BEFORE THE PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA

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Order Instituting Rulemaking to Implement the Commission's Procurement Incentive Framework and to Examine the Integration of Greenhouse Gas Emissions Standards into Procurement Policies.	R.06-04-009

COMMENTS OF THE DIVISION OF RATEPAYER ADVOCATES ON THE JOINT CALIFORNIA PUBLIC UTILITIES COMMISSION AND CALIFORNIA ENERGY COMMISSION STAFF PROPOSAL FOR AN ELECTRICITY RETAIL PROVIDER GHG REPORTING PROTOCOL

Pursuant to the June 12, 2007 "Administrative Law Judges' Ruling Regarding Comments on Staff Reporting Proposal" (ALJ Ruling), the Division of Ratepayer Advocates (DRA) submits the following comments on the "Joint California Public Utilities Commission (CPUC) and California Energy Commission (CEC) Staff Proposal for an Electricity Retail Provider GHG Reporting Protocol" (Joint Staff Proposal).[1]

I. INTRODUCTION AND RECOMMENDATIONS

DRA appreciates the initiative of the CPUC and CEC staff in drafting the Joint Staff Proposal, and welcomes the opportunity to provide feedback on this critical first step in accounting for and mitigating Greenhouse Gas (GHG) emissions in California and

[1] Administrative Law Judges' Ruling Regarding Comments on Staff Reporting Proposal (ALJ Ruling), Attachment A: "Joint California Public Utilities Commission and California Energy Commission Staff Proposal for an Electricity Retail Provider GHG Reporting Protocol," (Joint Staff Proposal), June 12, 2007.

regionally. Careful monitoring of GHG emissions from "source to sink" through consistent, verifiable, straightforward, and regionally expandable reporting standards is essential to maximizing the success of the GHG and Climate Change mitigation policy program mandated by Assembly Bill (AB) 32. Ratepayers will ultimately play a role in funding an improved system of monitoring GHG emissions and the purchase of allowances in a prospective cap and trade market system. Thus, they have a significant interest in ensuring that the reporting protocol is as accurate and effective as possible.

The Joint Staff Proposal goes a long way toward addressing some complex foundational regulatory issues that will require resolution if California is to meet the objectives of AB 32 and chart a clear path for other states in the region to follow. In particular, tracking and reporting emissions from unspecified out-of-state sources are among the many challenges that face policymakers. In order to maximize the effectiveness of an electric retail provider GHG reporting protocol, DRA offers the following recommended changes and additions to the Joint Staff Proposal:

1. The proposed definitions and criteria for evaluating the reporting protocol in the Joint Staff Proposal should be as clear and narrowly-defined as possible.

2. Joint Staff and ARB should develop separate short-term and long-term plans for emissions reporting systems consistent with the respective dates for implementation (January 1, 2008) and compliance (January 1, 2012). DRA supports the use of the Joint Staff Proposal's reporting template with some modifications in the near-term. DRA also supports the development of a Western regional emissions tracking system in the long term.

3. The Joint Staff Proposal should modify the derivation of marginal emissions factors for residual unspecified power.

4. GHG emissions reports should be submitted on a quarterly basis in order to evaluate emissions and market trends more frequently and comprehensively.

5. The proposed verification procedures should be clarified and penalties should be enforced.

II. DISCUSSION

A. The definitions in the Joint Staff Proposal should be consistent with those identified in AB 32.

In Section 2.1 (Definitions) of the Joint Staff Proposal, an Emission Factor is defined as a ratio "to calculate emissions of a given pollutant per unit of energy consumed" and "[is] used to convert combusted fuels to quantities of pollutants, e.g., lbs. CO_2e/MMBtu."[2] The Joint Staff Proposal subsequently recommends CO_2 emission factors (in lbs/MWH) for various types of purchases. DRA recommends that the definition of emissions factor be modified for two reasons. First, AB32 requires that all retail electricity providers measure greenhouse gas emissions from their customers' electricity consumption. Second, section 38505 (g) of the California Health and Safety Code defines greenhouse gases as including carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons and sulfur hexafluoride. Accordingly, the definition of emission factors should be modified as follows:

> An emission factor is a ratio that is used to calculate greenhouse gas emissions per unit of energy consumed. Greenhouse gases include carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons and sulfur hexafluoride. Emission factors are used to convert combusted fuels to quantities of greenhouse gas emissions as given by lbs. CO_2e/MMBtu or lbs. Emission factors can also be calculated for the end use of electricity based on what is known about the types and quantities of fuels combusted to produce the power delivered to end users.

Moreover, consistent with AB 32, the Joint Staff Proposal should also define "Carbon dioxide equivalent" (CO_2e) as follows:

[2] Joint Staff Report at 5.

> …the amount of carbon dioxide by weight that would produce the same global warming impact as a given weight of another greenhouse gas, based on the best available science, including from the Intergovernmental Panel on Climate Change.[3]

B. DRA's proposed criteria for assessing GHG reporting protocols

The Joint Staff Proposal identified a set of seven criteria for assessing the reporting protocols: accuracy, consistency, simplicity, transparency, minimization of unintended consequences, setting appropriate policy signals, and expandability.[4] In order to meet the objectives of AB 32, DRA recommends the following modifications to the above criteria:

1. Replace the criterion of "Accuracy" with "Accuracy, Completeness, and Verifiability"

Section 38530(b)(4) of the California Health and Safety Code requires that the greenhouse gas emission reporting be "complete and verifiable." The reporting protocol should be designed to cover all six greenhouse gases from owned generation assets as well as purchases, including the California ISO's (CAISO) energy allocation. Furthermore, the protocol should be conducive to verification by establishing clear and comprehensive monitoring standards. As discussed further below, guidelines for routine audits of retail providers' calculation methods of reported emissions, as well as verification of contract language, is essential to maintaining the integrity of the reporting system.

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[3] California Global Warming Solutions Act of 2006 (AB 32), Section 38505, (c) of the California Health & Safety Code.

[4] *Id*. at 7-8.

2. Remove or clarify the criterion "Setting Appropriate Policy Signals"

This criterion appears somewhat duplicative of both the "Minimization of Unintended Consequences" and the "Accuracy" criteria, and should either be modified or eliminated for the sake of simplicity. While relevant, the specific concern about the impact of the estimation on incentives for reducing GHG emissions would seem to fall under the rubric of avoiding unintended consequences. Thus, unless Joint Staff can more clearly distinguish the "Setting Appropriate Policy Signals" and "Minimization of Unintended Consequences" criteria, either merging them or eliminating the former would help to streamline and clarify them.

3. Clarify the "Minimization of Unintended Consequences" criterion.

In addition to possibly merging the "Minimization of Unintended Consequences" and "Setting Appropriate Policy Signals" criteria, the former would benefit from a clear, general definition of "unintended consequences". This should be followed by the identification of other specific consequences. The criterion heading is broad, but the description is based strictly on the example of the potential conflict between the Integrated Forward Market (IFM) and Market Redesign, and the GHG mitigation policy proposal. DRA recommends that the Joint Staff Report divide this criterion into other relevant unintended consequences. One example might be labeled "Establishing Proper Policy Incentives", and another might be "Market Redesign Issues," or simply "Potential Market Distortions." However it is parsed out and defined, this criterion should cast a wider net by addressing other risks and consequences.

In summary, the objectives of the reporting protocols should be more clearly defined and narrowly focused to ensure rigorous and consistent accounting of emissions.

C. The Proposed Reporting Protocol should address both short-term emissions reporting requirements as well as the need to develop a regional emissions tracking system in the long term.

The Joint Staff Proposal recognizes as part of Section 2 "Key Issues, Definition, and Criteria for the Protocol" "that the reporting protocol adopted for 2008 reporting will change as lessons are learned from the initial implementation"[5] and that in the future, "a WECC-wide tracking system may materialize with emission-labeled contracts that also accounts for the claimed resources in other states."[6] DRA recommends that the Reporting Protocols emphasize reporting requirements in the short term as well as the need to develop a WECC-wide GHG emissions tracking system for the long term to meet the mandates of AB 32.[7] This would be best accomplished through the addition of a new section after the current section 8.

For the short-term reporting requirements, DRA recommends that all calculation steps and adjustments necessary to determine the total load-based CO_2e emissions be disclosed and transparent in the final reporting protocol. Currently, the draft protocol references the ARB methods for calculating the emission factor for both in-state and out-state specified source. It is unclear without having instant access to the ARB methods what these calculations entail. DRA recommends clarification on the ARB methods in an appendix to the reporting protocol. This should also include the emission calculation method for null renewables. Secondly, DRA recommends that Joint Staff provide a

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[5] *Id*. at 6.

[6] *Id*. at 6.

[7] Section 38530.(c) of the Health and Safety Code states: "The state board shall do both of the following:

(1) Periodically review and update its emission reporting requirements, as necessary.
(2) Review existing and proposed international, federal, and state greenhouse gas emission reporting programs and make reasonable efforts to promote consistency among the programs established pursuant to this part and other programs, and to streamline reporting requirements on greenhouse gas emission sources."

reporting template similar to the sample reporting form that reflects all of the calculation steps in the final reporting protocol. This will eliminate any ambiguity in the reporting format. Lastly, DRA recommends that Joint Staff clarify whether LSEs should continue to submit certification reports to the California Climate Action Registry (CCAR) once the GHG reporting protocol takes effect on January 1, 2008.

For the long term GHG reporting, DRA recommends that Joint Staff and the ARB continue to work with other states within the Western Electricity Coordinating Council (WECC) region to promote the need and pursue the development of a regional GHG tracking system for all electricity generation resources. The Western Renewable Energy Generation Information System (WREGIS) developed by the APX and the CEC and operated by the WECC is one candidate platform for the Western regional tracking of GHG emissions. Although WREGIS was developed as a registry and tracking system for renewable energy generation, the system could ultimately be extended to cover all forms of generation for the purpose of GHG emissions tracking. Other regional tracking systems in the U.S. have been utilized to successfully track emissions data, and this functionality exists in WREGIS.[8]

Although coordination efforts with other states in the region has occurred, DRA recognizes that establishing mandatory compliance with a regional emissions reporting system will be challenging and may take time. In fact, this may be the largest obstacle to overcome in the deployment of a complete regional emissions tracking and reporting system. Joint Staff and ARB should make this coordination effort a long term goal between now and the compliance date of January 1, 2012.

D. The derivation of marginal emission factors for residual unspecified power should be modified to reflect new generation resources.

The Joint Staff Proposal recommends calculating the emissions for Residual Unspecified Power based on the marginal resource mix for each of the Northwest and

[8] "WREGIS Implementation and Capabilities of Regional Tracking Systems," workshop presentation by Sakis Asteriadis, Senior Director, APX Inc., April 13, 2007.

Southwest region. For the Southwest, the marginal resource mix for unspecified power is characterized as 90% natural gas and 10% coal, yielding a weighted average default emissions factor of 1,075 lbs/MWh. For the Northwest, the marginal resource mix for unspecified power is characterized as 66% hydro, 9% coal, 2% nuclear, 22% natural gas and 1% renewables, yielding a weighted average default emissions factor of 419 lbs/MWh.[9]

These marginal numbers would only indicate what types of generation would be used to serve instantaneous California load based on the existing plant mixture. However, in the long run, a marginal system will not incent new out-of-state generation capacity that minimizes greenhouse gases. Depending on the area, new generation will include coal plants and/or natural gas-powered facilities, consistent with least-cost dispatch principles. In such a system, all of the new capacity that is intended to serve California will not be natural gas-fired, thereby increasing the possibility of gaming. Specifically, the derivation of a default emission factor based on the marginal resource mix will incentivize out-of-state generators/utilities to claim all coal power for serving native load while "reserving" low-carbon power for export to California. Furthermore, in the absence of a regional emissions cap outside of California, out-of-state generators/utilities will add new coal facilities as part of their long term resource plan to serve both native load and California exports. DRA therefore recommends the use of a modified emissions factor methodology which recognizes the risk of contract-shuffling and gaming, and their impact on long-term GHG reductions. The present model used to derive the marginal generation should be modified, if necessary, to reflect these considerations.

E. Potential legal issues and changes to existing CPUC and CEC policies

[9] *Id.* at 19.

DRA does not see any legal issues that would interfere with development of the reporting requirements as currently envisioned. AB 32 requires California LSEs to report their emissions to CARB, but such reporting does not appear to burden interstate commerce or otherwise raise issues related to the Commerce Clause. Furthermore, DRA also does not believe that any changes to existing CPUC or CEC policies will be necessary to accommodate the Joint Staff Proposal. However, DRA reserves the right to comment on any legal or policy issues in reply.

F. In the context of AB 32, the proposed reporting protocol has a potential loophole for importing contracting parties.

The ALJ Ruling requests parties to comment on "whether modification to the Staff proposal would be needed to support implementation of the recommendations in the Market Advisory Committee's draft report, in particular, the 'first seller structure.'"[10] Prior to consideration of the "first seller" approach, two models existed for controlling emissions: source-based regulation, in which emission caps applied to generators, and load-based regulation, in which emissions caps apply to LSEs under a load-based structure. Under the "first seller" structure proposed in the MAC Draft Report, the point of regulation would cover both in-state generators as well as importing contractual parties.[11] To the extent that AB 32 mandates GHG reporting from both emission sources as well as all retail sellers of electricity, the reporting protocols should accommodate report submissions from both generators as well as the retail electricity sellers. To calculate emissions for electricity sector reporting, the Joint Staff Proposal recommends: (i) the use of emission factors specific to the generation source; (ii) the assignment of default regional emission factors for unspecified generation; and (iii) the adjustment of total emissions from wholesale sales. These calculation protocols are valid for both load-based and source-based regulation.

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[10] ALJ Ruling at 2.

[11] MAC Draft Report at 39.

However, there appears to be a significant potential reporting loophole under the first seller structure. AB 32 does not appear to require entities other than generators of LSEs to report emissions, so importing contracting parties that are not LSEs, e.g. power marketers, appear unlikely to be covered by reporting requirements. Aside from the need to close this potential loophole, DRA does not see any necessary reporting modifications to accommodate the "first seller" structure.

G. The proposed reporting, verification, and enforcement procedures require further development

1. Reporting should be completed on a quarterly basis.

Rather than reporting annually as recommended in the Joint Staff Proposal, emissions data should be reported on a quarterly basis. Quarterly reporting would increase transparency and could provide more opportunities to monitor the data and address potential market volatility. In addition, as noted in the MAC Draft Report, quarterly reporting would also "facilitate timely quality assurance/quality control, and provide information to the public and to emissions markets regarding trends."[12] The Joint Staff Proposal notes that "[i]n-state generation data is already reported by sources to the Energy Commission on a quarterly basis and to the federal government monthly and annually," and that "[l]oads also report to the Energy Commission on a quarterly basis."[13] Thus, combining these reports with quarterly emissions data is feasible and would provide additional valuable information on emissions and market tendencies, which will be critical in the early stages of implementation of the emissions reduction program.

2. The verification and enforcement procedures should be clear and include penalties.

[12] MAC Draft Report at 71.
[13] *Id*. at 34.

The Joint Staff Proposal briefly mentions that CARB is developing a third-party auditor training and certification program. Audits should be completed on an annual basis to ensure reporting compliance and accuracy of emissions data. DRA also supports a verification and enforcement program that includes fines or penalties for non-compliance in order to ensure the integrity of the program. DRA has not yet considered whether such penalties should be strictly financial, whether non-compliant entities should be required to make up the shortfall in allowances, or both (as in the European Union ETS and the trading program SO_2 trading program).[14]

H. The ability of the CAISO to optimally dispatch resources under the MRTU will likely depend on a regional emissions tracking system that assigns emission values to all submitting bids.

At the April 12-13, 2007 CPUC workshop, discussion questions included the implications of the CAISO's Market Redesign and Technology Upgrade (MRTU) on the role of LSEs in determining which resources are dispatched and the implementation of a regional tracking system. While these questions were not discussed in detail during the workshop, DRA offers its comments on the implications of the MRTU implementation as follows.

The MRTU's Integrated Forward Market (IFM), scheduled to go live in February 2008, will replace the current Day-Ahead market. The IFM is designed to optimize the delivery of energy by minimizing energy price, which includes the cost of energy plus transmission costs, and transmission congestion.[15] As currently planned, the MRTU Release 1 will not contain any tracking system for generator emissions. Thus, any energy that is procured through the IFM will not bear any indication of emission levels.

The MRTU will play a significant role in determining which resources are dispatched. Currently, LSEs are required to submit balanced schedules of load and

[14] *Id*. at 72.

[15] Transmission costs will vary by location of generation and load.

generation representing 95% of expected load the day before each trading day. The CAISO procures the remaining 5% of the needed energy through a competitive hour-ahead market. Under MRTU, however, LSEs will still submit a similar balanced schedule, but the generators submitted in this schedule will compete in a day-ahead market both against each other and any other generators that wishes to sell energy for the next day. The IFM will optimize the load-generation balance based on the objectives of minimizing costs (energy plus transmission) and transmission congestion. In other words, the generators submitted by LSEs with their day-ahead schedules may not be the winning bids in the optimization process. Rather, cheaper resources and resources that are close to load will generally prevail in IFM optimization. Such resources may not be compliant with any state-set emission caps, as the IFM does not track or optimize for emissions. The MAC Draft Report estimates that IFM will account for roughly 10% to 20% of the total IOU loads.

Under a load-based emission cap scenario, LSEs may choose to refrain from submitting its day-ahead schedule into the IFM, so that their designated resources will be used to supply their load in order to comply with emission limits. Several negative effects arise from this action: 1) LSEs will be penalized for withholding their schedules from the IFM; 2) the selection of remote resources that nonetheless contribute to the LSE's emissions compliance may add to overall grid congestion and transmission costs 3) LSEs' withholding of substantial amounts of generation from the IFM will decrease the efficiencies sought through the IFM. The overall impact of non-competitive, non-economic dispatch of resources results in increased ratepayer costs.

To avoid undermining the benefits of the IFM, CAISO staff has indicated that it may be possible to incorporate some form of GHG emissions tracking and/or optimization in the IFM in a subsequent release of the MRTU. DRA recommends that the Commission, CEC and ARB continue to work closely with the CAISO to achieve this functionality. The IFM can also leverage on the development of a regional emission tracking system for more accurate accounting of emissions. Other states within the WECC will also benefit from such a regional emissions tracking system if emission

reporting and/or capping becomes mandated outside of California. As discussed earlier, WREGIS is one candidate platform for such a regional emissions tracking system. DRA strongly recommends that the Commission advocate for the development of a regional emissions tracking system.

III. CONCLUSION

DRA supports a GHG emissions reporting protocol that is clear, accurate, effective, verifiable, and conducive to adoption and implementation by other states in the region. The CPUC and CEC should adopt and incorporate DRA's recommended changes, additions, and input in the final reporting protocol.

Respectfully submitted,

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