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QUESTIONS TO GUIDE DISCUSSION AND COMMENT JUNE 23, 2009 JOINT SITING AND IEPR COMMITTEE WORKSHOP ON GHG

Questions for discussion and comment on Consultant Report to the Energy Commission: *Framework for Evaluating Greenhouse Gas Implications of Natural Gas-Fired Power Plants in California.*
(GHG Framework Report)

Competitive Power Ventures ("CPV") appreciates this opportunity to provide comments on the GHG Framework Report. The report is critical to the efficient use of gas-fired power facilities, an indispensable generation resource, as California moves toward a low carbon energy portfolio. As a company whose business model and belief is that the development of both renewable and gas-fired generation are essential for building the bridge to a sustainable energy future, we believe Energy Commission staff should utilize the report's findings at every opportunity and continue to send clear signals to investors that California is a strong market for both simple and combined cycle gas-fired power generation. We look forward to future opportunities to comment and to a productive 2009 Integrated Energy Policy Report (IEPR).

1. Chapter 7 of the GHG Framework Report identifies five roles new gas-fired power plant may fill given the state's current environmental and energy goals. Three of these are related to local reliability or operating characteristics needed by the electric system in increasing amounts as greater levels of reliance upon renewable generation takes place.

    a. Do the system operators agree that these are roles that gas-fired power plants will fill in the near and medium term?

California is currently bound by statue and regulation that limits any new, large and on demand capacity effectively to natural-gas fired generation. Modern gas-fired power facilities are 30% to 40% more efficient than the average existing gas-fired plant in California. Given the need to modernize the aging existing fleet and the limitations of renewable and demand side resources, modern and efficient gas fired generation is a necessary compliment and the only proven and viable option to fill the near and medium term goals of California.

    b. Are there other roles that are not described in Chapter 7 that should be added?

California's unique market structure and progressive initiatives present opportunities for two additional roles that should be considered;

Retirement/Replacement of Aging and/or Once Thru Cooling (OTC) Plants	*New, efficient gas-fired generation can replace existing less efficient and/or OTC generation as it retires*	*All services mentioned in report are potentially relevant* *Aging/OTC plants within the LCA can be replaced by appropriately designed gas-fired generation located within the LCA*
Displacement of Energy/Services currently provided by aging, less efficient and/or OTC plants	*New, efficient gas-fired generation will displace the energy and services currently provided by aging, less efficient and/or OTC plants*	*All services mentioned in report are potentially relevant* *Aging/OTC plants within the LCA can be displaced by appropriately designed gas-fired generation located within the LCA*

c. Should standardized definitions of plant attributes be developed? What agency or source should be relied upon for determining standardized definitions? Chapter 7 provides definitions that are drawn for CAISO's tariff. Are there definitions sufficient?

The CAISO tariff proceeding, which provides ample opportunity for stakeholder participation, has thus far proved to be an effective forum. Periodic revisiting of the definitions would complement this process and allow for a fluid and up to-date representation of the market.

d. What is the relative importance of the five roles?

The roles are critical to providing uninterrupted power flow to the citizens of California. Unlike as-available resources, gas-fired projects can be scheduled to account for variations in generation and transmission situations on a real time basis.

2. Are there characteristics of plants using fuels other than natural gas (e.g. biomass) that should be considered in terms of their impact on GHG emissions?

The highly flexible, efficient, clean burning and dispatchable nature of gas-fired power plants can meet the needs of today's market more effectively than any other technology available.

3. Do the Policy-Driven Futures identified in Chapter 6 of the GHG Framework Report adequately describe the likely range of resource development trajectories over the next 12 years, and if so do they correctly capture the GHG emission implications of those futures?

A large portion of California's generation portfolio consists of imported coal-fired generation. This reliance greatly impacts California's GHG emissions and is often over-looked. Replacing even a small portion of these imports with local, efficient and modern gas-fired power generation will substantially lower California's global emissions profile while effectively supporting the many renewable and environmental goals. Furthermore, an October 2008 white-paper by the Natural Resources Defense Council identified the efficient use of natural-gas as the cleanest of fossil fuels and opined that it should be utilized as the bridge to America's clean energy future.

4. Are the identified Policy Driven Futures an appropriate range of possible future alternatives?

It is crucial to not over-look the need for reliable, rate-payer friendly and on-demand resources while fulfilling California's ambitious and important goals. As the only viable large-scale on demand resource, gas-fired generation will be needed to bridge the gap and maintain system reliability as we move toward our low-carbon future.

5. The GHG Framework Report suggests extensive modeling would be necessary to understand precisely how the net GHG emissions of the electric system would change

a. The addition of new gas-fired power plants to the extent necessary to permit the penetration of renewable generation to the 33 percent target.

b. The addition of new gas-fired power plants improving the overall efficiency of the electric system.

c. The addition of new gas-fired power plant or modernization/repowering of existing capacity serving load growth or capacity needs more efficiently than the existing fleet.

Is this a reasonable conclusion?

Yes, it is a reasonable to conclude that net GHG emissions will decline under the above mentioned futures. The modernizing of California's gas-fired fleet is a net benefit for California's electric system, environment and economy. Modern gas-fired power facilities have lower heat-rates (higher efficiency), faster operating characteristics (improved ramping), less environmental impact (lower emissions) and provide substantial economic stimulus (jobs and taxes revenues).

6. Assuming that the roles identified in Chapter 7 of the GHG Framework Report are valid, how are utilities and others responsible for long-term resource additions going to assure that generating resources with such qualities are developed?

California utilities already consider the many aspects of generation needs in their resource planning. For future planning, the utilities should continue to be encouraged by California's regulatory agencies to consider emissions and operational flexibility and place a greater emphasis on the retirement of older, less efficient plants.

Additionally, gas-fired generation with the above mentioned qualities are already essential for the IOU's to comply with existing regulatory requirements; 1) 20% RPS, 2) Loading Order, 3) GHG Regulations, 4) provision of reliable energy services as required by FERC and CAISO.

7. How has the CPUC directed IOUs to evaluate the GHG emissions of power plant contracts in its LTPP decisions, or through other means, in constructing RFOs or in evaluating bids submitted into RFOs?

The state of California directed IOUs to evaluate the GHG emissions of power plants with the passage of SB 1368 (2006). This landmark legislation effectively set a new standard for the future of power procurement in California. In short, the legislation prevents any load serving entity in California from contracting long-term power capacity from a generation resource with a heat rate above 1,100lbs CO2/MWh (effectively coal fired generation). Additionally, the legislation further incentivized project developers to present the most efficient product available.

8. To what extent are expected GHG emissions taken into account in procurement or project development processes?

    a. From the project developer perspective?

GHG emissions are taken into account in project development when procurement is aimed at increasing the efficiency of the fleet, supporting renewables with dispatchable assets and meeting regulatory requirements. Developers are heavily incented to present the most efficient, least polluting facilities available and will continue to provide such assets as projects are required to meet the needs of the market.

    b. From the IOU perspective, following CPUC procurement guidance?

N/A

    c. From the POU perspective, satisfying its own GHG emission policies or applicable mandates from the State of California?

N/A

    d. From the electric service provider perspective?

N/A

9. The GHG Framework Report suggests that the role of a power plant applying for a license at the Energy Commission be considered in assessing its likely GHG emissions, but how the expected role(s) that might be played by a given power plant with a specified technology would be determined is unclear:

Currently, natural gas-fired power plants are the only platform that can fulfill several, if not all of the roles, from a single facility. Therefore, it would be inappropriate to assign any specific role to a project for the purpose of the licensing process.

    a. What evidence should be presented in an individual power plant licensing case to confirm that a proposed power plant intends, or can be expected, to fulfill one or more roles?

Gas-fired power facilities are capable of providing capacity, energy, ancillary and environmental roles depending on their specific design, configuration and location. However, it is the balance of a combination of multiple generation and demand-side resources that provides the necessary benefits and services to meet California's energy needs and environmental goals. Those needs and goals are established through a combination of federal, state and regional mandates and requirements to provide reliable and affordable electricity while driving investment, development and procurement of new resources that meet all of these roles.

b. To what extent would long-term contract(s) with load serving entities help to establish that a power plant is intended to play one of more roles?

A project that has a long-term contract or would seek such an agreement for operation would indicate the projects' value in providing the roles.

c. Assuming typical long-term contracts between merchant power plants and investor-owned utilities extend 10 years, how would one or more roles be identified for the proposed power plant after an initial contract was completed?

A plant that would fulfill these needs during its initial contract life would continue to have those capabilities after that contract was completed.

10. From a GHG emissions perspective, the GHG Framework Report appears to reinforce the Energy Commission Siting Committee report (CEC-700-2009-004, March 2009) that power plants should be examined as elements of the overall electricity system and not as stand-alone facilities that can be examined separately.

a. Does the CAISO interconnection process for major projects also analyze a specific facility in the context of its impact on the system?

Stakeholder understanding is that the purpose of the restructuring process was to move in this direction, however the application of this process is still unknown as the "first group" is still being studied by the CAISO.

b. Do the procurement rules established by the CPUC for IOUs in determining "net short" positions forward in time examine specific project output in the context of a portfolio of projects satisfying total requirements?

c. How do specific contracts submitted for approval by the CPUC satisfy overall IOU resource needs to serve end-user energy demand reliably?

The specific contracts are negotiated by the IOUs with complete consideration of the resource needs as defined by the IOU and the CPUC.

Closing Remarks:

As previously mentioned, CPV appreciates this opportunity to provide comments on the GHG Framework Report. The report is a strong indicator to investors that gas-fired generation will continue to play an essential and environmentally beneficial role in California's future. The proven track-record, compatibility of modern simple cycle projects, impressive flexibility of today's combined cycle projects and environmental approval of natural gas all demonstrates that gas-fired generation is the preferred platform for on-demand generation and an excellent compliment to a low-carbon portfolio.

Gas-fired generation developers invest millions of dollars a year into California's economy to build and modernize power plants using clean energy technologies that ensures our state's electricity system remains affordable, sustainable, and meets legislative mandates for addressing global climate issues. These developers are committed not only to a brighter energy future, but a stronger economy where healthy market opportunities can continue to create jobs, generate tax revenues and provide clean, reliable and rate-payer friendly electricity now and for the future.