BEFORE THE ENERGY COMMISSION
OF THE STATE OF CALIFORNIA

In the matter of:	)	
	)	
Rulemaking to Consider Modifications of	)	
Regulations Establishing a Greenhouse	)	Docket No. 12-OIR-1
Gases Emission Performance Standard	)	
For Baseload Generation of Local	)	
Publicly Owned Utilities	)	

REPLY COMMENTS FROM THE LOS ANGELES DEPARTMENT OF WATER AND POWER TO THE CALIFORNIA ENERGY COMMISSION'S TENTATIVE CONCLUSIONS AND REQUEST FOR ADDITIONAL INFORMATION

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Dated: September 28, 2012

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Pursuant to the procedures established by the California Energy Commission (Energy Commission, or CEC), the Los Angeles Department of Water and Power (LADWP) respectfully submits these Reply Comments to stakeholder comments received on July 27, 2012, regarding the CEC's Tentative Conclusions and Requests for Additional Information (Docket 12-OIR-1) to consider modifications to the Emission Performance Standard (EPS) regulations, Title 20, California Code of Regulations, Section 2900 et seq.

I. INTRODUCTION

The LADWP remains committed to reducing its greenhouse gas (GHG) emissions as part of Senate Bill (SB) 1368 and Assembly Bill (AB) 32, and all actions and comments by LADWP in this proceeding and other policy discussions related to GHG emissions unequivocally support this position. This month, the Los Angeles Board of Water and Power Commissioners (Board) approved LADWP's proposed rate increase of eleven percent over two years that will further support the goal of transitioning the LADWP to cleaner generation; the Los Angeles City Council is in the

midst of similarly approving the proposed rate increase with a first reading approval on September 25, 2012.

It is disconcerting to LADWP that the Energy Commission has granted the Natural Resources Defense Council and Sierra Club (Petitioners) consideration of their unsubstantiated allegations of misconduct associated with three specific coal-fired power plants, and has gone even further to provide a venue for the Petitioners to advocate for a new lower level EPS that is legally unsupported and technologically infeasible as further described below.

Further, LADWP is deeply troubled that the Petitioners are expanding their concerns about fossil fuel to further the opposition to natural gas and have elected to use this proceeding, the staff time of the CEC, and publicly-owned utilities (POUs) to engage in what appears to be nothing less than a campaign against all fossil-fuel generation, beyond not only coal but now natural gas as well. The Petitioners appear to ignore the ever-critical role that natural gas generation plays with the integration of more renewable energy into California's energy mix and the increasing cost burdens being placed on our homeowners and businesses just to comply with the existing rules. The Petitioners failed to acknowledge that a portion of natural gas generation is further supported by fuels acknowledged by Public Resources Code section 25741 as being renewable (i.e. biomass, digester gas, municipal solid waste conversion, landfill gas, etc.). The suggested standard is impractical and presents unmanageable risks of either stranding clean and reliable natural gas generation or requiring utilities to procure excess generation.

LADWP urges the Energy Commission to quickly bring closure to this unnecessary proceeding, which has become a distraction from the more important work

of implementing existing environmental mandates under ever tightening regulatory deadlines. LADWP has been undertaking a multi-year utility-wide transformation of its Power System. This transformation requires a minimum 10-year planning horizon to coordinate new project development, financing, design, permitting, and construction. An extraordinary amount of resources are required to implement and sequence these complex projects, including renewable energy projects, divestiture and replacement of coal interests, repowering projects for in-basin natural gas units, transmission upgrades to support new renewable energy, and power reliability projects to strengthen the grid.

Lowering the EPS at this point equates to “moving the goal posts” which is a significant change in law that not only introduces an unacceptable level of regulatory uncertainty but also risks unwinding the financial analyses and resource planning efforts currently underway to support early divestiture of LADWP’s Navajo Generating Station (Navajo) interests by 2015 and mass integration of renewable resources. If replacement of Navajo baseload generation can only be met with a new combined cycle natural gas (CCNG) plant that meets the Petitioners’ suggested EPS level of 825-850 lbs per megawatt hour (MWh) rather than power procured from existing natural gas generation meeting the 1,100 lbs per MWh adopted standard in place today, then LADWP is extremely concerned. Such action would jeopardize its ability to divest its interests even by 2019 at the latest, as construction of an entirely new CCNG plant would not be feasible in that timeframe.

Representatives of the Petitioners published a commentary in the *Los Angeles Daily News* (September 11, 2012) that demonstrates either a fundamental lack of understanding on their part about the relationship between renewable energy, natural

gas and reliability or calls into question their true motivation behind this proceeding. An excerpt from this commentary is included below:

> *"Replacing coal with new big natural gas plants repeats our mistakes of the past by locking in customers to decades of unnecessary fossil fuel generation and volatile prices. State law requires DWP to get 33 percent of its energy from renewables by 2020, and it should use this mandate to replace its coal with reliable, renewable energy. DWP should also be preparing now by making the grid improvements necessary to get to 50 percent renewables by 2030."* [1]

It has been well documented that the intermittency of wind and solar resources continues to challenge bulk power system operators with the inherent swings and/or ramps in the power output of these resources. In many cases, where large concentrations of intermittent renewable resources have been added, system planners must accommodate added variability by increasing the amount of available regulating reserves, and potentially carrying additional operating reserves. These reserves in most cases will be natural gas generation.

As LADWP replaces its coal-based generation and increases its renewable energy portfolio, flexible natural gas generation will play a fundamental role for ensuring reliable integration of intermittent resources and maintain reliability of the bulk power system. The existing large coal generators currently provide a tremendous amount of electrical inertia that currently supports electrical flows into Southern California. Removing these generators without replacing the electrical inertia will impact energy flows and the ability to integrate renewable energy with limited electrical inertia. The Petitioners' suggestion to readers – many of which are LADWP customers – that highly reliable baseload generation can and should be replaced entirely with intermittent renewable resources as opposed to natural gas generation, is misleading. Such

[1] http://www.dailynews.com/opinions/ci_21485369/kristin-eberhard-and-evan-gillespie-how-ladwp-can

commentary is counter-productive and raises serious questions about the Petitioners' motivations.

Let us be clear, SB 1368 was never about preventing utilities from locking in long-term natural gas; it essentially encouraged it. SB 1368 is really about divesting of coal with both renewable energy *and* natural gas (as both reliability backup for those renewable energy sources as well as baseload generation for the utilities). If the Petitioners wish to now treat natural gas the same as coal, this rulemaking proceeding is not the proper forum.

Lowering the EPS is not just a slippery slope argument which reveals the true desire of the Petitioners to see utilities altogether divest of all fossil fuels entirely, it is also an unlawful concept because the Legislature made clear that the EPS was to be set at the level of a CCNG plant, as that technology existed at the time of the law's passage [circa 2007]. It never stated that the standard would readjust according to the state of the technology in the future. It is important to take a second hard look at what representatives of the Petitioners have stated in that *Daily News* commentary:

> *"Replacing coal with **new big natural gas plants** repeats our mistakes of the past by locking in customers to decades of unnecessary fossil fuel generation and volatile prices."* (emphasis added)

The Petitioners' entire discussion about lowering the EPS to a level that is somehow in line with the best of current technology under the best of variables and circumstances flies in the face of this commentary even when "new…natural gas plants" are similarly being targeted as unsatisfactory or "another mistake."

Additionally, in a May 3, 2012 *National Journal* publication, the current Executive Director of Petitioner Sierra Club, Michael Brune, is quoted as saying: "As we push to retire coal plants, we're going to work to make sure we're not simultaneously switching

to natural-gas infrastructure." Mr. Brune is further quoted as saying: "And we're going to be preventing new gas plants from being built wherever we can."[2] This fundamental position of Petitioner Sierra Club is at complete odds with their position in this rulemaking for a lower EPS, which essentially demands new, state of the art, gas plants be constructed to meet an EPS of 825-850 lbs per MWh.

LADWP respectfully requests that this proceeding draw to a close without further modifications to the EPS regulation, as this proceeding is not the appropriate forum to address the petitioner's demands.

II. SPECIFIC COMMENTS

A. Whether to establish a filing or notification requirement for all POU Investments in non-EPS compliant facilities

1. Petitioners Fail To Demonstrate How LADWP's Public Process Is Deficient

The Petitioners recommend that the CEC "*should ensure that relevant service lists are simultaneously informed of POU activity and that URL links to POU disclosures are posted on a publicly available CEC website…In the case of agendas and agenda descriptions for public meetings, under Brown Act requirements, this may be 72 hours in advance of that meeting. In other cases, information should be available sooner*." While LADWP supports a public and transparent process for its budget, rate case and resource planning efforts, it is unclear how the Petitioners' suggestion will improve upon the current structure that already provides an abundance of information directly by the utility. The Petitioners have been actively involved in the LADWP and City of Los Angeles proceedings; therefore this duplicative effort is unnecessary and burdensome.

[2] http://www.nationaljournal.com/energy-report/war-over-natural-gas-about-to-escalate-20120503

The individual utility's ratepayers represent the target audience that have a vested interest in the costs that will be passed through to them for any capital investments in non-EPS compliant facilities, renewable energy projects, repowering projects, as well as transmission and power reliability upgrades. The Energy Commission's service lists or website would not be the first place a utility's ratepayers would go to receive information about a utility's proposed actions or expenditures.

In the case of LADWP, its ratepayers have access to this information directly through LADWP's website as well as through the newly appointed Rate Payer Advocate (RPA) which oversees all proposed rate increases which in large part are for meeting the various state mandates. LADWP's ratepayers can also watch Board meetings on the Los Angeles City's Channel 35, and can participate in Board meetings, Los Angeles City Council meetings, public workshops, neighborhood council meetings in person and seek information through more immediate, convenient, and direct means than the Energy Commission.

In addition, the Brown Act requirements referenced by the Petitioners apply to the governing body of the POU in a general sense of giving the entire public adequate notice of upcoming meetings; the Brown Act does not require specifically contacting and notifying a certain party such as the Energy Commission or a certain service list. Everything is now accessible and available via Internet. The interested public doesn't need to physically go to LADWP's headquarters in Los Angeles to find a paper posting of what matter is going to be heard at what time. In fact, LADWP has a set schedule for Board meetings and when there is a deviation of that schedule, it is also made public

through its website.[3] Parties can also be placed on a service list for LADWP Board Meetings.

It should also be noted that the reporting requirements for the Load Serving Entities (LSEs) under the jurisdiction of the California Public Utilities Commissions (CPUC) do not contemplate this level of reporting or disclosure: they simply require an annual advice letter indicating whether or not that LSE is in compliance with the EPS and if it has entered into any covered procurement.

2. ***Petitioners' Proposed Notification Duplicates Existing Public Process***

The Petitioners also recommend that *"…all documents or information needed to allow for an informed understanding of planned capital and debt expenditures or any contractual amendment or new contract affecting a non-complaint facility be made available through the notification methods detailed above…to ease potential administrative burdens, NRDC and Sierra Club are also amenable to a standard such that expenditures under a threshold value, such as $50,000, need not be disclosed."*

The Petitioners' suggestion to post on the CEC website links to the agendas of every publicly owned utility for all expenditures that exceed $50,000 related to non-EPS compliant facilities does not provide meaningful transparency. As previously stated by LADWP and consistent with other POUs, the utility's annual budget process is the primary mechanism for approving operating expenditures overall, including expenditures associated with non-EPS compliant facilities. It is not clear what LADWP would provide to the Energy Commission aside from its annual operating budget. If the Petitioners' intention is to provide disclosure of line-item expenditures in excess of

[3] The Board of Water and Power Commissioners meets regularly on the first and third Tuesdays of each month at 1:30 p.m.

$50,000, such level of reporting by POUs would likely inundate the Energy Commission, and would have no bearing on a utility's long-term interests in a non-compliant facility.

3. ***Petitioners' Proposed Annual Compliance Plan*** **Duplicates** ***LADWP's Integrated Resource Plan***

The Petitioners recommend that *"… CEC request an annual compliance plan from each POU with any interest in a non-compliant facility. Each POU should file a letter with the CEC, annually providing an update on its plans for compliance with the EPS, including any plans for activity, investment, capital expenditure or dent, contractual changes, sale of interest, or other activity at non-compliant facilities."*

LADWP's Integrated Resource Plan (IRP), as a living document that is annually updated and approved by the General Manager and Senior Assistant General Manager of the Power System, is the appropriate mechanism for providing a comprehensive discussion of the LADWP's long-term strategy for meeting multiple Power System objectives. Extensive staff resources are put into this document to fully evaluate and disclose the LADWP' recommended strategy as well as alternatives that have been considered. LADWP does not support the development of a separate annual compliance plan for the EPS that would duplicate efforts associated with the development of the IRP. If the Energy Commission's preference is to have some level of annual reporting by POUs, it should be consistent with the annual advice letter that is filed by LSEs with the CPUC as noted above.

B. Whether to make any other changes to the EPS to carry out the requirements of SB 1368

LADWP strongly opposes the Petitioners' proposal to lower the EPS for several reasons that are outlined below. Most importantly, the Petitioners' proposal is not

supported by the legislative record or current statutes, or by the administrative record established by the CPUC and CEC. Additionally, the proposal is technologically infeasible to implement under conditions specific to California where the operating conditions of generating units require more flexibility today as compared to 2007 when the regulations were first established. LADWP provides a more detailed response below:

1. Administrative Record Does Not Support Lower EPS

LADWP strongly opposes further consideration of the Petitioners' proposal to lower the EPS. Aside from no statutory authority to do so, as described below, it introduces a concept that is not supported by the administrative record at the CEC or CPUC. In fact, the CPUC already vigorously vetted a variety of proposals regarding the level at which the EPS should be established and concluded that it should be set at 1,100 lbs per MWh, a conclusion concurred with by the CEC.

In fact, CEC concurrence is mandated by Public Utilitiy Code section 8340(e)(1) as the statute requires that "the greenhouse gases emission performance standard established by the Energy Commission for local publicly owned electric utilities **shall be consistent** with the standard adopted by the [CPUC]." (emphasis added)

A rulemaking process cannot exceed its scope of authority conferred and in accordance with standards prescribed by other provisions of law as required by section 11342.1 of the California Government Code.[4] Specifically, the Legislature enacted Public Utilitiy Code sections 8340-8341 to codify SB 1368's intent and this rulemaking process cannot exceed the scope of authority conferred by that Legislature.

[4] California Government Code section 11342.1 states: "Except as provided in section 11342.4, nothing in this chapter confers authority upon or augments the authority of any state agency to adopt, administer, or enforce any regulation. Each regulation adopted, to be effective, shall be within the scope of authority conferred and in accordance with standards prescribed by other provisions of law.

"Authority" is defined by section 11349(b) of the California Government Code as "the provision of law which permits or obligates the agency to adopt, amend, or repeal a regulation."

In this instance, Petitioners are asking the CEC to take action beyond that which it is entitled to do: specifically, amending by lowering the EPS. This specific action is beyond the scope of authority granted to the CEC under Public Utility Code section 8341(e)(1) as that law specifically made clear that the CEC's EPS "shall be consistent with the standard adopted by the [CPUC]."

This current proceeding stems from allegations made by the Natural Resources Defense Council and the Sierra Club in a Petition focusing on expenditures associated with three specific coal plants in which California POUs, including LADWP, have long-term financial interests. However, the Petitioners have incorrectly used this proceeding to investigate alleged wrongdoing when in fact there is a clear administrative procedure established in the regulation that should have been used by the Petitioners to request a compliance investigation.[5] It is unreasonable for the Energy Commission to contemplate further changes to the EPS using this current rulemaking effort, particularly when the outcome would be applicable only to POUs under this proceeding.

This latest proposal of lowering the adopted EPS has broad implications for the electricity sector that cannot be addressed in this limited venue. This rulemaking does not include participation by the broader electric sector, including other POUs, IOUs and developers that would have a vested interest in its outcome. These other stakeholders will have an interest in any changes to the EPS, especially as it relates to potential

[5] Public Utilities Code, section 2911 Compliance Investigation.

impacts on integration of renewable energy to meet the State's 33 percent Renewable Portfolio Standard (RPS).

Furthermore, any consideration by the CEC and/or the CPUC to conduct separate proceedings to lower the adopted EPS would have a chilling effect on clean energy investments due to the amount of regulatory uncertainty that would be introduced. For this reason, LADWP recommends that this rulemaking stay focused on what is at hand and bring closure to those issues, namely the expenditures associated with San Juan Generating Station, Intermountain Power Project, and Navajo Generating Station.

2. Legislative Record Does Not Support Lower EPS

Administrative action to lower the EPS is not supported by current legislation (SB 1368). The CEC statutory authority to revisit the standard is triggered only when a GHG "emissions limit is established and in operation that is applicable to POUs" [Public Utilities Code section 8341(f)].[6] In this proceeding, the California Air Resources Board (ARB) commented that section 8341(f) has not been triggered. The Energy Commission has determined that "there is currently no greenhouse gas emissions limit applicable to POUs" and therefore "the Energy Commission will not reevaluate and continue, modify or replace the Commission's EPS at this time." If that is the position of the Energy Commission, then why are we having this extended discussion about reevaluation of the EPS?

The CEC's tentative conclusion in July stated it welcomed comments, but it appears this is just for the sake of discussion and not something that can be seriously

[6] PUC, section 8341(f) reads "*The Energy Commission, in a duly noticed public hearing and in consultation with the commission and the State Air Resources Board, shall reevaluate and continue, modify, or replace the greenhouse gas emission performance standard* ***when*** *an enforceable greenhouse gas emissions limit is established and in operation, that is applicable to local publicly owned electric utilities."* [emphasis added]

considered in light of section 8341(f) not being triggered. Petitioners agreed this requirement has not been triggered, yet are going ahead and asking that the EPS be, in fact, modified. The Petitioners cannot have it both ways, such that the Energy Commission limits reevaluation of the EPS only to what the Petitioners want considered, a lower EPS, while full reconsideration of the need for the EPS is ignored. Ultimately, the statute required the CPUC to establish the EPS by February 1, 2007, for IOUs and the CEC to establish a "consistent" EPS by June 30, 2007 for POUs. That requirement in the law has been satisfied. Further action, unless required pursuant to Public Utilities Code section 8341(f), is not authorized under the current statutes.

The Legislature considered different ways in which to direct the CEC and CPUC to establish the standard, including a) based on the CEC's 2005 IEPR recommendation to set it at the level of a new CCNG plant; b) allowing an exceedance over a new CCNG plant by a certain percentage; or c) specifying an initial emissions level in the bill and ratcheting it down as technology improves.[7] The Legislature accepted the CEC's recommendation and ultimately rejected the notion that the EPS should be lowered periodically as technology improves. This is in part due to the recognition that the EPS was intended to be a backstop measure reflecting a minimum standard, as described in further detail below. It is also important to reiterate that the Legislature made clear that

[7] California Senate Energy, Utilities and Communications Committee Analysis of SB 1368, dated April 4, 2006. http://www.leginfo.ca.gov/pub/05-06/bill/sen/sb_1351-1400/sb_1368_cfa_20060330_153357_sen_comm.html, *"Unlike the CEC's recommendation, this bill does not specify that the GHG standard should be based on new plants. This gives wide discretion to the CEC to choose a standard that could be fairly easy, or very difficult to achieve. For example, emissions of CO2 from existing combined-cycle natural gas power plants in California range from 651 lbs/MWh (impossible for any older gas plant or commercially-proven coal plant to meet) to 2,338 lbs/MWh (dirtier than many coal plants). If a stringent standard is desired, the author and the committee may wish to consider specifying that GHG emissions cannot exceed those of a new combined-cycle natural gas power plant, following the CEC's recommendation. If a less stringent standard is desired, LSEs could be given an allowance to exceed the emissions of a new plant by a certain percentage. Or* ***an initial emissions level could be specified in the bill, and ratcheted down as technology improves.****"* [emphasis added].

the CEC's EPS was to be made consistent with the CPUC's EPS. The Legislature's intent on this point was made all the more clear when it mandated that the CPUC would establish the EPS first and that the CEC's EPS would follow thereafter. Pursuant to Public Utility Code section 8341(d)(1), the Legislature required the CPUC to establish the EPS by February 1, 2007, whereas under section 8341(e)(1), the Legislature required the CEC to *subsequently* establish a "consistent" EPS by June 1, 2007. There is no ambiguity about the fact that the concept of requiring an EPS be made "consistent" with another agency's EPS is exclusively mandated for the CEC and not the other way around; the timing of the dates in 2007 are similarly consistent with the Legislature's intent.

3. ***EPS Is A Backstop Establishing A "Minimum" Performance Requirement***

The EPS was established under SB 1368 as a near-term bridge until an enforceable GHG emissions limit applicable to LSEs and POUs is in place and operational. It was not intended to be the state's primary vehicle to drive down GHG emissions as that is the central function of the Global Warming Solutions Act of 2006 (AB 32). Instead, the SB 1368 EPS was intended to work in concert with AB 32 by preventing further backsliding in the "interim" that would result if LSEs were allowed to enter into new long-term financial commitments with new coal-fired generation, which would unwind all the GHG benefits from state policies promoting ratepayer investments in energy efficiency and renewable energy.[8] At the time SB 1368 was enacted in 2006,

[8] CPUC "Final Interim Opinion on Phase 1 Issues: Greenhouse Gas Emissions Performance Standard." January 25, 2007, "*An EPS is needed to reduce California's financial risk exposure to the compliance costs associated with future GHG emissions (state and federal) and associated future reliability problems in electricity supplies. Put another way, it is needed to* ***ensure that there is no "backsliding" as California transitions to a statewide GHG emissions cap****: If LSEs enter into long-term commitments with high-GHG emitting baseload plants during this transition, California ratepayers will be exposed to the high cost of retrofits (or potentially the need to purchase expensive offsets) under future emission control*

the Legislature found that "California's investor-owned electric utilities currently have long-term procurement plans that include proposals for making new long-term financial commitments to electrical generating resources over the next decade, which will generate electricity while producing emissions of greenhouse gases for the next 30 years or longer..." [9]

The Legislature was not so much concerned about the existing natural gas generation fleet as it was concerned about IOUs locking into new commitments to coal-fired electricity imports. The Legislature recognized that time was of the essence to send a clear message to the electricity market that California was not going to support further development of high-emitting coal resources that were being proposed in the West to serve California load.[10] In its Interim Opinion on the EPS, the CPUC also reaffirmed the intent of the EPS to act as a "minimum performance requirement" for any long-term financial commitment for baseload generation serving California load, recognizing that it is applicable to existing plants and not just newly proposed plants.[11]

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regulations. They will also be exposed to potential supply disruptions when these high-emitting facilities are taken off line for retrofits, or retired early, in order to comply with future regulations. ***A facility-based GHG emissions performance standard protects California ratepayers from these backsliding risks and costs during the transition to a load-based GHG emissions cap."*** (Page 3)

[9] Senate Bill 1368, section 1(e).

[10] California Senate Environmental Quality Committee Analysis of SB 1368, dated April 24, 2006, http://www.leginfo.ca.gov/pub/05-06/bill/sen/sb_1351-1400/sb_1368_cfa_20060423_201534_sen_comm.html *"[T]here are approximately 30 proposed coal fired plants across the West, some of which are planned in anticipation of meeting demand in California. The carbon dioxide emissions from just three 500 MW conventional coal-fired power plants would offset all of the emissions reductions from the IOU's energy efficiency programs and would severely compromise the State's ability to meet the Governor's GHG goals. As the largest electricity consumer in the region, California has an obligation to provide clear guidance on performance standards for utility procurement."*

[11] CPUC "Final Interim Opinion on Phase 1 Issues: Greenhouse Gas Emissions Performance Standard." January 25, 2007, "*As discussed in this decision, an EPS is similar to an energy efficiency appliance standard. If a consumer wants to purchase a new refrigerator in California, for example, he or she has a variety of models to choose from--each with a different upfront purchase price, operating cost and other design attributes. However, at a minimum, each refrigerator must meet the threshold for appliance efficiency established by the standard. Similarly, SB 1368* ***establishes a minimum performance requirement*** *for any long-term financial commitment for baseload generation that will be supplying power*

As such, the point of comparison established by the EPS was clearly between new CCNG technologies as they existed in 2007 versus coal-fired generation, and not between new CCNG technology as it existed in 2007 versus future CCNG technology as now suggested by the Petitioners.

SB 1368 does not provide for an "opener" to revisit the standard every time there is a change in technology. As mentioned above, the Legislature considered and rejected the approach to establish an initial standard that would ratchet down over time according to the state of the technology. Had that been the Legislature's intent, SB 1368 would have included provisions requiring the CEC and the CPUC to periodically re-evaluate the state of the technology. It would have excluded grandfathering provisions for existing CCNG units that were in operation or that had an Energy Commission final permit decision to operate as of June 30, 2007. Additionally, it would have required that new financial commitments to baseload generation be met with only new CCNG generation meeting the updated standard, thereby excluding existing generation meeting an initial standard. In fact, SB 1368 does not include any of these provisions that would have been required to support an "updating" approach to the EPS as suggested by the Petitioners.

4. ***CEC Recognized EPS As A Measure of Intended Operation, Not Best Performance***

The Petitioners argue that the 2007 EPS is "not sufficiently stringent to require the use of the most efficient and least polluting base load fossil-fueled technology commonly available today – high efficiency natural gas combined-cycle (NGCC or

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to California ratepayers. [3] The new law establishes that the GHG emissions rates for these facilities must be no higher than the GHG emissions rate of a combined-cycle gas turbine (CCGT) powerplant." [emphasis added], pages 2-3.

CCNG)."[12] LADWP disagrees with this comment, particularly in light of California-specific regulatory constraints adopted since 2007, such as replacement of ocean water once-through cooling (OTC) plants expected to retire as a result of California's State Water Resources Control Board's (SWRCB) OTC Policy, integration of the new 33 percent RPS that directly impacts the efficiency of CCNG units, and implementation of the GHG Emissions Cap-and-Trade program. In developing section 2902 and 2903 of the EPS regulation[13], the CEC recognized that compliance with the EPS should be measured based on the "intended operations" of a plant and not "hypothetical best performance" scenarios when the plant would achieve optimum efficiency at higher loads and capacity.[14] The plant data presented by the Petitioners does not reflect the intended operational conditions required of CCNG units that must provide California with needed electric generating capacity with improved efficiency and operational flexibility to help it meet its long-term electricity needs.

Additionally, prior to the CPUC adopting the 1,100 lbs per MWh threshold for the EPS in 2007, it considered a number of proposals that included the full range of

[12] Joint Comments of the Natural Resources Defense Council and the Sierra Club in Response to the Energy Commission's Notice of Rulemaking Workshop," July 27, 2012, page 6. The proposed Federal NSPS for Electric Generating Units uses the acronym "NGCC" for natural gas combined cycle units. The California Emissions Performance Standard uses the acronym "CCNG" which is synonymous with NGCC.
[13] CEC "Regulations Establishing and Implementing a Greenhouse Gas Emission Performance Standard for Local Publicly Owned Electric Utilities," Article 1, section 2902 Greenhouse Gas Emission Performance Standard and section 2903 Compliance with the Emission Performance Standard.
[14] CEC "Final Statement of Reasons for Adoption of Regulations Establishing and Implementing a Greenhouse Gases Emission Performance Standard for Local Publicly Owned Electric Utilities," August 31, 2007, *"Section 2902 & 2903 Subsection (e) 2903(a) requires that powerplant emissions be calculated based on **intended operations and not on a hypothetical, best performance scenario** that fails to take into consideration factors specific to the powerplant being analyzed. Emissions per megawatt hour are higher when a plant is operating at low levels, such as when it is starting or ramping. Emissions per megawatt hour start to drop when the unit is operated at an intermediate level, and are lowest when it is fully on at a maximum performance of a "full load heat rate." Since the purpose of SB 1368 is to dissuade certain long-term investments in powerplants that do or will exceed the EPS, it is important that the calculation of a power plant's greenhouse gases emissions be based on an operating scenario that is likely to be utilized; thus leading to an accurate estimate of likely emissions."* page 5.

emission rate levels.[15] The CPUC initially recommended a lower 1,000 lbs per MWh threshold. However, after receiving public comments on its Proposed Decision, the CPUC elected to adjust the EPS threshold slightly upwards to take into account smaller-sized CCNG units utilizing newer technologies, as well as the variability of heat rates based on altitude and ambient temperatures where the facility is located. The CPUC concluded that 1,100 lbs per MWh represented a "reasonable level" that reflects emission rates associated with both existing and new baseload CCNG units. The CPUC also noted that 1,100 lbs per MWh reasonably accounts for potential outliers from the average Continuous Emissions Monitoring System (CEMS) that either utilize dry cooling technologies, are smaller sized facilities, or that are located in the desert or at high altitudes. At the same time, the CPUC noted that this level avoided establishing a standard that is representative of the most inefficient, older CCNG units already in operation in 2007.[16] The CEC concurred with the CPUC's determination and noted in its Final Statement of Reasons that no other party in this proceeding [aside from CEED]

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[15] CPUC Final Interim Decision, *"Independent Energy Producers Association (IEP), GPI, PG&E, SCE, SDG&E/SoCalGas (filing jointly), Energy Producers and Users Coalition and Cogeneration Association of California (EPUC/CAC, filing jointly) among others support an EPS level of at least 1,100 lbs/ MWh for a variety of reasons, including:*

- *An EPS level of 1,100-1,200 lbs/MWh would accommodate different CCGT configurations, some of which may have higher heat rates in order to meet other (non-greenhouse gas) environmental objectives, such as a facility with dry cooling technology for purposes of minimizing water use, or efficiency. (PG&E, IEP, GPI)*
- *A lower level (e.g., 1,000 lbs/MWh) would not appropriately take into account intermediate units, including reciprocating engine units that will be needed for reliable operation of the grid. (PG&E)*
- *An EPS level of at least 1,100 lbs/MWh would ensure satisfaction of SB 1368's mandate that all CCGTs currently in operation be deemed compliant with the EPS. (SDG&E/SoCalGas).*
- *An EPS even higher than 1,100 lbs/MWh should be set in order to ensure that all existing gas-fired units, not just CCGTs, are available for procurement. (EPUC/CAC, Center for Energy and Economic Development (CEED).)[15]* [bold emphasis added] *(Page 61)*

[16] CPUC "Final Interim Opinion on Phase 1 Issues: Greenhouse Gas Emissions Performance Standard." January 25, 2007, pages 64-65.

argued that this number was not appropriate.[17] It appears that the Petitioners are now asking the CEC to do a "new analysis" of something that was already analyzed, and for which new post-2007 regulatory constraints make an EPS standard lower than 1,100 lbs per MWh even less reasonable to consider today in 2012.

Again, it also appears the Petitioners are asking the CEC to act outside its scope of authority. The CEC didn't simply concur with the CPUC's determination, they made sure to follow it and make their EPS "consistent" with the CPUC's determination as required by the law pursuant to Public Utility Code section 8341(e)(1).

5. ***Cap-and-Trade, not EPS, Drives Emission Reductions Through Efficiency***

The intent of the AB 32 Cap-and-Trade program is to provide market incentives to reduce GHG emissions in the most cost-effective and efficient manner possible. This approach is inherent in the manner in which electric utilities economically dispatch their generating units to serve California load. In other words, all things being equal, electric utilities are motivated to operate their most efficient and least expensive natural gas units first before dispatching their less efficient and more costly natural gas units within their portfolio. This operational strategy is not the result of the EPS so much as it is the influence of a carbon price on emissions. In 2007, the CPUC had the foresight to realize that encouraging long-term commitments with resources having emissions below the EPS limit was outside the scope of the EPS rulemaking and should be more appropriately handled in conjunction with a GHG emissions cap.[18]

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[17] CEC Final Statement of Reasons, August 31, 2007*, "The CPUC undertook a thorough analysis to determine what this rate should be and, after receiving comments from various stakeholders and parties, concluded that 1,100 pounds of carbon dioxide per megawatt hour was the appropriate number. The Energy Commission concurred in this determination. No other party in this proceeding has argued that this number is not appropriate." (page 68).*

[18] CPUC "Final Interim Opinion on Phase 1 Issues: Greenhouse Gas Emissions Performance Standard." January 25, 2007, *"Calpine recommends that the Commission take additional steps to encourage long-*

The Cap-and-Trade program correctly incentivizes emission reductions by providing a carbon price that is factored into the overall cost considerations associated with economic load dispatch. Lowering the EPS mid-point equates to "moving the goal-posts," eliminating flexibility for compliance, and thus undermining the effectiveness of the Cap-and-Trade program to reward cost-effective emission reduction strategies. That is because lowering the EPS for existing generation would likely create the wrong incentives to operate more CCNG units at lower capacity factors (and thus less efficiently) to avoid triggering the EPS, or to operate CCNG units at full capacity 24 hours per day, seven days per week in order to achieve the better efficiency rate so as to avoid falling out of compliance with the EPS, even if the power is not needed. Both outcomes are absurd and fly in the face of economic efficiency, because they incorrectly prioritize the emissions "rate" over "aggregate" (mass) emissions, resulting in the exact opposite outcome that the Petitioners claim they want to encourage: the most efficient and least polluting baseload generation.

6. ***The Petitioners' Comparison of EPS to NSPS Is Flawed and Should Be Rejected***

The Petitioners' comparison of the California EPS to the Environmental Protection Agency's (EPA) New Source Performance Standards (NSPS) for new fossil-fueled Electric Generating Units (EGUs) is fundamentally flawed and should be rejected. The EPA's regulatory authority to establish the NSPS originates from Section 111(b) of the Clean Air Act for any category of stationary sources that "contributes significantly" to air pollution that endangers public health and welfare. The NSPS program establishes emission standards for categories and subcategories of

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term commitments with resources with emissions below the EPS limit…[The CPUC concludes] this is beyond the scope of Phase 1," page 187.

major new, modified or reconstructed sources, based on best adequately demonstrated control technologies, taking into account economic, energy and non-air quality environmental factors. The Energy Commission is not an air quality regulator like EPA and its regulatory authority does not originate from the Clean Air Act. Instead, the objective of the California EPS was to "internalize the significant and under-recognized cost of emissions and to reduce potential financial risk to California consumers for future pollution-control costs."[19] For that purpose, the EPS has clearly met its objective and does not require updating.

7. EPA Proposed Carbon Standard Applies Only for New Plants, Not Existing Plants

The Petitioners suggest that since the EPA is now considering CO2 emission limits for new fossil-fueled EGUs, the CEC should take up this issue now to ensure that developers of "new" EGUs choose the most efficient units available.[20] EPA's NSPS limit of 1,000 lbs per MWh is intended to address emissions from new plants only, not existing EGUs or to the modification or reconstruction of existing EGUs. The EPA NSPS does not restrict long-term financial commitments in existing generating units, regardless of the emission rate. In contrast, the California EPS does not distinguish between new or existing power plants, with the exception of CCNG units in operation prior to June 30, 2007 that are grandfathered. For that reason, the "trigger" for the California EPS must be reasonable such that it does not result in abandonment of relatively clean natural gas generation assets that comply with the adopted EPS and that have not reached the end of their useful life. Such stranded investments would

[19] California Regulatory Notice Register 2007, Volume No. 10-Z, Notice of Proposed Action for Adoption of Regulations Establishing and Implementing a Greenhouse Gases Emission Performance Standard for Local Publicly Owned Electric Utilities," page 454 (Informative Digest).
[20] Joint Comments of the Natural Resources Defense Council and the Sierra Club in Response to the Energy Commission's Notice of Rulemaking Workshop," July 27, 2012, page 7.

harm California consumers by forcing them to absorb costs for minimal environmental gain.

EPA, in its GHG NSPS rulemaking, did not propose a standard applicable to existing sources due to a lack of information (77 Federal Register 22421). EPA's explanation for excluding existing plants is that most of the expected modifications will be pollution control projects and under EPA's current NSPS regulations, they would be exempt from the definition of modification, and therefore would not be subject to the new standard. EPA also states that, "Because of the limited number of modifications, their disparate nature, and the disparate type of sources, we do not at present have an adequate base of information to propose standards of performance for modifications."[21]

Recognizing the cost-prohibitive nature of applying this standard to existing EGUs, the EPA standard will drive the emissions down more cost effectively over many years. As the country's fleet of coal-fired electric generating units' age, they will be retired and replaced with units utilizing newer technology, at which time the NSPS standard would be triggered. The Petitioners' proposal, on the other hand, would force California ratepayers to finance costly new generation to meet an extremely aggressive emission rate anytime the EPS is triggered, while leaving available existing CCNG units that comply with the existing EPS (at 1,100 lbs per MWh) out of contention. This is a cost that the California ratepayers cannot afford.

8. ***EPA Criteria to Set and Update NSPS Does Not Dictate Control Technology***

By statute, NSPS standards are required to reflect the application of the "best system of emission reduction" that "has been adequately demonstrated," taking into

[21] Federal Register, Volume 77, No. 72, Friday, April 13, 2012, Proposed Rules, page 22421, http://www.gpo.gov/fdsys/pkg/FR-2012-04-13/pdf/2012-7820.pdf#page=31

account costs, environmental impacts, and energy requirements. With limited exceptions, the statute forbids EPA from expressly requiring any new or modified sources to adopt a particular control technology. Instead, EPA must establish a performance standard (e.g. maximum emissions rate) and allow sources to determine how best to meet that standard. The Petitioners, on the other hand, are proposing a standard that, aside from being lower than what EPA is proposing for new sources, would fail to be achievable by anything but newly constructed CCNG plants operating in optimum conditions, namely higher capacity and cooler ambient temperatures. This equates to requiring a specific technology even if it has not been demonstrated to meet more demanding requirements of California electric utilities (OTC Policy, 33 percent renewables integration, and GHG Cap-and-Trade). EPA is also required to review the NSPS for each category periodically. By statute, the only time the CEC is required to reevaluate the EPS is once a GHG emission limit is in place, for which the ARB has suggested earlier in this proceeding that such a trigger has not been met.

If the CEC did decide to adopt the Petitioners' proposal to lower the EPS, it is entirely unclear what process would be undertaken or what criteria would be applied. Using an analysis that is equivalent to determining the best available control technology from an air emissions perspective is an exercise that falls exclusively within the realm of health-based standards – clearly an area over which the CEC has no jurisdiction or experience – and would provide minimal benefit to the intended purpose of the EPS to reduce potential financial risk to California consumers.

9. ***Petitioners Selected CCNG Units with Lowest Calculated Emission Factors***

In order to have a meaningful discussion about the state of the technology, data should not be presented in a manner that ignores the context of California's multiple

regulatory mandates and how those mandates impact the options available for California utilities to comply in the most cost-effective manner while maintaining grid reliability. Rather than identifying only those facilities that are at or below 850 lbs per MWh, the Petitioners should have focused specifically on the emissions profile of CCNG units that are located within the WECC, are available to serve California load, and are operated under California-specific conditions.

The 53 CCNG units listed in Table 1 and 2 combined are a subset of CCNG units installed nationwide. These listed units reflect only the best emission rate profile, i.e. less than 850 lbs per MWh, and yet only four facilities are located in California.[22] It is disingenuous for the Petitioners to pick the best of the national fleet of EGUs and use them as a reference without regard for 1) how they are dispatched, 2) what type of cooling system is used, 3) to what extent they are used to support the integration of 33 percent renewables, 4) whether they are subject to GHG emissions trading limitations, or 5) what other type of local air emission limits may be in place. The GHG emission rate of a plant fluctuates based on how it is operated and is influenced by each of these factors as described in more detail below.

10. Petitioners' Net Emissions Rate Discount Factor Is Overly Optimistic

Plants listed as examples in the Petitioners' filing do not report a CO2 emission factor, only emissions and gross output. It appears the Petitioners, on their own,

[22] Inland Empire Energy Center (Riverside), Calpine Sutter (Yuba City), Delta Energy Center (Pittsburgh), and Sunrise Power (Kern County). It is worthwhile to note that one of the facilities, Calpine Sutter Plant, listed by the Petitioners as an example of what should be strived for is a plant located near Yuba City that opened in 2001 after the California energy crisis. In recent months, it has been at risk of early retirement due to lack of electrical demand in the state, as most energy procurement contracts today are for renewable energy. On September 13, 2012, CAISO Board of Governors approved a proposed rule that makes sure the CAISO has the ability to keep existing flexible power plants from prematurely retiring if they are found to be needed for reliability in future years. This illustrates that the emissions rate is only one of many factors that are part of the "best fit/least cost" resource planning paradigm. For more, please see the CAISO press release at:
http://www.caiso.com/Documents/ISO_BoardApprovesRule_KeepNeededFlexibleGenerationCapacity.pdf

extrapolate the “net emissions” by using a generic three percent discount factor across all units. This approach is crude and introduces a false sense of accuracy that cannot be relied up for any meaningful evaluation. The only certainty this data presents is that the values do not reflect real world conditions, especially since these net emission factors are not directly reported by or confirmed with the facility operators for each CCNG unit on the Petitioners’ list.

The emission rate profile of a CCNG unit is highly dependent on local parameters, e.g., ambient temperature, elevation level, megawatt (MW) level and parasitic loads in the generating plant, etc. Those parameters can influence the penalty factor on the gross emission rate and can vary from 3 percent to 15 percent. For example, a unit in a cool weather area that has a 3 percent penalty factor can become a 15 percent penalty in a hot desert climate; a compliant CCNG unit at 3 percent (presumably at 850 lbs per MWh) can become a non-compliant CCNG unit at 15 percent penalty factor (now becomes 949 lbs per MWh). A CCNG unit on the east coast utilizing OTC technology will be more efficient than a California coastal plant using dry cooling towers. A suggested 850 lbs per MWh EPS level would severely restrict potential sites for a CCNG power plant. Potential desert locations would become undesirable, and cooler coastal regions may not be feasible if land or transmission is unavailable. Even then, it is unclear whether such units would attain this efficiency level under cycling conditions required of CCNG units that will support California’s integration of renewable energy (as discussed further below).

11. The Petitioners’ Suggested Emissions Rate Is Technically Infeasible

Currently, most of LADWP’s in-basin CCNG units are not typically dispatched at full capacity due to system loads, economic and environmental reasons, and yet all are

permitted by SCAQMD such that they can be brought on-line to replace baseload generation to ensure reliability. Because of the regional climate, the LADWP system load varies significantly between seasons and time of day. The unit permits do not restrict them to less than 60 percent capacity factor, which would otherwise ensure they are never considered a covered procurement. To achieve the suggested emission rate requires the CCNG units to work in optimum conditions (full capacity with minimal cycling, start ups and shutdowns) whether the energy is needed or not. If the CCNG drops below the peak MW level, then its efficiency will decrease and the emissions rate will be considerably higher. As previously noted, the Petitioners suggested standard could have the opposite effect of creating a situation where more natural gas-fired generation would be built in order to avoid the baseload designation. Running CCNG units at a lower capacity factor would produce absurd results, because it would mean that the units would be operated more frequently in a 1 plus 1 mode rather than the more efficient 2 plus 1 mode thereby generating excessive GHG and criteria pollutant emissions overall as a result.

For example, a typical CCNG unit on LADWP's system may operate at the minimum level during off-peak hours; its heat rate will increase from approximately 7,000 British thermal unit (btu) per kilowatt hour (kWh) to 7,400 btu per kWh and the corresponding emission rate will go from 832 lbs per MWh to 880 lbs per MWh. At 880 lbs per MWh, that CCNG unit would be considered non-compliant with the suggested EPS. To stay at or under 850 lbs per MWh for the year, the CCNG must be kept at full capacity (91-92 percent capacity factor). This will generate surplus electricity that is not needed to serve load or for wholesale sales, and will produce more CO2 and criteria pollutant emissions in aggregate. As for LADWP's three coastal plants, they will

be repowered to include dry cooling towers in response to OTC regulations in California. As such, the new CCNG units will not achieve the level of efficiency achieved by units on the Petitioners' list of CCNG units that are once-through cooled. The Petitioners' proposal prioritizes the emissions rate over all other environmental considerations and fails to recognize that standard protocols for economic load dispatch already consider multiple utility needs in addition to the EPS, including cost, reliability, and aggregate emissions.

12. Cycling for Renewables Integration will Reduce CCNG Efficiency

California's 33 percent RPS mandate will dictate that CCNG units serving California load have flexibility to be cycled up and down for integration of renewables in order to meet load requirements when intermittent renewable energy is not being produced, rather than running continuously at optimum high loads. Ramping CCNG units up and down to meet these requirements will reduce overall efficiency of the units, making it technically infeasible to achieve an emission factor as low as 825-850 lbs per MWh. Emissions data from new CCNG units suggests that under these real-world cycling conditions, the new CCNG units will achieve emission factors at or just below 1,100 lbs per MWh. Although the emissions are typically higher at a lower load, the high average emission levels overall are mostly attributed to a high number of required start-ups and shutdowns (cold and non-cold) during which time there are GHG emissions but no power generation. This "cycling" is needed to facilitate the integration of power generated from renewable sources and to balance the power demands from different sources.

This conclusion is consistent with a recent GHG Best Available Control Technology (BACT) evaluation prepared by CH2MHILL for AES Southland

Development, LLC and submitted to the South Coast Air Quality Management District and EPA Region IX. This GHG BACT evaluation is required as part of the permitting process to address GHG emissions from the Huntington Beach Energy Project (HBEP)[23]. The HBEP project was designed in part to provide "controllable generation to allow the integration of the ever increasing contribution of intermittent renewable energy into the electrical grid." HBEP has been designed to start and stop very quickly and be able to quickly ramp up and down through a wide range of generating capacity. [24] Projects strategically located within load centers and designed for fast starts and ramp-up and down capability will be critical to both local electrical reliability and grid stability. Based on the projected annual operating profile and equipment design specification, the GHG BACT calculation for the HBEP was determined in pounds CO2 per MWh of energy output (on a gross basis) at a rate of 1,082 lbs per MWh. When converted to net output, in order to be consistent with the California EPS, this emission rate will be even higher. The EPA BACT analysis is very thorough and done on a case-by-case basis. BACT determinations in the South Coast are also usually very stringent. Thus, if the permit limit is set at a higher level than what the Petitioners are proposing as the floor, it is entirely inappropriate to set such a low standard.

[23] The Huntington Beach Energy Project is being developed by AES Southland Development, LLC. LADWP does not have any involvement in this project, and it is referenced here to demonstrate the best available control technology emission factor for a power plant designed to meet requirements that are more specific to California.

[24] CH2MHILL "BACT Determination for the Huntington Beach Energy Project," June 2012, page 1-1. For EPA's New Source Review/Prevention of Significant Deterioration permitting process, the EPA undergoes a rigorous Best Available Control Technology (BACT) Analysis for GHGs. This methodology includes the following steps: 1) identification of available GHG emissions control technologies; 2) Elimination of technically infeasible options; 3) Combustion Turbine GHG Control Technology Ranking; 4) Evaluation of most effective controls; and 5) Selection of GHG BACT. SB 1368 does not provide for a similar type of analysis to update the EPS.

III. CONCLUSION

The LADWP appreciates the opportunity to submit these reply comments and strongly encourages the Energy Commission to not modify the EPS as requested by the Petitioners. LADWP has been transparent and forward with its customers regarding the costs and necessity to transition away from coal-fired generation as a result of SB 1368 and AB 32. LADWP remains committed to reducing its GHG emissions. LADWP urges the Energy Commission to swiftly bring closure to this rulemaking in order to return attention to the actions that will help bring about the transition LADWP has embarked upon without further delay.

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Respectfully submitted,

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