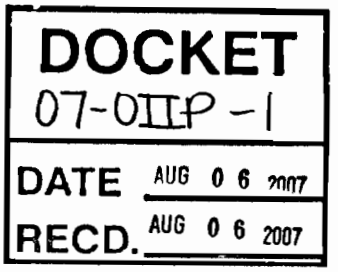
DOCKET 07-OIIP-01
CALIFORNIA ENERGY COMMISSION
COMMENTS OF PACIFIC GAS AND ELECTRIC COMPANY (U 39 E) ON MARKET ADVISORY COMMITTEE RECOMMENDATION OF "FIRST SELLER" REGULATION OF GREENHOUSE GAS EMISSIONS UNDER AB 32



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I. INTRODUCTION

Pursuant to the ruling of the Administrative Law Judges dated July19, 2007 (ALJs' Ruling), Pacific Gas and Electric Company (PG&E) provides its comments on the proposal by the Governor's Market Advisory Committee that the "first seller" approach be used for the regulation of greenhouse gas emissions in the electric sector under AB 32. PG&E's comments are organized in three sections: (1) An executive summary of PG&E's overall comments; (2) Responses to Questions 1- 42 in the ALJs' Ruling, which generally relate to policy and implementation issues regarding the "first seller" proposal; and (3) Attachment 1 to these comments, which provides responses to Questions 43- 53 in the ALJs' Ruling, relating to legal issues regarding the "first seller" proposal.

II. EXECUTIVE SUMMARY OF PG&E'S COMMENTS ON "FIRST SELLER" REGULATION OF GREENHOUSE GAS EMISSIONS IN THE ELECTRIC SECTOR

PG&E agrees with the Governor's Market Advisory Committee that the "first seller" point of regulation is preferable to a "load based cap" for regulation of greenhouse gas emissions (GHGs) from the electric sector under AB 32. The first seller approach is preferable because it is better than a load based cap at meeting the key public policy criteria for achieving AB 32's ambitious GHG reduction goals:

A. Market Efficiency.

The first seller approach is more economically efficient than a load based cap, because power will be "least cost" dispatched based on the costs of GHGs as well as other variable and fixed costs of power production. Under a load based cap, the costs of GHGs will not be included in the price of electricity for economic dispatch purposes. Moreover, the first seller approach provides much more direct price signals to utilities and power sellers, because the entities required to comply with AB 32—first sellers and deliverers of power in the state—will have a more clear "line of sight" to the sources of the GHG emissions being regulated. In contrast, utilities and other load serving entities (LSEs) will have a clear "line of sight" to a significantly smaller amount of purchased power. The GHG emissions from in-state generation and power imports from out of state facilities with which LSEs have no ownership or operational responsibility are significant.

B. Environmental Integrity.

The first seller approach is better than a load based cap at avoiding GHG emissions "leakage," because the first seller approach will directly internalize the costs of GHGs in electricity generated and bid into California power pools, such as the California Independent System Operator (CAISO) integrated forward market. In contrast, under a load based cap, importers of power into California and in-state generators would not reflect GHG costs in their electricity bidding practices, thus creating more "leakage" of GHG emissions between high emitting and low emitting sources.

In addition, the first seller approach, unlike a load based cap, aligns the regulation of in-state sources of GHG emissions with the ability to track responsibility

for those emissions under AB 32, because in-state sources would comply with AB 32 emissions requirements directly.

C. Customer Cost.

Customer costs under the first seller approach are likely to be about the same under a load based cap. Under a first seller approach, dispatch costs will internalize power costs, with the profits obtained by high GHG emitting producers squeezed by the need to internalize the costs of GHG compliance in competition with lower emitting resources. Under a load based cap, power costs will not internalize GHG compliance costs, and high emitting resources will not see a direct market signal but may see an indirect signal as LSEs will pay GHG compliance costs outside and separate from the wholesale market.

D. Administrative Convenience.

The first seller approach is much easier to administer than a load based cap, because the first seller approach more accurately tracks both in-state emissions sources and sources associated with imports from out-of-state. The load based cap relies on less accurate, more administratively complex attribution, conversion and allocation of source-based emissions into load-based emissions.

E. Electricity Resource Portfolio Management.

The first seller approach may be better than a load based cap at fulfilling California's resource planning goals, such as customer energy efficiency, renewable power, and the "preferred loading order." On the one hand, the first seller approach, like a load based cap, maintains and does not affect pre-existing State energy policies that mandate and fund CEE and renewable energy, such as the preferred loading order and the Renewable Portfolio Standard (RPS.) On the other hand, the first seller approach,

unlike the load based cap, provides a more direct incentive for additional investment in renewable and GHG-reducing technologies because less generation is likely to be assigned a default emissions rate. This provides more opportunity for the generator to directly realize financial benefits for investing in GHG reducing technologies.

F. Consistency with Other Proposed Federal and Regional GHG Programs.

The first seller approach is much easier to transition to a federal GHG program, because a federal GHG program is much more likely to be source-based rather than load based, thus allowing California's first seller approach to be easily converted to the federal program. In contrast, a load based cap cannot be transitioned directly to a federal source-based program, because the points of regulation would be different, leading to redundant and costly regulation.

In addition, the first seller approach is more consistent with potential regional GHG programs in the West, because the first seller approach will avoid the double counting of emissions attributable to imports across state boundaries under a regional program. In contrast, a load based cap by definition necessarily requires approximation and possible double counting of emissions associated with power imported across state boundaries.

G. Legal Issues.

As discussed in more detail in Attachment 1, both a load based cap and the first seller approach raise legal questions under the Commerce Clause to the U.S. Constitution and under the Federal Power Act. However, as the Governor's Market Advisory Committee pointed out and as the CPUC implicitly acknowledged in its legal analysis of similar issues raised regarding the GHG emissions performance standard

adopted under SB 1368, these legal issues are not materially different under either the first seller approach or a load based cap. For these reasons, the legal issues can and should be addressed independent of the point of regulation chosen under AB 32.

PG&E provides a more detailed discussion of the policy, implementation and legal issues associated with the first seller approach below, as part of its responses to the questions listed in the ALJs' Ruling.

III. RESPONSES TO POLICY AND IMPLEMENTATION QUESTIONS

A. Basic Definitions

It appears that the first-seller concept discussed in the Market Advisory Committee report can be defined in the following manner: (a) for in-state California generation, the first seller is the generator, in all cases; and (b) for imported power, the first seller is the entity that first delivers electricity at a point of delivery within California.

Utilizing the above description, for purposes of this ruling, we use the terms "deliverer" and "first-seller" interchangeably. This description is also intended to cover any entities responsible for electricity intended to be scheduled into California, including retail providers, brokers, marketers, or the California Independent System Operator (CAISO).

There are two possible market designs that would utilize this description of deliverer/first-seller. The first is a market design in which the deliverer/first-seller is both the entity that reports its GHG emissions as well as the point of regulation (the entity required to comply with AB 32). In the second option, the deliverer/first seller would report its GHG emissions, but the retail provider would be the point of regulation. Except where specifically indicated below, all of the questions in this ruling refer to the first option, where the deliverer/first seller is both the point of regulation and the entity required to report its emissions.

1. Is the above description of this deliverer/first-seller approach accurate? Comment on whether you agree with this description, and if not, explain how the first-seller approach should be described differently and why.

PG&E agrees that the above description of the first seller/deliverer approach is conceptually correct, but not precisely accurate.

First, for in-state California generation, the first seller/deliverer is the entity

which owns the power and which is the first such entity to deliver or sell the power at a point of delivery on the transmission grid within California. This may be identical to the owner or operator of the generating unit, because the owner or operator of a California generating unit is usually the first to deliver the power to the "bus-bar," which is usually the first delivery point on the transmission grid in California. However, it is also possible that the first entity delivering or selling the power is an entity other than the actual owner of the generating unit or the entity operating the unit. In this case the first seller/deliverer, the entity that markets or first sells the power, may not be the same as the owner or operator of the unit.

Second, for imported power, the definition is the same as for in-state power, i.e. the entity which owns the power and which is the first such entity to deliver or sell the power at a point of delivery on the transmission grid within California. This may include retail providers, marketers, out-of-state utilities importing power into California, or the California Independent System Operator (CAISO) if they meet the definition. However, the above description is incorrect in implying that the definition is based on "responsib[ility] for electricity intended to be scheduled into California," because the mere scheduling or transmission of imported power into California is insufficient to make the scheduling or transmitting party a "first seller or deliverer." Transmission services can be and are distinct transactions from the "first sale" or "first delivery" of power at a delivery point in California, and therefore the mere participation in the scheduling or provision of transmission services for imported power would not make an entity a "first seller" or "first deliverer" for purposes of responsibility for the GHG emissions associated with the electricity commodity being transmitted or scheduled.

2. For imports, who has ownership of electricity when it enters California? Is the "Purchasing/Selling Entity" (on the North American Electric Reliability Corporation (NERC) E-tag) listed at the first Point of Delivery in California the deliverer/first seller? If this is generally the case, are there any exceptions?

The ownership of power when it enters California is a function of the contractual relationship between the seller and buyer of the electricity. Under standard master power sales agreements, including those generally in use in Western wholesale power markets, the title (and therefore ownership) of power passes from the seller to the buyer upon delivery by the seller to the buyer at the delivery point specified in the contract. Thus, the entity with ownership of or title to the power at the first point of delivery in California is the importer or first seller of the power. The identity of the first seller is substantiated primarily by E-tags. For those imports which have e-tags, the "PSE" ("purchasing or selling entity") listed at the first "POD" ("point of delivery") in California would be the deliverer/ first seller. Exceptions are discussed below.

3. Are there any inter-Balancing Authority imports not accounted for by E-tags? If so, describe these instances and explain how these imports can be accounted for.

AB 32 requires the tracking and regulation of emissions associated with the imports of power into California generally, and thus the following discussion of inter- and intra- balancing authority imports applies to both the first seller/deliverer approach and to a load-based cap.

All transactions between balancing authorities are required to have NERC E-tags, which will provide information to substantiate the importer, the import quantities, and the region of origination of the imports ("PNW" - "Pacific Northwest," or "DSW" – "Desert Southwest"). E-tags are accepted and validated by all parties with possession of

power and all balancing authorities involved in the physical path, such as the CAISO, SMUD and LADWP. According to mandated WECC business practices, all exchanges between balancing authorities must be documented through E-tags. The E-Tag system is the primary means of notification of emergency curtailments; in the event of outages, curtailments or overloads, the E-tags are corrected and reloaded.

In some cases, balancing authority boundaries cross state lines and therefore in some cases, power may be imported into California without the benefit of E-tags. In these cases, the importing entities may be identified based on documentation by the balancing authorities in the state for purposes of accounting for such intra-balancing authority imports into California. For example, PacifiCorp's control area overlaps California and Oregon, and therefore imports from Oregon within this control area may cross the state boundary but not balancing authority boundaries. The CARB, PUC, and CEC may wish to convene a technical working group including the balancing authorities in the state to review the information sources for these intra-balancing authority imports into California.

For purposes of identifying inter- and intra- balancing authority imports into California, the balancing authorities in California are:

- California Independent System Operator (CAISO)
- Imperial Irrigation District (IID)
- Los Angeles Department of Water and Power (LADWP)
- PacifiCorp — West (PACW)
- Sacramento Municipal Utility District (SMUD)
- Sierra Pacific Power Company (SPP)

- Turlock Irrigation District (TID)
- Western Area Power Administration, Lower Colorado Region (WALC) (possible- for Needham Municipal Utility District)

PG&E does not have any intra-balancing authority imports but it is generally publicly known that certain generation resources may serve California load without having E-tags. This may include energy from Intermountain and Hoover Dam, energy serving PACW and SPP, and power imported using CAISO facilities in Northern Mexico. Imports from these facilities can be accounted for using information from the appropriate market participants, scheduling coordinators and balancing authorities.

Again, it is important to note that this tracking of inter- and intra-balancing authority imports would need to occur under the first seller/deliverer approach or a "load-based cap" approach in order for California to accurately assess its electricity imports.

4. What agency could/would identify importing contractual parties? Is there already a state or federal official compilation of these market participants?

Under AB 32, like other air quality laws and regulations, the California Air Resources Board (CARB), the agency with responsibility to regulate GHG emissions, would be the entity that would identify importing contractual parties and require those parties to report emissions associated with their sales and deliveries of power into the state.

The WECC and balancing authorities such as the CAISO maintain an official compilation of market participants using the transmission grid in California and throughout the West. All owners, operators and users of the bulk electric system are required to register with the WECC. This information is available at:

http://www.wecc.biz/wrap/registration/currentWECC%20Entity%20Registration.pdf

In addition, the WECC maintains the Western Interchange Tool, which is a database of all of the NERC E-tags in the WECC.

In addition, lists of wholesale electricity market participants and related transactions are reported to or gathered by other entities, such as the California Energy Commission, the Federal Energy Regulatory Commission, the U.S. Department of Energy, as well as commercial trade press and newsletters. While AB 32 authorizes the CARB to require reporting and compliance by all covered entities independent of these sources of information, it would be able to use these various third party sources as a supplement to its own auditing and verification functions.

5. Could the deliverer/first-seller be identified by means other than the NERC E-tag? If so, please explain.

Yes. Under AB 32, as under most environmental statutes, complying and reporting entities will be under the legal obligation to identify themselves and report their imports to the CARB. These reporting requirements would be needed under either the first seller approach or under a load-based cap. For example, as CARB's AB 32 reporting protocols note, emissions from combustion are reported by facilities or other reporting entities under reporting requirements promulgated by the regulatory authority, e.g. US EPA under 40 Code of Federal Regulations Part 75. Thus, under AB 32, CARB would require all applicable entities registered in the WECC to report their import-based emissions if they import power into California for ultimate consumption in California.

For inter-balancing authority imports, information could be substantiated through independent auditing and verification using the schedules developed by the importers and balancing authorities. E-tags would be a more detailed source of information and

could be obtained from the importers through verification and auditing.

For intra-balancing authority imports, documentation generated by the importers and intra-balancing authority transactions would be used.

Again, these reporting, verification and auditing activities to accurately identify imports would occur regardless of whether the point of regulation is the load serving entity or the first seller/deliverer.

6. How would a deliverer/first-seller system deal with power marketers and brokers?

Power marketers would be regulated in the same way as other first sellers/deliverers. Brokers typically do not take title to power, but to the extent that a broker meets the definition of a first seller or deliverer, it would be subject to the same compliance and reporting obligations as any other wholesale seller or deliverer.

7. How would treatment of imports differ in a deliverer/first-seller system compared to a load-based approach?

Under a load based cap, importers have no compliance responsibility (unless they are an LSE) and would have no direct obligation to report electricity imports When LSEs take possession of power outside of California and import it into the state e.g. as a first seller/deliverer, they will know the characteristics of the import to the same extent as other importers. However, for power imported by other entities, LSEs will have no idea whether the system power they purchase in-state originated outside of California or not. These system contracts are important least-cost, reliable energy products, but LSEs do not know the generation sources of this electricity they deliver to end-users. Thus, under a load-based cap, the regulators will have to undertake a complicated and, likely, controversial task of assigning the responsibility of the dispatch of a particular generation facility or import contract to a particular LSE. This process is likely to be

contentious as LSEs are somehow assigned emissions from imports or in-state facilities over which they had no dispatch decision.

Under a load based cap, an additional means of contract shuffling becomes available. If the LSE itself imports the power, then region specific CO2 default emissions rates would be used. However, if the import region specific CO2 default emissions rate is higher than the California default emission rate, then the LSE can allow a third party to do the importing and purchase the power within California, avoiding the direct responsibility of the higher import default emissions rate. In addition, if a purchase is done through a pool under a load based cap, then the assignment of an in-state or import-based default emissions rate necessarily involves guess work since the LSE cannot know where the power purchased through the pool was sourced. If an LSE had to establish a unit specific import relationship for unit-specific emissions attribution, the CARB would have to maintain a list of these unit specific relationships to validate or enforce these claims.

Unlike a load based cap, the first seller approach eliminates line of sight problems for all in-state generation and minimizes line of sight problems for imports because transactions do not need tracking after in-state delivery occurs First sellers report imports to CARB based on approved documentation. The E-tag and balancing authority information can substantiate who the importer is, how much they have imported, and which region the imports originate (PNW or DSW), and a separate exercise establishes the emissions associated with those imports. Region specific CO2 default emissions rates are assigned to all unspecified imports. Specific emissions are assigned to importer-owned generation, unit specific contracts, and RPS eligible

imports. Unit specific relationships can be validated and enforced through documentation of the unit specific claims themselves.

8. To sum up your answers to the previous questions, provide a succinct but complete definition that identifies, for each way in which electricity could be delivered to the California grid, the entities that would be responsible for compliance with AB 32 regulations under a deliverer/first-seller approach.

Any entity which owns the electricity and which is the first entity to sell or deliver that electricity at a delivery point within California will be responsible for compliance and reporting of the GHG emissions associated with that sale or delivery of electricity. This definition would apply equally to the sale or delivery of power generated within the state as well as power generated outside the state that is delivered and consumed within the state.

B. General Policy Issues

9. Compare and contrast the environmental integrity of a deliverer/first-seller and a load-based approach. How would a deliverer/first-seller approach address leakage? How would a deliverer/first-seller approach address contract shuffling?

a. Leakage

The environmental integrity of AB32 will depend in large part on its ability to effectively control "leakage". Leakage refers to increases in greenhouse gas emissions resulting from shifts in production (of electricity and other products) from sources subject to GHG emissions limits to sources outside the purview of the cap-and-trade program. Leakage is a particular concern within the electric power sector because there is regular trade in electricity across state lines, and greenhouse gas emissions can vary widely depending on the technologies used to generate power.

In order to effectively address leakage, *all electricity generation* supplying the

California market—whether in-state or out-of-state—must internalize the costs of GHG emissions.

The deliverer/first-seller option provides a more effective response to leakage by directly internalizing the GHG compliance costs in both in-state generation and imports. In-state California generators will reflect the cost of GHG allowances in their electricity bid prices submitted to the California ISO. Similarly, importers of electricity—responsible for surrendering allowances under the deliverer/first-seller approach—will factor these costs into their decision to import power, or risk making uneconomic decisions.

In contrast, under a load based cap, the load serving entity would be responsible for compliance. Importers and other sellers bidding into the California power market would have no compliance obligation and would, therefore, not reflect any GHG compliance costs in their electricity bid prices. As mentioned, LSEs would incur these costs outside of the power markets.

b. **Contract Shuffling**

In the context of CO2 regulation, "contract shuffling" occurs when California energy suppliers negotiate contracts to supply power with low- or zero-GHG emissions to meet California load, while higher emitting sources are left to satisfy load outside of the cap-and-trade program. By renegotiating contract arrangements, but not changing the overall utilization of higher emitting power plants, California could technically satisfy the obligations of an electric sector cap-and-trade program, but whether the spirit of the law has been met would be subject to debate.

In the context of a load based cap, contract shuffling may occur as load serving entities negotiate contracts with low- or zero-emitting sources in neighboring states,

while in-state generating sources seek to export their electricity in order to avoid California's GHG limits. Contract shuffling could also occur under the deliverer/first-seller approach as importers claim that clean generation is being exported to California to take advantage of the price premium.

Contract shuffling will be an issue under any regime where California is the sole state in the WECC with a preference for low carbon resources. In order to address the potential for contract shuffling, California should seek to expand the scope of the program to include additional western states, a process already underway under the auspices of the Western Regional Climate Action Initiative, and to do so under a first deliverer/seller point of regulation. Only under a first deliverer/seller approach will additional sources of emissions be brought within the cap and the potential for contract shuffling be reduced with an expansion of the geographic scope of the program. In contrast, under a load-based approach, all states in the WECC will need to set default emissions rates for imports, which is likely to be a controversial, contentious and high-stakes exercise.

c. Monitoring, Reporting and Dispatch of Generation

Accurate and transparent monitoring and reporting of emissions will be critical for ensuring the environmental integrity of a California GHG regulatory regime. Therefore, PG&E favors the deliverer/first-seller approach because it allows more accurate monitoring and assignment of emissions, minimizing the line of sight problems for imports because transactions do not need tracking after in-state delivery occurs. The load based cap necessitates some methodology for assigning emissions from facilities and imports to LSEs, perhaps through default emissions values. This introduces imprecision, uncertainty, chance for error and greater incentive for gaming in the

emissions of the complying entity, the LSE. The imprecision of the load based cap introduces increased uncertainty to the measurement of emissions reductions actions taken by the LSE for its load.

In the electricity industry, the capped entities should be able to determine accurately the emissions associated with their electricity and therefore more accurately factor in GHG compliance costs in generation investment and operational decisions. The fact that more generation will be dispatched through a common pool such as the CAISO's Integrated Forward Market under the MRTU, means an LSE will have less control over what generation dispatches for its load and, therefore, will have less accurate information upon which to make its procurement decisions.

Under a load based cap, generators will not include the GHG allowance price in the dispatch price. Since GHG costs will not be included in generators' bids into the Integrated Forward Market, the CAISO will not be able to dispatch bids or curtail generation based on all economic inputs, because the GHG emissions price is not included. Over time, this may significantly affect actual day-to-day emissions quantities if dispatch does not reflect GHG costs.

10. Would the scale of possible emissions leakage or contract shuffling differ under the deliverer/first-seller approach compared to a load-based approach?

The scale of possible emissions leakage is much greater under a load based cap than under the first seller approach. Leakage occurs as importers bid power into a California ISO market without internalizing the GHG price. The lower bids for the cheaper, imported electricity will be accepted without reflecting emissions costs, the entities will receive a price based on gas-fired electricity. At the same time, emissions will be attributed to LSEs, presumably knowing the power quantities but not the source.

Contract shuffling will be an issue under any regime where California is the sole state in the WECC regulating GHG emissions under its own standards. The scale of potential contract shuffling is likely to be similar under both the load based and first seller approaches. However, there is a slightly increased chance of contract shuffling under the load based cap if in-state generation sources have an opportunity to escape regulation by exporting electricity and importing lower-emitting generation ("greenwashing through exports"). In addition, the use of a load based cap with a power pool such as the CAISO's Integrated Forward Market significantly expands the inability to have a clear line-of-sight on GHG emissions through the blending of higher- and lower- emitting sources bidding into the pool.

11. Is there any advantage to applying the deliverer/firstseller approach to reporting only, while having the retail providers be the point of regulation (as with load based)? Why or why not?

Yes. In PG&E's view, these are independent issues, and the first seller/deliverer is in a better position to provide accurate reporting regardless of the point of regulation. However, it is more logical and more administratively efficient for the entity with better ability to know and report its emissions to also be the entity subject to compliance with the regulation of those emissions, which PG&E believes should be the first seller/deliverer.

As PG&E has recommended in its comments on AB 32 reporting protocols, reporting responsibility should be assigned to parties with the most operational or management control that corresponds to responsibility for implementing health, environmental and safety rules for the facility that is the source of the greenhouse gas emissions that are being reported. This would apply without regard to whether the point of regulation under AB 32 is the retail provider or the first seller, because in either case,

direct reporting by operators or managers of emitting facilities would be more accurate than indirect reporting by retail providers.

Thus, regardless of the point of regulation, all first sellers should report greenhouse gas emissions associated with their power sales and deliveries into California. The ARB is expected to mandate that all in-state facilities greater than 1 MW directly report their emissions using a methodology similar to the first seller approach. All approaches will have to track imports as accurately as possible. Accurate tracking of imports will help the state understand if leakage is occurring; from where; and because of which market participants; regardless of the point of regulation.

12. Compare and contrast the deliverer/first-seller and load-based approaches in terms of their impacts on electricity prices, costs, and reliability for consumers.

Customer costs from energy procurement and administrative costs will be the same or greater under the load-based cap than under the first seller approach. The tables below show illustrative cost implications under the first seller and load based cap scenarios. Under the load based cap, the wholesale market price of electricity will not include the CO2 cost. The GHG cost will be incurred by LSEs separate from the wholesale commodity market. Low emitting generation will be more valuable, and sellers of this generation may negotiate a long term contract with the LSE enabling the LSE to reduce its need for allowances. In the example below, PG&E illustrates this using a GHG price of $20/ Metric Ton. The coal generator is less likely to receive a unit-specific contract and more likely to be dispatched through the forward market. The resulting "system" electricity is assigned to the LSE. Depending on the choice of the default emissions rate for the system electricity, it is likely that the LSE will have to pay for GHG allowances on a value based on an emissions rate somewhere between that coal

and gas generation for the system energy. Regardless of the emissions rate chosen, it is very likely that the coal facility will continue to dispatch as before.

In the first seller example, the GHG cost for the resource on the margin is included in the dispatch price of electricity. In the example below, wholesale market price, which PG&E anticipates will be largely based on the variable cost of a combined cycle unit, will increase from $49 to $57 because of the GHG cost. All generators receive this higher price, but the profit margin of the coal generator shrinks because the coal generator must internalize some GHG costs that cannot be passed on to the consumer. The ultimate cost to customers depends on the default emissions rate used for power for which there is no line of sight. If it is based on combined cycle technology, then costs should be about the same under either a load-based cap or a first seller approach. If it is based on a coal technology without sequestrations, then costs will likely be higher under a LBC than under a first seller approach. Please note that the examples below assume line-of-sight for combined cycle and hydroelectric facilities. Market dynamics are more complex and costs are less certain if all combined cycle facilities do not have a clear line-of-sight.

GHG Point of Compliance: Load-Serving Entity

	Running Cost $/MWh	Wholesale Market Price $/MWh	CO2 Cost to LSE $/MWh at $20/ Metric Ton	Ultimate Cost to Ratepayer $/MWh	Generator's Profit Margin $/MWh
Gas-CC (price-setter)	$49	$49	$8	$57	$0
Hydro (price-taker)	$0	$49	$0	$57	$57
Coal Plant (price-taker)	$26	$49	$8-$20[(i)]	**$57-$69**(i)	**$23**

[(i)] This range is driven by a policy choice in setting a default emissions rate. PG&E believes that the default emissions rate should reflect actual market conditions, which it believes would be closer to $57 under this illustrative example.

GHG Point of Compliance: First Seller

	Running Cost $/MWh	CO2 Cost to Generator $/MWh at $20/ Metric Ton	Wholesale Market Price $/MWh	Ultimate Cost to Ratepayer $/MWh	Generator's Profit Margin $/MWh
Gas-CC (price-setter)	$49	$8	$57	$57	$0
Hydro (price-taker)	$0	$0	$57	$57	$57
Coal Plant (price-taker)	$26	$8-$20	$57	$57	$11-$23

Additionally, if the value of the allowances is given to the LSEs, the LSEs can use these funds to mitigate customer costs under either a load based cap or first seller point of regulation.

Administrative costs are likely to be higher under the load based cap. All regulatory approaches will track emissions from in-state facilities greater than 1 MW and will need to track imports. While data from individual importers does not necessarily have to be captured under the load based cap, PG&E recommends that it should still be tracked for California to most accurately identify the origin and quantity of imports and whether and why import levels change. In the load based cap, the state will need the additional regulatory layer of assigning emissions to individual LSEs when there is no line-of-sight from individual generators or imports contracts to specific load.

This administrative process is likely to be complicated and contentious, and therefore costly.

13. Would a deliverer/first-seller approach and a loadbased approach have different impacts on wholesale power prices? Which would result in higher prices? Why? Is this good or bad?

Under the first seller approach, wholesale electricity prices will rise to reflect the CO2 cost of the marginal unit. The price of all generation will increase, but those generators whose CO2 costs increase more than that of the marginal resource will realize less profit and may dispatch less. Under a load based cap, wholesale prices may not increase because the generators are not likely to include their GHG emission costs in their bids, but the LSE will separately incur the cost-of allowances needed to match emissions and pass this cost to customers. Since the GHG allowance price is a real cost to consumers, market efficiency will improve if it is internalized into the dispatch decision. Under a load based cap, dispatch of generation and actual emissions into the atmosphere may not reflect, or may affect only in a general way, actual GHG emissions cost. Over time, the lack of a clear GHG price in bids may significantly affect day-to-day emissions quantities.

As explained above in the response to Question 12, despite the fact that wholesale prices will increase under the first seller approach, consumers' prices may increase less than under a load based cap. There are at least two related considerations here. First, if a high default emissions rate is chosen, then customers will pay more for any transaction that is not unit-specific, and the quantity of generation to which this high default emission rate will be applied is greater than under a first seller approach. Second, and running counter to objectives of the MRTU, there will be a tendency to do more unit-specific contracts with low emitting generation, which will increase overall

procurement costs and possibly affect contract performance assurance.

14. What impact would a deliverer/first-seller approach have on long-term investment in low-GHG emitting generation technologies? Is this better or worse than under a load-based cap? Why?

When evaluating whether a load based cap or a first seller approach might provide a greater incentive to invest in GHG reducing technologies, both a "technology push" and "demand pull" perspective should be considered. It should be noted here that investment also will originate from the entities with a direct interest in the technology push, and not providing the demand pull.

In PG&E's view, the economic costs of complying with AB32 will be approximately the same in the electric sector whether a load based cap or the first seller approach is employed. In purely economic terms, a utility will endeavor to minimize its procurement costs, including reducing AB32 compliance costs, by shifting its purchase from CO2 emitting resources to those that do not emit CO2, including demand side resources. In this sense, neither a load based cap nor a first seller approach provides an advantage.

From an investment and funding perspective, across a whole range of GHG-reducing technologies, including e.g. customer energy efficiency, renewable energy generation, and carbon sequestration, the sources of funding will need to be broad and diverse, and not limited to revenues from an LSE's customers to comply with AB 32 or with their procurement needs ("demand pull" investment or funding sources). Thus, many other entities, particularly investors in new low-carbon power generation technologies and customer energy efficiency technologies, will need to be the source of direct investment in the new technologies ("technology push"), independent of the

utilities and their customers.

Under a load based cap or a first seller methodology, the utilities would not be making low-carbon technology investments without CPUC oversight and approval. Furthermore, if under a first-seller methodology either the utilities believe that the market is not meeting its needs or if the CPUC wishes to see utilities support more extensive development of low-carbon technologies, the CPUC can approve or encourage utility investment just like it would under a load-based methodology.

With many of the emerging carbon capture and sequestration technologies, the state of the technology, the level of risk, and the breadth of the benefits would imply that funding may come from a government agency such the Department of Energy, making it irrelevant whether a load based cap or a first-seller methodology is in place.

In summary, the economics for GHG reducing technologies are likely to be equivalent under a first seller or a load based cap. The sources of investment or funding will come a diverse group, from entities which may be considered in the technology push category, from governmental entities, or from utilities and their customers. PG&E does not view either a first seller approach or a load based cap as providing an advantage for this purpose.

15. How would a deliverer/first-seller approach interact with an upstream program design as articulated in Chapter 4 of the Market Advisory Committee report? Explain your answer in detail.

As described in Chapter 4 of the Market Advisory Committee report, a cap-and-trade program can regulate greenhouse gas emissions at different points in the energy supply chain. One option is to regulate emissions "upstream" at the point of fuel supply (e.g., petroleum refineries and natural gas processing facilities) based on the carbon

content of the fuel supplied. Emissions can also be regulated "downstream" (e.g., power plants and other industrial facilities) based on the actual emissions of the facility. This is the approach used by EPA's Acid Rain program, the European Union's Emissions Trading Scheme (EU ETS), the Northeast's RGGI program, and traditional source-based regulation of emissions from stationary sources. The deliverer/first-seller approach is an example of a "downstream" regulatory approach because emissions are regulated—directly or indirectly—at the point of combustion.

The upstream program design articulated in Chapter 4 of the MAC Report necessitates accounting for electricity imports separately from in-state generation since the emissions associated with fuel for in-state generation would be captured upstream. Since regulated entities cannot differentiate between imported electricity imported and electricity from in-state generation under the load based cap because of the line of sight, isues discussed elsewhere in our response, opting for a load based cap would preclude the ability to put the MAC's Chapter 4 approach into place. Under the first seller approach and the Chapter 4 design, importers of electricity would be the point of regulation for electricity generated out-of-state. In-state electricity sector emissions would be regulated at the pipeline or processor.

16. What impact would a deliverer/first-seller approach have on electricity service providers?

To the extent an electricity service provider meets the definition of a first seller or deliverer, it would be subject to the same compliance and reporting obligations as any other wholesale seller or deliverer. Under a load based cap, electricity service providers will also be a point of regulation with the same compliance and reporting obligations as any other load serving entity.

C. Interaction with Energy Markets

17. Compare and contrast the impact that a deliverer/firstseller and a load-based system would have on the existing wholesale energy markets, both at the

California Independent System Operator (CAISO) and outside of it.

Currently, there exist a bilateral wholesale energy forward and day ahead markets and CAISO markets for ancillary services and balancing energy. In bilateral markets, counterparties are matched up by voice or electronic brokers and remain anonymous until after transactions are agreed upon or execute directly between each other. Under a load based cap, the price of purchases made through these markets would not include the GHG costs, leading to the reduced line-of-sight and lack of GHG price internalization discussed in the responses to prior questions above.

18. For those entities participating in the CAISO markets, what would be the likely differential impacts of a deliverer/first-seller versus a load-based system on the CAISO's implementation of the Market Redesign and Technology Update (MRTU) system, including day-ahead and real-time markets for energy, transmission, and reserves?

After the Integrated Forward Market (IFM) is implemented through MRTU, the CAISO will dispatch generation resources bid into the IFM based on bid prices. The IFM will provide a centralized platform for all of the transactions currently occurring in the bilateral market. It is expected that all generation resources excepting nuclear, hydro, and must-takes will be dispatched through the IFM. The fact that more generation will be dispatched through a common pool means an LSE will have less control over which generating units are dispatched, and therefore, will have a reduced opportunity to directly purchase power from lower emitting sources.

Since GHG costs will not be included in generators' bids into the IFM under a load based cap, the CAISO-administered dispatch based on these bids will not reflect all costs to the consumer. Over time, this may significantly affect actual day-to-day emissions quantities. Since economic dispatch is one of the foundational purposes of the MRTU, a load based cap would undermine MRTU's effectiveness. In addition, one effect of the MRTU may be fewer unit-specific contracts, since more units will bid into a pool, improving market efficiency. Under a load based cap, however, LSEs may prefer bilateral contracts particularly if the default emissions rate is set at a high or unpredictable level. This also will frustrate the MRTU goal of a more efficient market.

19. To what extent would either approach (deliverer/firstseller or load-based) be likely to alter the dispatch of existing generation units in the near-term? Why? If there is a difference between the approaches, how significant would it be?

A load based cap is not likely to change near term dispatch to reflect GHG emissions costs. On the other hand, the first seller approach will have the potential to affect dispatch because generators will internalize the CO2 costs, particularly over time as new technologies become commercial. Whether or not actual dispatch will change depends on the price of the CO2 allowance and the relative variable costs of various generating technologies and projects. In the near-term, if the CO2 price is low or moderate, then dispatch is unlikely to change. If the CO2 price is very high, then the running cost of the higher emitting resources may become more expensive than lower emitting resources, and the dispatch order may change. If the CO2 price is high enough that coal becomes the marginal fuel, then higher emitting resources such as coal will be curtailed and replaced with lower emitting resources or customer energy efficiency.

D. Interaction with Existing Programs and Policies

20. How would a deliverer/first-seller approach interact with the Public Utilities Commission's Resource Adequacy requirements and procurement/portfolio oversight? How would this approach affect efforts to maintain resource adequacy by the publicly-owned utilities (POUs)?

Resource adequacy (RA) is a regulatory requirement for a capacity product that is utilized when needed. In other words, it is a product that has no GHG impact unless and until it is called upon by the load serving entity and/or the CAISO and then results in emissions associated with the delivery of energy. Currently LSEs contract directly with suppliers of RA resources (e.g., generators and marketers). However, the CAISO has the right and the ability to call on these resources to meet operating standards. Once the CAISO calls upon a resource it effectively goes from being capacity to energy, thereby triggering a GHG impact.

Under a load based cap, if an RA product were called by the CAISO, an allocation of the benefits of this call would need to be made to all benefiting LSEs, who were allocated the RA costs. Under the first seller approach, the first seller of the electricity would have the compliance obligation. Neither approach would impact fulfillment of the reliability requirements established by the CAISO or CPUC or LSEs, because in either case, the regulatory and contractual requirements for RA remain the same.

21. How would a deliverer/first-seller approach interact with the Public Utilities Commission's promotion of end-use efficiency? How would this approach affect energy efficiency programs for the POUs? Under which system (deliverer/first-seller or load-based) would the penetration of end-use efficiency likely be greater?

Why?

The first seller approach and a load based cap should affect customer energy efficiency (CEE) programs equally. Currently, cost effective energy efficiency is already the first resource in the preferred loading order, which is a California energy policy established separately from AB 32. PG&E and other LSEs already have programs underway to meet aggressive CEE goals under the preferred loading order, and the funding for those programs has been provided and mandated separate from AB 32. Under a load based cap, LSEs will have some incentive to increase energy efficiency programs to lower compliance responsibilities under AB 32, in addition to existing incentives and mandates under the preferred loading order. Under the first seller approach, incentives will be similar, because electricity prices will be higher due to the internalized costs of AB 32 compliance, which in turn will make more energy efficiency more cost effective while maintaining existing incentives under existing CPUC programs and mandates, such as the preferred loading order. Thus, incentives and implementation of CEE will be comparable under either point of regulation of electricity for GHG compliance.

Customer energy efficiency improvements also independently may arise from more efficient federal and state building and appliance standards, from other utility customer energy efficiency programs, from price increases and from technology innovation generally and possibly other means. Still another approach possibly which could be considered is improving the energy efficiency of existing buildings and the appliances in those buildings at the time is the buildings are sold or transferred.

22. How would a deliverer/first-seller approach interact with the State's Renewable Portfolio Standard requirements (both existing and proposed)?

The first seller/deliverer approach would not affect the State's Renewable

Portfolio Standard, as it exists now or may be expanded in the future, because AB 32 is an environmental statute directed at the regulation and reduction of GHG emissions, and therefore does not affect the independent authority and responsibilities of the CPUC and utilities regarding meeting the RPS standard. Conversely, RPS compliance by the utilities independent of AB 32 may indirectly help achieve the goals of AB 32 at uncertain cost, because substitution of non-CO2 emitting renewable energy for CO2-emitting sources may reduce overall GHG emissions within California or associated with electricity sold or delivered into California. Utilities will comply with RPS regulations whether the deliverer/first seller or a load based cap is the point of regulation.

23. How should renewable energy generators be treated under a deliverer/first-seller system?

Renewable energy with zero GHG emissions would not be subject to regulation under the first seller approach. The deliverer/first-seller approach will encourage investment in renewable energy technology by increasing the operating costs of conventional fossil fuel-fired power plants (thereby improving the economics of renewable energy technologies). Certain categories of renewable energy may require special consideration under either a deliverer/first seller or load-based system in order to provide the proper incentives for renewable energy development. For example, combustion of biomass will generate CO2 emissions. However, the net greenhouse gas emissions from biomass combustion may be zero, assuming that the biomass is harvested in a sustainable manner. The Regional Greenhouse Gas Initiative (RGGI) Model Rule provides a possible approach for addressing this issue.

24. Compare and contrast the impact of a deliverer/first seller and a load-based approach on the voluntary renewables market.

The voluntary renewables market is dependent on the ability to transact with "Green Tags," an unbundled energy product where the energy and the renewable attribute are separate components of the total MWh sold. California, currently, does not recognize the unbundled green tag for RPS compliance. However, given the economic advantage that voluntary renewables would have under AB 32 under either the first seller approach or a load based cap, it is reasonable to assume that neither approach would have any direct effect on the current voluntary renewables market, all else being equal.

25. Would one approach (deliverer/first-seller or load-based) have an advantage over the other in producing the greatest amount of emissions reductions through modifications (e.g., retrofitting, efficiency improvements, etc.) to existing power plants? Why?

No, for the reasons stated in the responses to questions 12 and 14.

E. Reporting, Tracking, and Verification

26. What would be the data and administrative requirements of the deliverer/first-seller approach?

Under both the first seller and load based cap approaches, the CARB will collect emissions information from all in-state generation sources greater than 1 MW. For in-state generation, the first seller approach requires no other data collection. A load based cap, on the other hand, requires much more additional data to attribute emissions to LSEs when the line of sight from the in-state generator to the LSE is not clear. To accomplish this, LSEs and the state will have to undergo a complicated exercise of attribution and/or assignment of default emission rates. However determined, this process will be administratively complex and time consuming, and will necessarily be an

approximation.

Under either the first seller or load based cap approaches, CARB will need to collect information on imports. Data from individual importers would need to be captured under a load based cap as well as under the first seller/deliverer approach, in order to most accurately identify the origin and quantity of imports where there is not a clear line-of-sight. Again, an attribution or assignment of a default emissions rate will be necessary, will be complex and time consuming, and will be an approximation.

For both approaches, importers will have to submit the following information:

1. Entity importing
2. Amount imported
3. Region of origin of import
4. Unit specific relationships

For a method of substantiation of items 1-3 for audit and verification purposes, PG&E believes that NERC E-tags are very good source documents. Methods for balancing authorities whose boundaries cross state lines may require other documentation. These activities to accurately identify imports would occur regardless of whether the point of regulation is the load based approach or the first seller/deliverer approach.

27. How would the deliverer/first-seller approach relate to the Public Utilities Commission/Energy Commission Staff reporting protocol proposal, i.e., would the deliverer/first-seller approach require modifications to the Staff reporting proposal, or could it serve as an interim reporting protocol? If modifications are required, what exactly would they be?

As PG&E has noted in its prior comments on reporting protocols, the Staff reporting proposal should be revised to place the reporting responsibility on first sellers,

rather than on the LSEs. Note that whoever has the reporting responsibility, the source data will need to be obtained from the first sellers. Reporting requirements for first sellers are described in the response to the previous question. Default emissions rate for in-state purchases would no longer be necessary. Default emissions rates will still be needed for imports. These default emissions rates, and the policy for updating these rates, would be determined through technical evaluation and calculation based on input from interested parties and agency staff.

28. If a deliverer/first-seller approach is adopted, what would be the pros and cons of requiring reporting both from deliverers/first sellers and retail providers, in order to provide ARB with multiple control data sets for comparison?

Because the information from first sellers would be used to estimate LSE reported information, requiring LSEs to report would not provide the CARB with an independent or additional source of information. Additionally, given the necessary approximations required to assign energy from individual facilities and import transactions to load, LSE reports would be less accurate and of limited usefulness.

29. Compare and contrast the ability of a deliverer/firstseller and a load-based system to create confidence for investors and confidence for environmental advocates about tracking and compliance.

Accurate monitoring and reporting of emissions (and rigorous enforcement) is fundamental to the proper functioning of an emissions trading market. Investors, regulated entities, and other stakeholders must have confidence in the value of the commodity being traded. An allowance should reflect the right to emit one ton, and only one ton, of CO2e. Again, this requires accurate monitoring and reporting of emissions.

As a load-serving entity, PG&E can only estimate the CO2 emissions associated with the company's retail power sales because a significant portion of our load is served

by general system purchases, which cannot be traced back to a specific generating facility. This makes it impossible to determine the precise emissions associated with the electricity we deliver.

The CAISO MRTU initiative will only further exacerbate these tracking issues.

In contrast, the first-seller approach allows the precise monitoring and reporting of emissions from in-state power plants; data that are already collected and reported by some facilities under the Acid Rain program. A system would need to be developed for tracking emissions associated with imports, which introduces some complexities. It requires that emissions be traced to the point of first delivery inside the state. However, it avoids the need to trace emissions from their source the point of first delivery inside the state to the load serving entity. Emissions would only need to be traced to the importer of the power.

The increased confidence in reporting under the first seller approach will enable more confidence in AB 32's tracking and compliance mechanisms.

30. Who/what governs access to the purchasing/selling entity data on the NERC E-tags? What would a state agency need to do to obtain access to E-tag data?

The E-tag information is within the possession of sellers, deliverers, schedulers, buyers, the balancing authorities, and the WECC. The balancing authorities and the WECC govern access to the E-tags, but the information included in the E-tags is obtainable directly from reporting and complying entities and subject to independent verification and audit by CARB, similar to under other environmental regulations.

31. What role would the CAISO play, if any, in the implementation and administration of a deliverer/first seller program? What role would other control area operators or balancing authorities play?

The CAISO, other balancing authorities and other control area operators would play no formal role. However, CARB as the lead AB 32 regulatory agency could consult with the CPUC, the CEC, the CAISO, the WECC and other balancing authorities and control area operators to determine the most efficient and administratively convenient means of obtaining necessary and auditable emissions and power sales information from power importers. While the first sellers would provide compliance reporting documentation, the balancing authorities and WECC can advise CARB on format and level of documentation. In addition, WECC maintains a listing of market participants. This list can be used to identify entities who are potential first sellers and who would be required to submit E-tags or other substantiating information. The CARB, PUC, and CEC also can work with the balancing authorities in the state to account for intra-balancing authority imports into California.

F. GHG Emissions Allowance Allocation Issues

32. Would implementation of a deliverer/first-seller approach necessitate auctioning of GHG emissions allowances? Why or why not?

No. The issue of whether and how to auction GHG emissions allowances is independent of the approach chosen for point of regulation. The choice of an allocation methodology—an auction or free allocation—should be based on equity economic efficiency criteria, not the point of regulation.

PG&E recommends distributing allowances to load serving entities for the benefit of their customers, who will ultimately bear a significant share of the costs

associated with a cap-and-trade program. The allowances then would be distributed to first sellers as complying entities through an auction or some other approach that ensures that the value of the allowances are available as an offset against the costs of the allowances which customers ultimately pay for through their electric rates. The revenues generated from the auction or other approach would be held for the benefit of load serving entities' customers.

33. If you do not believe that an auction would be required under the deliverer/first-seller approach, explain how an emissions allocation system would work under a deliverer/first-seller approach. In doing so, answer the following:

a. To whom would allocations be given?
b. If you recommend allowances be given to deliverers/first sellers, on what basis would allocations be given during any particular compliance period?
c. How would the state of California know how many allowances were needed by importers?
d. How would marketers be treated?
e. How would electricity service providers be treated?
f. Would zero-carbon generators also receive allowances?
g. What would be the likelihood of windfall profits under such a system?
h. How could such a system prevent windfall profits?

PG&E supports the distribution of electric sector CO2 allowances to load serving entities to help mitigate the costs of the program on California's electricity consumers, while promoting investment in energy efficiency programs and greenhouse gas reduction technologies, and using an allocation methodology that recognizes early actions.

California would not distribute allowances directly to first sellers/deliverers; therefore, there would be no need to calculate an allocation of allowances for importing entities. Zero-carbon generators are not emitters of GHGs and therefore would not directly receive allocation. However, the design of a cap-and-trade market could allow

for the unbundling and trading of the zero emissions attributes of such generators. Marketers and other electric service providers, including LSEs with their own GHG-emitting generation, would need allowances to the extent that they serve as first sellers/deliverers of power into California that results in GHG emissions. Allowances allocated to LSEs and subsequently auctioned or otherwise distributed, would be available on equal terms to both LSE and non-LSE first sellers.

This system avoids windfall profits in the allocation of allowances and is the best paradigm to protect customers. Regardless of whether they receive the allowances for free, first sellers will include the opportunity cost of selling the allowances in their electricity bids and wholesale energy prices will increase. To mitigate these wholesale price increases resulting from CO2 regulation, LSEs should be given the value of the allowances for the purpose of mitigating customer cost impacts.

In the case of investor-owned utilities and possibly other LSEs, the overseeing agency or board would direct the sale of CO2 allowances. For investor-owned utilities, the CPUC would supervise distribution of the revenues for the benefit of electricity consumers and possibly other purposes. PG&E believes that the CPUC, with its knowledge of electricity customers, experience with energy efficiency programs and rate design, and demonstrated leadership on climate change, is well-suited to direct the distribution of those proceeds.

34. If you recommend allocation of allowances to retail providers, followed by an auction to deliverers/first sellers, how would such an auction be administered? What kinds of issues would such a system raise?

As indicated above, PG&E supports the initial distribution of electric sector CO2 allowances to load serving entities for the benefit of California's electricity consumers,

with the allowances then being distributed to complying entities i.e. first sellers through an auction or some other market-based mechanism. We would emphasize that the LSEs would not retain the economic value of the allowances, nor could the LSEs withhold the allowances from the market, driving up the price of allowances. LSEs would not profit in any way from the sale of allowances to complying entities. The value and revenues associated with the allowances allocated to the LSEs would be reserved directly for the benefit of the LSEs' customers, for the households and businesses who ultimately bear the costs of AB 32 in their electric rates.

The CARB, with support from the CPUC and local governing boards of municipal utilities, would have oversight authority to ensure that LSEs satisfy the requirements of the program. This could include an obligation to sell all of their allowances within a specified time period to avoid creating artificial scarcity in the allowance market. Also, the funds generated as a result of the sale of the allowances should be directed to specified purposes to avoid interfering with the functioning of competitive electricity markets. In particular, an allocation to LSEs would be structured to avoid creating any competitive advantage for affiliated or LSE-owned generation (i.e., load serving entities would be precluded from simply transferring or selling their allowances at below market rates to their own generating assets).

The sale of allowances could be coordinated through various mechanisms, including a central auction with the proceeds returned to load serving entities based on their proportionate share of the allocation. The auctions could be scheduled to allow deliverers/first sellers to acquire their allowances in advance of the actual compliance period. Auctions could be conducted several times each year or at whatever frequency

makes sense for market participants. A secondary market would be likely to emerge, which would help in facilitating compliance planning.

G. Relationship to Other Sectors Under AB 32 in California

35. Would GHG emissions allowances created under a deliverer/first-seller compliance regime in the electricity sector be compatible for trading with other sectors in the California economy, assuming a multisector cap–and-trade system? How?

Yes. Assuming that the electric sector is clearly delineated in terms of who has compliance responsibility compared to other sectors, the deliverer/first seller approach should be compatible for trading with other sectors.

H. Relationship to a Multi-State System Such as the Western Regional Climate Action Initiative

36. Compare and contrast the ability of a deliverer/firstseller and a load-based approach to avoid doublecounting of emissions between states.

If multiple states in the western region adopt a load-based approach, there is a far greater likelihood of double counting emissions, particularly if inconsistent methodologies are used in the reporting emissions. This problem arises both in establishing the emissions cap as well as in implementing the program. The measurement and reporting of GHG emissions in the western region is significantly dependent on regional power flows and transactions. For example, if California assumes that Oregon's fossil resources serve Northwest load, leaving hydro resources for export, then California may be setting its cap artificially low. Other states making different assumptions, may set their caps artificially high. The deliverer/first seller approach can avoid double counting by regulating all in-state generation, while only regulating imports from states outside of the cap-and-trade program. Also, the cap would need to

be established based on a consistent region-wide methodology.

In terms of implementation, expansion of a load based cap to multiple states: (1) greatly expands the potential for double counting; (2) requires the attribution of emissions or setting of default emissions rates; and (3) sets the stage for a high stakes, contentious proceeding addressing the quantity of power and emissions exported from one state to another.

Under a load based cap, importing and exporting states will want to minimize their own liability, and will naturally be on opposing sides. Instead of leading to the kind of regional cooperation necessary to achieve these reductions, this high stakes allocation of liability based on approximations will place states and entities within these states in adversarial positions.

In contrast, if all states in the WECC are included in a first seller structure, the administration of a GHG program becomes simpler. While a California-only approach must address imports to minimize leakage, when all states in the WECC participate there is no longer a need to track imports to minimize leakage. A first seller approach then simply becomes a source-based regulation, and avoid the need for adversarial multiple state allocation proceedings.

37. How should exports from California be handled under a deliverer/first-seller approach? Would the proper treatment of exports depend on whether the receiving state has a cap-and-trade system? If so, how?

From a policy perspective, exports can either be included or excluded from a deliverer/first-seller approach under a California-only program, assuming that is the statutory intent of AB 32. However, the inclusion of more sources will reduce the potential for leakage. Note as well that a California-only load based cap would exclude

exports from sources within the state that are not load serving entities. There also may be legal issues related to regulating exports under AB32, and PG&E addresses these in Attachment 1.

38. If some states in the region adopt a source-based system (or a load-based system which also regulates exports), how would the State of California verify the true source of imports in order to avoid double-regulation of power imported from other capped states?

If multiple states adopt a source-based system, then there is no longer a need to track and regulate imports and exports among those states operating under a mandatory source-based cap. The GHG emissions can be regulated at their source.

On the other hand, if two states operate under a load-based system which also regulates imports, then the quantities of power that crossed state boundaries would need to be determined and an emissions value would need to be assigned to these imports. This could be accomplished through a marginal-based approach employing production simulation.

This is necessarily an approximation that could be avoided under a source-based approach and would set the stage for the adversarial process described in PG&E's response to Question 36.

39. How would a deliverer/first-seller approach function relative to an Oregon load-based system (as currently proposed by Oregon)?

Any time a load based cap might be employed in conjunction with another state's mandatory cap and trade program, there will be a need to track power transacted across state lines. In this case, exports from California to Oregon would need to be excluded from California jurisdiction if they were covered under Oregon's load based cap.

If both Oregon and California operated under a load based cap, then imports and

exports from both states would need to be tracked.

If both Oregon and California adopted a source-based cap, then there would be no need to track imports and exports between the states, since regulation would occur at the source.

I. Interaction with Potential Federal Regulation

40. How easily could a deliverer/first-seller approach scale or link to multi-state, national, or international programs?

The deliverer/first-seller approach is generally consistent with the design of the RGGI program in the Northeast. A key difference is that the deliverer/first seller approach would regulate imports in California under AB 32, which is intended to cover all emissions associated with power consumed in the state. Both approaches require in-state or in-region power generators to surrender allowances for compliance. Adopting similar regulatory approaches should facilitate linking the two programs. However, other program design features—such as the relative stringency of two programs—are also likely to be significant in terms of deciding whether to link the two programs.

Another consideration is the degree to which the two programs are linked. There are different options for linking a California cap-and-trade program and RGGI that will influence how difficult or easy it is to join the two programs. California could simply allow the use RGGI greenhouse gas offsets or the two programs could be fully integrated allowing the trade of both allowances and offset credits. Adopting similar regulatory approaches will be important in attempting to fully integrate the two programs.

41. Would one approach (deliverer/first-seller or loadbased) be easier to transition into a potential federal GHG regulatory system? If one would be superior in this respect, explain why and what assumptions you are making about the likely federal framework.

Yes, the first seller approach is preferable to a load based cap for transitioning to a federal GHG program. None of the legislative proposals introduced at the federal level have proposed a load based cap-and-trade approach. Most propose a traditional generator-based cap-and-trade approach or a hybrid upstream-downstream approach. A primary motivation for a load based cap, to address emissions associated with imported electricity, is not a concern in the federal policy debate. Therefore, a deliverer/first-seller approach is much more likely to serve as a model for federal action.

42. What are the merits of the deliverer/first-seller proposal as a model for other governments' efforts, particularly at the national level?

There are two primary advantages of the deliverer/first-seller approach as a model for federal action. First, the electric power sector has many years of experience complying with cap-and-trade based regulations. This institutional knowledge will be helpful in transitioning to a federal greenhouse gas cap-and-trade program. Second, as indicated above, federal legislative proposals propose a source-based cap-and-trade approach, similar to the deliverer/first-seller proposal. In adopting this approach, California will have unique insights into the functioning of a source-based cap-and-trade program. California companies and policymakers can leverage this experience in the federal policy debate. In contrast, a load-based cap-and-trade approach is very unlikely to serve as a model for federal action.

IV. CONCLUSION

For the reasons stated above and in Attachment 1, PG&E recommends that the CPUC and Energy Commission join the Governor's Market Advisory Committee in recommending the "first seller" proposal for regulation of greenhouse gas emissions in the electric sector under AB 32.

Respectfully Submitted,

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Attachment 1
Response to Questions on Legal Issues

Federal Power Act

43. Would the Federal Power Act preempt adoption of the deliverer/first-seller approach? Why or why not? Does it make any difference that the federal government has not issued any regulations in this specific area?

No. The question of whether the Federal Power Act preempts regulation of GHG emissions arises under both a load based cap and the first seller approach, because both approaches seek to regulate the GHG emissions associated with the wholesale sale and delivery of power in the state.[1/] However, for the reasons stated by the CPUC in its decisions implementing a GHG emissions performance standard under SB 1368, regulation of GHG emissions associated with FERC-jurisdictional sales of power does not conflict directly or indirectly with FERC's regulation of those power sales. (CPUC Decision No. 07-01-039, *Interim Opinion on Phase 1 Issues: Greenhouse Gas Emissions Performance Standard,* January 25, 2007, mimeo at pp. 193- 205 ; Decision No. 07-05-063, *Order Denying Rehearing of Decision (D.) 07-01-039,* May 24, 2007, mimeo at pp. 8- 11.) Under U.S. Supreme Court decisions, AB 32 regulation of the GHG emissions associated with wholesale sales or transmission of power – whether directed at the buyer under a "load-based approach" or at the seller under a first seller/deliverer approach – would not be preempted by the Federal Power Act because compliance with FERC's economic regulation of the terms, conditions and rates for the power sales is not

1/ See Health and Safety Code section 38505(m), defining statewide greenhouse gas emissions to include "emissions of greenhouse gases from the generation of electricity delivered to and consumed in California, ... whether the electricity is generated in state or imported."

prevented or thwarted by AB 32's environmental-related regulation of the GHG emissions associated with the electricity being sold.[2/]

Moreover, FERC itself has consistently confirmed that its own regulation of the terms, conditions and rates of power sales under the Federal Power Act is not intended to override the obligation of sellers and transmitters of power to comply with local environmental, safety and zoning laws. For example, in its 1980 rulemaking implementing Federal Power Act regulations under the Public Utility Regulatory Policies Act (PURPA), independent power generators argued that PURPA's requirements were intended to exempt power generators from the necessity of complying with local zoning and environmental laws. FERC ruled otherwise, stating "While [the PURPA] legislation permits certain facilities to be exempt from State and Federal laws, it excludes exemptions from environmental laws. Thus, a qualifying facility may not be built or operated unless it complies with all applicable local, State, and Federal zoning, air, water, and other environmental quality laws, and unless it obtains all required permits."(*Small Power Production and Cogeneration Facilities – Environmental Findings,* 10 FERC ¶61,314 at 61, 632 (1980).)

More recently, during the 2000- 2001 California energy crisis, FERC was faced with a question regarding whether emergency regulations by FERC to ensure availability of power during the crisis would preempt California's air quality laws and regulations restricting the hours of operation of certain generating units. In two order issued in June, 2001, FERC ruled that its "must offer" regulations applicable to California generating units under the Federal Power Act did *not* preempt and absolve the generating units from

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2/ See e.g. *Medtronic, Inc.* v. *Lohr* (1996) 518 U.S. 470, 485 (internal citations omitted); *see also Pacific Gas & Elec.* v. *Energy Resources Comm'n* (1983) 461 U.S. 190, 204, 206 (distinguishing between public safety regulation and economic regulation.

the need to comply with California air quality laws and regulations. FERC stated that its order:

> "[D]oes not require generators to run if doing so would violate their certificate or applicable law.... Mirant seeks assurance that it is exempt from the must-offer requirement to the extent compliance would require operation of certain units located at the Potrero Power Plant in excess of the current 877 hour annual limitation for these units. Specifically, Mirant states that it owns and operates three 52 MW peaking units located at the Potrero Power Plant (Potrero Units) which are restricted by the terms of their governing air quality regulation and permits to operate for no more that 877 hours per year. The governing air permit, issued in 1998 pursuant to Bay Area Air Quality Management District (BAAQMD) regulations, is enforceable by the Environmental Protection Agency (EPA).... Mirant claims that it intends to comply with the June 19 Order to the extent doing so would not violate its legal obligations under the governing regulation and air permit. However, since the June 19 Order states that the must offer requirement does not apply to circumstances where running the unit violates a certificate, and EPA has stated its position that Mirant would not be in compliance with the governing regulation and air permit if it operates those units in excess of 877 hours per year, Mirant requests clarification that it is exempt from the must offer requirement to the extent compliance with that requirement would require operation of the Potrero Units in excess of 877 hours per year.
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> ... ***This Commission is not the appropriate forum for determining whether utilities are in violation of their Clean Air permits. The Commission has addressed everything within its jurisdiction to maximize the output of much needed generation in California, including the must offer requirement. Issues related to compliance with the Clean Air Act certificate are subject to either local, state or other federal agency jurisdiction.*** We urge the EPA and the state to work out administrative provisions that would enable these units to run. We find that Mirant's factual presentation and the related lawsuit constitute an adequate showing under our April 26 and June 19 Orders. Accordingly, we will grant Mirant's request for clarification."

("Order Granting Emergency Motion Clarification," *San Diego Gas & Electric Company v. Sellers of Energy and Ancillary Service Into Markets Operated by the California Independent System Operator Corporation and the California Power Exchange*, Docket No. EL00-95-039 96 FERC ¶ 61, 117 at 61, 446- 8, July 25, 2001 (emphasis added).)

The fact that FERC's regulations under the Federal Power Act do not either directly or indirectly attempt to regulate the emissions of greenhouse gases or other air or water pollutants is strong support for the position that AB 32 regulations would not be preempted by the Federal Power Act, whether load-based or first seller-based. This is because one of the indicators for preemption is whether the state or local regulation directly conflicts with the federal regulation or law, or otherwise makes compliance with both the federal regulation and the state regulation impossible. Here, there is clearly no conflict because there are no FERC regulations covering GHG emissions and the AB 32 regulations will not prevent buyers and sellers who are parties to FERC-jurisdictional transactions from complying with the terms, conditions and rates applied to those transactions by FERC.

This "bright line" between FERC economic regulation and state and local environmental regulation is consistent with decades of state and local environmental regulation of powerplant siting and operation. For example, numerous powerplants have been sited and constructed over the past couple decades in California for the sole purpose of selling their output exclusively under FERC ratemaking using FERC-jurisdictional transmission lines. All these powerplants have been subject to California siting and environmental regulations, including those applied by the California Energy Commission, the California Air Resources Board, and regional water quality boards, to name just a few. To the best of PG&E's knowledge, in no case has the FERC or a powerplant owner or operator ever argued that FERC's regulation of the rates, terms and conditions of the sales of power from those facilities preempts the right of the State of

California to regulate the siting, construction and operation of the facilities under environmental laws.

44. For purposes of your legal analysis of the previous question, would your opinion differ if the deliverer/firstseller were the reporting entity only and not also the point of regulation? Why or why not?

No. A regulation requiring an entity to report information would be reviewed for preemption purposes using the same analysis as a regulation requiring the entity to change its operations in compliance with a regulation. In this case, neither a reporting nor compliance regulation under AB 32 would be preempted by the Federal Power Act.

45. Could the deliverer/first-seller approach be designed or implemented in a way that would avoid or lessen problems under the Federal Power Act? If so, how?

As discussed in PG&E's recommendations for designing and implementing a first seller/deliverer point of regulation above, such a regulation can and should be designed to solely achieve the objectives of AB 32, which is reduction of GHG emissions, and to do so with out directly or indirectly attempting to achieve purposes unrelated to the environmental goals of AB 32. Such a design will make it less likely that AB 32 as implemented could be construed as directly or indirectly conflicting with the economic regulatory objectives of the Federal Power Act.

46. Compare Federal Power Act issues under a deliverer/firstseller approach and a load-based approach.

The issues would be the same for purposes of Federal Power Act preemption analysis, because both points of regulation would affect the GHG emissions associated with the wholesale sale of power regulated by FERC under the Federal Power Act.

47. If you conclude that Federal Power Act preemption would be a problem, could FERC action (e.g., approval of a CAISO tariff rule) ameliorate this problem? If so, what specifically could FERC do? Could FERC ameliorate any Federal Power Act concerns related to publicly-owned utilities?

PG&E does not conclude that Federal Power Act preemption would apply to AB 32. In addition, by definition, Federal Power Act preemption could not apply to AB 32 regulation of publicly owned utilities as first sellers/deliverers, because the Federal Power Act does not apply to publicly owned utilities for this purpose.

Dormant Commerce Clause

48. Does the deliverer/first-seller approach raise problems under the dormant Commerce Clause?

No. As the Governor's Market Advisory Committee noted, both a load based cap and the first seller approach seek to implement the statutory intent of AB 32 to regulate the emissions of GHGs associated with the import of power into California, even where the facilities emitting the GHGs are outside the state. (Market Advisory Committee Report, June 1, 2007, p. 42.) As such, both approaches raise issues regarding potentially excessive burdens on interstate commerce under the Commerce Clause of the U.S. Constitution. However, PG&E believes the "first seller/deliverer" point of regulation under AB 32 is likely to comply with Commerce Clause standards if the regulation applies even-handedly and in a non-discriminatory manner to first sellers located both inside and outside California, and if the transactions being regulated include either the delivery of power into California or a buyer or seller which is a California entity. This conclusion is supported by the relevant court decisions on Commerce Clause issues, as well as the CPUC's own analysis of a similar Commerce Clause challenge to the GHG emissions performance standard adopted under SB 1368. (CPUC Decision No. 07-01-

039, *Interim Opinion on Phase 1 Issues: Greenhouse Gas Emissions Performance Standard,* January 25, 2007, mimeo at pp. 205- 223; Decision No. 07-05-063, *Order Denying Rehearing of Decision (D.) 07-01-039,* May 24, 2007, mimeo at pp. 2- 8.)

The Commerce Clause provides that Congress can regulate interstate and foreign commerce. The "negative implication" of this is that individual states cannot regulate interstate commerce in a way that unduly burdens interstate or foreign commerce. Note, however, this does not mean that states may not regulate business transactions between the states at all, it just means they may not regulate in a burdensome way.

"Dormant" Commerce Clause doctrine consists of three analytical tests. First, a state rule that facially discriminates against other states in order to protect local economic interests will generally be found invalid.[3/] Second, when a state rule does not facially discriminate against out-of-state economic interests, the *Pike* balancing test will be applied. Under *Pike*, a state enactment "will be upheld unless the burden imposed on such commerce is clearly excessive in relation to the putative local benefits."[4/] Third, a state rule must not regulate extraterritorially.[5/]

Analysis of whether a state regulation meets these tests is necessarily fact-dependent, and the facts of each case are often disputed and subject to interpretation by the courts. There is no "hard and fast" rule or "bright line" standard that can be applied to each case. However, the analysis below is the approach that a court would be likely to

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3/ *See, e.g., Oregon Waste Systems, Inc.* v. *Department of Environmental Quality of the State of Oregon* (1994) 511 U.S. 93, 100-101; *but see Maine* v. *Taylor* (1986) 477 U.S. 131, 151-52 . These and additional citations on dormant Commerce Clause cases follow generally the analysis contained in the Commission's decisions on the SB 1368 greenhouse gas emissions performance standard. *See, generally* Decision No. 07-01-039, *Interim Opinion on Phase 1 Issues: Greenhouse Gas Emissions Performance Standard,* January 25, 2007, mimeo at pp. 205- 223; Decision No. 07-05-063, *Order Denying Rehearing of Decision (D.) 07-01-039,* May 24, 2007, mimeo at pp. 2-8.

4/ *Pike* v. *Bruce Church, Inc.* (1970) 397 U.S. 137, 142.

5/ *See, e.g., Healy* v. *Beer Institute* (1989) 491 U.S. 324, 336-37.

take in reviewing a Commerce Clause challenge to a "first seller" regulation under AB 32.[6/]

The first test the courts usually apply under the Commerce Clause is the "discrimination" test, which looks at whether a state regulation regulates out-of-state businesses even-handedly compared to in-state businesses. If the state regulation discriminates on its face against out of state businesses, then it is *per se* unlawful under the Commerce Clause. Thus under AB 32 if the emissions limits or caps are more strict when applied to out of state businesses than in-state businesses, the courts will likely strike them down. On the other hand, if all sellers of electricity in the state and those outside the state that sell into the state are subject to the same emissions standards or same cap and trade rules, then the regulations likely will not be considered discriminatory.

Applying these legal principles to the facts, the "first seller" regulation would appear to be non-discriminatory to the extent that all "first sellers" of power delivered to and consumed in California would be subject to the same regulatory standards under AB 32, regardless of whether the "first seller" is a California or non-California entity, and regardless of whether the source of the CO2 emissions is a facility located in California or outside California.

Any party challenging the constitutional validity of a regulation under the dormant Commerce Clause bears the burden of demonstrating discrimination.[7/] In the *City of Philadelphia* case, the Court cited the principle that: "[a] state cannot block

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6/ For purposes of this analysis, it is assumed that there is no federal legislation which directly or indirectly regulates greenhouse gas emissions. If there were, then the courts would be likely to analyze any AB 32 regulation, including a "first seller" regulation, under federal preemption grounds as well.

7/ *See Hughes* v. *Oklahoma* (1979) 441 U.S. 322, 336.

imports from other states, nor exports from within its boundaries, without offending the Constitution."[8/] Here, the "first seller" regulation under AB 32 appears to be distinguishable from the statute in *City of Philadelphia* for two reasons.

First, the statute in *City of Philadelphia* prevented certain products from entering New Jersey. Under the "first seller" regulation, electricity generated from high-GHG emitters can still be sold in California if it meets the AB 32 standards.

Second, a "first seller" regulation that applies to both in-state and out-of-state sellers delivering power into California does not discriminate based on geographic origin. In contrast, in *City of Philadelphia*, the New Jersey statute prohibited the importation of "solid or liquid waste which originated outside the territorial limits of the State."[9/]

The second Commerce Clause test is a balancing test to see if the state interest in regulating the activity offsets the interference with interstate commerce. When a state enactment is not facially discriminatory, the *Pike* balancing test is generally applied. In *Pike v. Bruce Church* (1970) 397 U.S. 137, the Supreme Court established this test that weighs the local benefits against the burdens on interstate commerce, in order to determine if a particular state regulation violates the dormant Commerce Clause. A regulation's burdens on interstate commerce must be "clearly excessive" in relation to the local benefits in order for a regulation to be struck down under *Pike*.[10/]

Here, the *Pike* balancing test would be applied to both the first seller approach and to a load based cap, because both are seeking to implement AB 32's statutory intent

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8/ *City of Philadelphia* v. *New Jersey* (1970) 437 U.S. 617, 620.
9/ *City of Philadelphia* v. *New Jersey*, 437 U.S. at 618.
10/ 397 U.S. at 142.

to regulate power delivered into the state from outside the state.[11/] As with SB 1368, AB 32 clearly states California's strong local interest and there is no comparable federal GHG statute that provides a countervailing federal interest. Thus, a "first seller" regulation under AB 32 should meet this test as well (which is applicable regardless of the point of regulation.)

Applying this legal principle to the facts, the courts would be likely to look primarily at the statutory language of AB 32 and other legislative history.[12/] In addition to the findings and legislative history of AB 32, California's Climate Action Team has found that GHG emissions contribute to climate change, and those findings also would be likely to be taken into account by the courts.[13/] Thus, California would be able to cite these legislative and public policy findings to conclude that a "first seller" regulation under AB 32 would have substantial local benefits.

The second prong of the *Pike* test is to assess the relative burden of the "first seller" regulation on interstate commerce. In this regard, whether one out-of-state geographic region may be impacted more than another is not relevant here because the concern underlying the dormant Commerce Clause is economic protectionism of in-state interests, and the "first seller" regulation would be applied even-handedly to in-state and out-of-state sellers alike. In *Minnesota v. Clover Leaf Creamery* (1981) 449 U.S. 456, the Court upheld a Minnesota statute that banned the retail sale of milk in plastic nonreturnable, nonrefillable containers, but allowed such sale in other types of

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11/ PG&E notes that because AB 32 is a form of environmental regulation administered by CARB and not a form of traditional retail public utility regulation administered by the CPUC, neither the first seller approach nor a load based cap would be entitled to be analyzed by the courts under Commerce Clause decisions reviewing the impacts of traditional local public utility regulation on interstate commerce.

12/ California Health & Safety Code § 38501(a).

13/ Final Climate Action Team Report to the Governor and the Legislature, March, 2006, pp. 19-24.

nonreturnable, nonrefillable containers.[14/] The opponents of the statute argued that the "plastic resin . . . used for making plastic nonreturnable milk jugs, is produced entirely by non-Minnesota firms, while pulpwood, used for making paperboard, is a major Minnesota product."[15/] The Supreme Court responded: "[e]ven granting that the out-of-state plastics industry is burdened relatively more heavily than the Minnesota pulpwood industry, we find that this burden is not 'clearly excessive' in light of the substantial state interest in promoting conservation of energy and other natural resources."[16/]

Applying *Clover Leaf Creamery* to a "first seller/deliverer" regulation, it is likely that California could successfully argue that the burden on interstate power sellers is no different than other even-handed state energy and environmental regulations which directly or indirectly affect or regulate such sellers when they sell or deliver power into California. Thus, the "first seller" regulation would be likely to satisfy the *Pike* balancing test.

The third Commerce Clause test is whether the state regulation is attempting to regulate a transaction or activity that is "extra-territorial" i.e. a transaction that is conducted completely outside the state with no ties to the state. Like facially discriminatory regulations, an "extraterritorial" regulation is generally considered to be invalid per se.[17/] In this context, extraterritorial regulation means regulation that impacts commerce that occurs "wholly" outside the state.[18/] An example would be if an Arizona utility sold power to a Nevada utility with a delivery point under the contract outside

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14/ 449 U.S. 456.
15/ *Id.* at 473.
16/ *Id.*
17/ *See, e.g., Brown-Forman Distillers Corp.* v. *New York State Liquor Authority* (1986) 476 U.S. 573, 579.
18/ *Edgar* v. *MITE Corp.* (1982) 457 U.S. 624, 642-43 (plur. opn.).

California and no other activities relating to the contract are within or connected to California. This would be an "extraterritorial" transaction that California could not regulate under AB 32.

On the other hand, as the CPUC said in its SB 1368 decision, a state can regulate an out of state entity which conducts business in California through a contract with a California entity. Thus if the Arizona utility sells power to a California purchaser, such as an LSE, and the LSE takes delivery in California or the contract otherwise indicates the power is to be delivered into California, then the transaction is not "extra-territorial" under the Commerce Clause and AB 32 could regulate the emissions attributable to that sale, even though the seller has no powerplants or other facilities located in California--the mere California contract would be a sufficient "nexus" under the Commerce Clause to satisfy the "extra-territoriality" test.

In *Healy v. Beer Institute* (1989) 491 U.S. 324, 336, the Court stated that: "[t]he critical inquiry is whether the practical effect of the regulation is to control conduct beyond the boundaries of the State." The practical effect of the Connecticut law challenged in *Healy* was that brewers could not offer volume discounts in Massachusetts, New York and Rhode Island, where they were legal. If they did so, the volume discount would have become the ceiling price for all sales in Connecticut, which did not allow volume discounts.[19/] However, a "first seller" regulation under AB 32 where the contract is with a California buyer or where the electricity is to be delivered into California would not have the practical effect of setting the price, or any other conditions, of sales in other states, because it would only regulate sales transactions in California.

19/ *Healy* v. *Beer Institute*, 491 U.S. at 339.

As the Ninth Circuit noted in *Gravquick A/S v. Trimble Navigation International Ltd.* (9th Cir. 2003) 323 F.3d 1219, 1224, cases finding extraterritorial regulation "deal with laws that regulate out-of-state parties directly, not through contract."[20/] The Ninth Circuit held that when a state regulates contractual relationships in which at least one party is located within California, it does not regulate commerce entirely outside of the State of California.[21/] In the CPUC's decision approving the SB 1368 emissions standard, the CPUC rejected an argument by SCE that the Commerce Clause precludes states from applying local environmental laws that burden out-of-state entities. The CPUC held that States are permitted to prevent sales to in-state entities based on potential in-state environmental effects.[22/] The CPUC also cited a Supreme Court case that held that it was not a violation of the dormant Commerce Clause for the City of Detroit to condition access to its port by requiring compliance with local environmental regulations.[23/]

Applying these Commerce Clause requirements to a "first seller/deliverer" point of regulation, the courts would be likely to find that regulating the "first seller" of power into the State of California is neither discriminatory nor "extra-territorial," because the AB 32 standards would be applied to transactions with out of state entities in the same way as with in-state entities, and only transactions resulting in the delivery of power into California would be regulated, not transactions occurring wholly outside California.

20/ *See Healy* v. *Beer Institute,* 491 U.S. at 343 (Supreme Court invalidated statute that prevented sale of alcohol at a price higher than that sold in neighboring states.).

21/ *Gravquick A/S* v. *Trimble Navigation International Ltd.*, 323 F.3d at 12

22/ *See Cotto Way Co.* v. *Williams* (8th Cir. 1995) 46 F.3d 790, 794 On the other hand, so-called "mandatory reciprocity laws" that require another state to enact certain laws or regulations as a condition of permitting an entity from that state to sell or import a commodity or product into the regulating state, have been routinely overturned by the courts as "extraterritorial" or discriminatory. *See, e.g., City of Philadelphia, supra; National Solid Waste Management Ass'n.* (7th Cir. 1995) 63 F.3d 652, 654-62.

23/ *Huron* v. *Detroit,* 362 U.S. at 448.

Nonetheless, because AB 32 under either a load based cap or the first seller approach is directed at interstate transactions associated with GHG emissions from out of state facilities, the resolution of a Commerce Clause challenge to either approach is likely to be subject to uncertainty regarding how the courts will review and weigh the particular facts relating to benefits and burdens, including not only the intent of the regulation but its effects on interstate commerce. PG&E believes that a Commerce Clause challenge to either the first seller approach or to a load based cap under AB 32 will rest on the same basic facts discussed above. PG&E also believes such a challenge should fail because AB 32 by its terms—under either the first seller approach or a load based cap—is regulating the "causes" of emissions, which can be concluded to be the power deliveries or sales of power into California as well as the out-of-state operation of the powerplants themselves. Thus if California can meet the tests discussed above, the fact that the emissions occur solely out of state should not preclude AB 32 from regulating the transactions occurring in the state that lead to the emissions, whether through a load based cap or through the first seller approach.

49. Could the deliverer/first-seller approach be designed or implemented in a way that would avoid or lessen problems under the dormant Commerce Clause? If so, how?

See response to Question 48.

50. Are issues under the dormant Commerce Clause more or less serious under a deliverer/first-seller approach compared with a load-based approach? Explain.

See response to Question 48.

51. The Market Advisory Committee report suggests that the value of GHG emission allowances "can be used to fund innovative emission reduction technologies and to focus pollution-reduction efforts in low-income and minority communities" or "can be utilized to provide transition assistance for workers and industries subject to strong market pressures from competitors operating in

jurisdictions that lack similar caps on greenhouse gas emissions" (Market Advisory Committee report, at iv - v) or "should be directed to investments in end-use efficiency improvements" (Id., at 54). Would these uses raise problems under the dormant Commerce Clause? Would these problems be more or less serious under a deliverer/first-seller approach compared with a load-based approach?

Whether the revenues derived under AB 32 are pursuant to a load-based cap or a first seller/deliverer approach is irrelevant to an analysis of whether the use and intent of the revenues serve a sufficient public purpose to offset any burdens on interstate commerce under the Commerce Clause. In this regard, the intent of the use of revenues raised under AB 32 will be measured against the express intent and requirements of the statute itself. If the use of the revenues is consistent with AB 32's statutory objectives and public policy purposes, and the benefits of those objectives and purposes offset the resulting burdens on interstate commerce, the programs should be sustained under the Commerce Clause. If not, the programs will be subject to challenge under the Commerce Clause.

Authority to Auction

52. Does ARB have the authority, under AB 32 or any other statute, to auction allowances to emit greenhouse gases? Explain.

The question as to whether CARB has authority to require an auction of emissions allowances as part of AB 32 must begin with the statutory language of AB 32 itself.

AB 32 requires CARB to establish "a statewide greenhouse gas emissions limit...to be achieved by 2020" that is equivalent to "what the statewide greenhouse gas emissions level was in 1990." (Health and Safety Code section 38550.) AB 32 then requires CARB, "in furtherance of achieving the statewide greenhouse gas emissions limit," to "adopt greenhouse gas emission limits and emission reduction measures...to

achieve the maximum technologically feasible and cost-effective reductions in greenhouse gas emissions." (Health and Safety Code section 38562(a).)

"Greenhouse gas emissions limit" is defined as "an authorization, during a specified year, to emit up to a level of greenhouse gases specified by the state board, expressed in tons of carbon dioxide equivalents." (Health and Safety Code 38505(h).) Likewise, "emissions reduction measure" is defined as "programs, measures, standards, and alternative compliance mechanisms authorized pursuant to this division, applicable to sources or categories of sources that are designed to reduce emissions of greenhouse gases." (Health and Safety Code section 38505(f).)

Separately, AB 32 authorizes CARB to include in its emissions limit regulations "market-based compliance mechanisms" that may be used by regulated entities "to achieve compliance with their greenhouse gas emissions limit." (Health and Safety Code section 38570 (a), (c).) In turn, a "market-based compliance mechanisms" is defined as either:

"(1) A system of market-based declining annual aggregate emissions limitations for sources or categories of sources that emit greenhouse gases," or

"(2) Greenhouse gas emissions exchanges, banking, credits, and other transactions, governed by rules and protocols established by the state board, *that result in the same greenhouse gas emission reduction, over the same time period, as direct compliance with a greenhouse gas emission limit or emission reduction measure adopted by the state board pursuant to this division.*"

(Health and Safety Code section 38505(k)) (emphasis added).

Thus, the relationship of "emissions limits" to "market-based compliance mechanisms" must be considered under AB 32 in order to determine whether an auction is permitted. First, CARB must establish "emissions limits" applicable to regulated

entities and designed to achieve the overall reduction of statewide greenhouse gas emissions to 1990 levels. Once the emissions limits are established and applied to each regulated entity, then CARB may – but is not required to – include "market-based compliance mechanisms" that result in "*the same greenhouse gas emission reduction, over the same time period, as direct compliance with a greenhouse gas emission limit or emission reduction measure*" adopted by CARB to achieve the statewide emissions reduction. In other words, a "market-based compliance mechanism" is not a separate regulatory limit or requirement under AB 32, it is an alternative means of compliance with an emissions limit or reduction measure already adopted and applicable under the statute.

Applying this regulatory system to a market-based compliance mechanism consisting of emissions "allowances" that may be freely traded among regulated entities and other parties, it appears that CARB may authorize regulated entities which emit less greenhouse gases than their emissions limits to trade "allowances" equivalent to their "surplus" emissions to other regulated entities which are emitting more than their limits or to third parties who obtain value from the "allowances." However, it is a separate question as to whether CARB may require regulated entities which are otherwise emitting less than their emissions limits to nonetheless purchase "allowances" to emit that they do not need in order to comply with their emissions limits. To do so would raise the question as to whether CARB is converting a "market based compliance mechanism" into a separate emissions limit or reduction measure that is more stringent than the direct emissions limit or reduction measure that CARB already has adopted, pursuant to Health and Safety Code sections 38505(k) and 38562(a).

Similarly, the question arises as to whether CARB in implementing a "market-based compliance mechanism" under Health and Safety Code section 38505(k) may require each regulated entity or a category or sector of regulated entities to "auction" to third parties their rights ("allowances") to emit up to their already established emissions limits and then buy back all or a portion of their rights in order to comply with the emission limits applicable to each entity or categories or sectors of entities. Such a system would raise questions as to whether CARB is attempting to implement an indirect emissions limit that is arguably more stringent than the direct emissions limit adopted separately under Health and Safety Code section 38562(a).

These issues of statutory interpretation are preliminary and subject to further review and analysis as CARB moves forward with consideration of various market-based mechanisms and direct source-specific or sector-specific emissions limits. The design of AB 32 emissions limits and market-based mechanisms, including the scope and design of an auction of allowances under an AB 32 cap-and-trade market-based mechanism most certainly will require resolution of these legal questions.

Other Legal Issues

53. Are there any other legal issues that the Public Utilities Commission and the Energy Commission should consider in deciding whether to investigate the deliverer/first-seller approach further? Explain.

As noted by several parties in their comments on proposed reporting protocols for AB 32, including PG&E, a load-based cap raises legal issues regarding whether LSEs can be held responsible for accurate reporting of emissions from facilities or under contracts over which the LSEs have no legal or operational control or involvement. In contrast, under the first seller approach, this legal issue is significantly mitigated by the fact that

generators would be the most likely reporting and complying entities for in-state GHG emissions sources, and counter-parties with a more direct legal and commercial relationship with out-of-state sources of emissions would be the most likely reporting and complying entities for power imports.

A related legal issue associated with regulation of in-state sources of GHG emissions under AB 32 is whether, under the statutory requirements of AB 32, load serving entities which neither own nor operate the facilities that are the sources of such in-state emissions, can be made responsible for such emissions in lieu of the third parties who actually own or operate the facilities directly. This legal issue is accentuated when compared to traditional regulation of emissions from stationary sources under other air quality laws, where the owners or managers of the facilities themselves are the complying and reporting entities, not the customers served by the facilities or the purchasers of the output from the facilities.

PG&E recommends that these additional legal issues be considered in this proceeding as well.