient energy use.

Moreover, there are ways to help electricity, and EVs specifically, achieve cost parity with fossil fuels, including energy storage and other technology solutions that can manage charging around electricity rates, rebates from the LCFS program, and point-of-sale incentives that reduce the cost of purchasing the vehicle.

### **IV. Conclusion**

Climate change is a global problem that requires a broad array of solutions to tackle. California can and should provide leadership to create GHG reduction programs for the rest of the world to replicate. The development of a thorough and thoughtful 2030 Target Scoping Plan is crucial to putting our state on a path to meet the SB 32 goal of reducing GHG emissions in California to 40

---

<sup>6</sup> P 56

PG&E Comments on the Discussion Draft 2030 Target Scoping Plan Update  
December 16, 2016  
Page 14

percent below 1990 levels by 2030. Thank you for considering PG&E's feedback on the Discussion Draft 2030 Target Scoping Plan Update.

Sincerely,

Mark Krausse  
Senior Director  
Pacific Gas and Electric Company