Appendix C – Joint Proposal of Energy Agencies (July 22, 2009)

Implementation of OTC Mitigation Through Energy Infrastructure Planning and Procurement Changes by the CEC, CPUC, and California ISO May 19, 2009

Background

In March 2008, the State Water Resources Control Board (SWRCB) issued a preliminary once-through cooling (OTC) policy report for electric power plants establishing reliability as a condition for the design and implementation of an OTC mitigation policy. The proposed policy contemplates a phased compliance schedule that would allow sufficient time for the energy agencies and the transmission and generation industries to build new infrastructure or identify new resources in a timely manner, thus assuring adequate electrical system reliability. The following outline identifies the steps that the California Public Utilities Commission (CPUC), California Energy Commission (CEC), and California Independent System Operator Corporation (ISO) intend to undertake to support the SWRCB efforts. This proposal seeks to address the replacement or repowering of OTC power plants through an approach that (1) maintains reliability of the electric system; (2) meets California's environmental policy goals; and (3) achieves these goals through effective long-term planning for transmission, generation and demand resources. The proposal relies upon use of competitive procurement and forward contracting mechanisms in order to identify low cost solutions.

The SWRCB recognized that its implementation process could create transitional problems, so it created an Inter-agency Working Group (IWG) to review these implementation challenges and other aspects of the proposed policy.

In a December 15, 2008 paper, the CEC and CPUC in conjunction with the ISO proposed an alternative approach to the fixed time schedule to reduce OTC in existing coastal power plants, while assuring reliability of the electrical grid.[1] That paper broadly sketched out changes to planning, procurement and project permitting processes to encourage repowering or new infrastructure so that retirement of OTC facilities can occur without threatening reliability. In subsequent meetings and discussions, SWRCB staff and other members of the IWG communicated broad support and requested refinements that defined milestones and accelerated compliance timelines wherever possible. In particular, SWRCB staff requested consideration of applying the general approach on a regional, rather than statewide basis.[2] This paper modifies the original proposal, focusing on regional analysis and implementation.

Proposal

[1] For purposes of expressing collective recommendations, this paper will refer to these three organizations as the Energy Agencies.

[2] While there are several alternative regional definitions in use among agencies for various specific purposes, for this purpose the local capacity areas used as the basis for resource adequacy requirements are the starting point. The relevant regions that are local capacity areas are San Diego, Los Angeles Basin, Ventura/Big Creek, Greater Bay Area, and Humboldt. To these the Central Coast has been added to encompass all OTC facilities.

In order to accomplish the retrofitting, repowering or retirement[3] of more than 30 percent of the power generating capacity in California, significant planning decisions, procurement authorization, and ultimately permitting of specific energy infrastructure projects will be necessary. Of the five balancing authorities in California, only two (the California ISO and the Los Angeles Department of Water and Power (LADWP)) are needed to encompass all of the 19 generation plants with OTC units. Of the 16 OTC plants in the ISO, 13 are located in transmission constrained regions. Transmission constraints on the LADWP system also influence both the need for and options among refitting, repowering and replacing the three OTC plants within the LADWP balancing authority. In sum, the need for OTC plants and options for repowering or replacing them are more readily understood at this regional level. Thus, the Energy Agencies propose a process that does not have uniform schedules for all OTC facilities; rather, the regions whose problems are better understood and where solutions are at hand should be required to reduce OTC harm more quickly than those regions where constraints on implementing solutions are more extensive.

Specific Proposal for Planning and Procurement of Electricity Infrastructure

Listed below are the key steps of this approach that will result in an OTC Power Plant Replacement Infrastructure Plan (Plan) and the permitting and procurement steps that will implement it.

1. Establish regional basis for analyses and identify existing transmission and system operations studies relevant to establishing constraints on the retirement of specific OTC plants/units:
    a. Review definition of the regions to understand local reliability issues and assign OTC facilities to each region.
    b. Review existing Local Capacity Requirement (LCR) studies of those regions containing OTC plants. Review specific new generation and transmission project proposals and licensing decisions by regulatory agencies for impacts on future LCR values.
    c. Review other regional and system studies[4] to determine the operating characteristics of the current generating fleet, how the amount of needed characteristics could change going forward under preferred resource (energy efficiency, renewable, and demand response) and transmission to support those resources, and the implications of OTC plant/unit retirements for the necessary characteristics of replacement facilities.
    d. Compile results of Steps 1.a through 1.c and identify, to the extent possible, a realistic development schedule for needed replacement

[3] Retrofitting refers to the installation of a cooling system that complies with the proposed SWRCB policy. Repowering entails replacement of the existing boiler with advanced generation technology – improving thermal efficiency – and installing a compliant cooling technology. Retirement may, and often does, require replacement of the foregone capacity with generation at another location.

[4] As an illustration, the CAISO study of the implications of 20 percent penetration of renewable generation, November 2007.

infrastructure to establish the dates by which existing OTC power plants/units will no longer draw in and discharge ocean water above levels allowed by the SWRCB policy. For those plants/units requiring further analyses, Step 2 is needed.

2. Complete an enhanced[5] Local Capacity Requirement evaluation, or other relevant assessment, for each region that contains OTC power plants, and update amounts of necessary operating characteristics as needed.
    a. The Energy Commission and CPUC will develop scenarios of annual load projections for each region, any projected generation or resource additions or non-OTC retirements for each region, and any transmission project upgrades or additions+ in each year from 2012 up to and including 2019 reflecting alternative ways in which preferred resource development policies could be implemented. The CEC and CPUC, in consultation with the CAISO, will review these scenario results and select the assumptions to be used for the following enhanced LCR evaluation.
    b. The ISO will prepare an enhanced LCR evaluation for each year 2012 to 2019 based on those projections and available ISO –performed transmission studies.[6] These enhanced LCR evaluations will identify expected generation capacity needed within the LCR Areas and OTC regions for each year for given transmission system configurations.
    c. The Energy Agencies will then compare projected LCR needs with total expected generation less the capacity represented by OTC power plants/units in each LCR Area to identify the necessary capacity to replace OTC power plants/units in each region. The sequence for removing OTC plants/units through time will be based on effectiveness in mitigating various system contingencies, plant/unit-specific characteristics, and other operational needs in maintaining reliability.
    d. The CAISO, in consultation with CPUC and CEC, will identify the specific characteristics of that capacity (e.g. ramping ability, minimum load

[5] Enhanced implies conducting an LCR-style analysis of capacity needs, but doing so 10 years forward and identifying the impacts of specific OTC retirements or transmission developments on the area's LCR projections.

[6] Three of the facilities that use OTC are operated by LADWP. As a publicly-owned utility, LADWP makes investment decisions in the interests of its customers and does not come under the jurisdiction of the CPUC. As a separate control area it is responsible for its own reliability studies and is not part of the ISO balancing authority area. The Energy Agencies believe the elimination of OTC at these facilities will require the development of new infrastructure. Therefore, it is possible that LADWP will need to compete with generator owners to secure Emission Reduction Credits (ERCs) in the air shed under SCAQMD jurisdiction. The Energy Commission hopes to facilitate LADWP's cooperation in the Plan; however, absent such cooperation the Energy Agencies will proceed to develop the Plan as it pertains to OTC power plants within the ISO's balancing authority area.

constraints, regulation requirements, etc.) needed to meet systems needs once the OTC plants are retired.

e. The Energy Agencies will jointly identify what additional system capacity is needed in connection with replacing each OTC power plant/unit. While replacement capacity needed in an LCR area may be less than that provided by OTC plants/units, system-wide capacity needs may require additional power plant development elsewhere in the ISO balancing authority area.

f. The ISO envisions performing enhanced LCR studies each year that can support efforts to refine capacity requirements set forth in the Plan. Any updates to the Plan would occur in consultation and agreement by the Energy Agencies and would be made available to the IWG (or the Statewide Task Force) which would be formalized upon approval of the OTC Policy and the SWRCB. Any Plan updates may also reflect transmission and/or generation infrastructure constructed and completed).

g. For those OTC power plants that are not located in LCR Areas, the Plan would consider the need for capacity located within the ISO balancing authority area (or LADWP balancing authority area) to serve system need.

3. The Energy Agencies will review the results of Steps 1 and 2 and, for each region, describe the course of action required to eliminate reliance upon a power plant/unit using OTC as a cooling technology. A specific schedule for each existing OTC plant/unit would be developed that identifies the latest date it would operate using OTC technology. After such date, the plant/unit will lose its reliability designation. New generating capacity would satisfy the characteristics identified in Step 2d. Collectively this set of decisions about OTC elimination and replacement infrastructure would be referred to as the "Plan." This initial version of the Plan would be updated periodically as a result of actual experience with generation and transmission project development timelines, or other material changes in assumptions affecting infrastructure needs.

4. The SWRCB and its regional boards would use the Plan as the basis for establishing an OTC mitigation policy and for issuing NPDES permits for each plant/unit based on its reliability designation. The projected date of operation of the specific replacement infrastructure needed to assure reliable operation of the grid without the facility using OTC technology should be the basis for the expiration date for that plant/unit's permit.

5. The CEC would review the Plan to determine how its power plant licensing process may be affected, and to facilitate air quality management district (AQMD) review by:

a. Providing an estimate to each local AQMD of the magnitude of air quality credits likely to be required for licensing the new or repowered generating facilities included within the Plan.
b. Obtaining AQMD concurrence that the volumes of credits used in the studies were credible, or working with an AQMD to devise valid sources of credits and estimates of their costs.
c. Communicating any significant change in assumptions about air credit availability and costs back to other entities involved in studies and procurement activities.

6. The CPUC would authorize IOU procurement mechanisms to require the IOUs to conduct a large set of targeted RFOs following the 2010 and subsequent long-term procurement proceedings. These targeted RFOs would focus on acquiring needed replacement capacity in appropriate locations with operational characteristics that would allow existing OTC plants/units to retrofit, repower or retire consistent with the Plan.

7. The CAISO will consider SWRCB directives and schedules limiting or canceling water permits required to operate OTC plant/units in the 2011 and subsequent annual Transmission Planning Process. The CAISO will conduct an analysis as part of its Transmission Planning Process reflecting projected OTC plant/unit retirements as a result of SWRCB permitting directives and schedules, which shall be incorporated into the CAISO's annual Transmission Plan that serves as a basis for further economic or reliability based transmission upgrades or additions.

8. Once each targeted RFO was complete, generator retrofits, repowers or new generating facility development assumptions would be updated in the Plan, to the extent the results from the RFOs differ from the previous edition of the Plan. Any updates to the Plan would result in SWRCB, or its regional boards, modifying permits for various power plants/units depending upon their role in carrying out the Plan.[7]

9. If there are changes (e.g. delays in project development or major modifications to forecast assumptions) in the infrastructure development assumptions (e.g. transmission upgrades or additions are not on schedule, or new generating

[7] For some OTC power plants, this would mean issuing a time-limited permit allowing the plant to operate without change until a specific date at which time it would be shut down and no permit extensions allowed. For other power plants with longer timelines for continued operations, some modification of water intake structures and water usage patterns would be required, but still the plant would not be required to undergo major change because it is scheduled to be retired by a specific date. For still other plants, shifts to closed cycle cooling would be required consistent with long-term continued usage of the power plant.

capacity is not operational) upon which the Plan is based, the Energy Agencies will perform appropriate analysis and inform the SWRCB, or its regional boards, of the new time period that a specific OTC plant/unit is required for system reliability.

10. The Energy Agencies will periodically update the Plan to reflect changing system conditions and transmission and generation developments to ensure that OTC mitigation is timely while preserving system reliability. It is possible that transmission upgrades and additions associated with California's Renewable Energy Transmission Initiative may address some system reliability concerns raised by OTC power plant retirements. The Energy Agencies intend to review these developments and incorporate them into the Plan for OTC power plant retirements.

11. The SWRCB would periodically review the Plan and, for each unit with an official reliability designation, modify the OTC permit expiration date to match the reliability designation of the unit. For units without such a designation, the SWRCB would establish compliance requirements and a schedule that transforms these into a water use permit.

Unresolved Issues for this Proposal

Some elements of this proposed approach remain unresolved. These include:

- Air pollution credits in South Coast Air Quality Management District (SCAQMD) for new power plants displacing OTC power plants, or repowers of existing OTC plants/units to eliminate OTC cooling technologies,
- Sequencing of bidding into utility RFOs versus permitting of a facility,
- Reliance upon conventional generating facilities or preferred technologies,
- Analyses of nuclear generating units at San Onofre and Diablo Canyon, and
- Development of a comprehensive Plan and preferential treatment of elements of the Plan in licensing proceedings compared to proposed facilities not included within the Plan.

Air Pollutant Credits in SCAQMD. Acquiring sufficient air credits through a revitalized Priority Reserve or some other mechanism is necessary for new or repowered generators in the SCAQMD. Only limited OTC retirement can happen without serious reliability consequences unless new or repowered plants can be constructed in the

SCAQMD's jurisdiction.[8] The July and November 2008 court decisions in the challenge of the SCAQMD's "priority reserve" requirements has complicated the situation, making it extremely difficult for new power plants to be sited in the Los Angeles Basin. This challenge will make it difficult for most aging power plants to be closed in the Los Angeles coastal region, until new generation or transmission can be constructed. Tradeoffs exist between the need to protect water quality, satisfy air quality requirements and ensure electrical system reliability, while moving toward greater levels of renewable generation as called for by Assembly Bill 32 (AB32) and the Governor's recent Executive Order calling for increased levels of renewable generation.

Sequence of Bidding and Permitting of Proposed Facilities. The sequence of Energy Commission permitting versus generator bidding into an IOU RFO raises several questions:

- whether power plants would be required to have an Energy Commission permit as a condition of bidding into an IOU RFO,
- whether power plants would be required to have entered the CEC permitting process and have satisfied specific milestones as a condition of bidding into an IOU RFO,
- whether winners of an IOU RFO would receive expedited treatment from the Energy Commission in the permitting process compared to other applicants, or
- whether advance guidance can steer proposed power plants into locations likely to be permitted by the Energy Commission.

Conventional versus Preferred Technologies to Replace OTC Facilities. A straightforward solution to the OTC problem is to repower existing OTC facilities by installing a new prime mover that does not use ocean water for cooling.[9] This approach makes use of the existing electrical switchyard, perhaps eliminates consideration of new transmission lines that would allow retirement of some facilities without replacement on site, and essentially preserves the existing electrical system as much as possible. However, this approach would likely have considerable problems in SCAQMD in finding needed air credits and it would fail to address the policy preferences established by the Energy Agencies through the Energy Action Plan process or the need to reduce reliance upon fossil power plants to achieve AB32 GHG emission reduction goals. Assessing the feasibility of major changes to the system through increased reliance upon renewable, resources, upon rooftop solar PV and other distributed generation technologies, enhanced energy efficiency program impacts reducing load, etc. is necessarily more complex and time consuming than simply endorsing a repowering strategy with little thought to the very long term consequences.

[8] Energy Commission Draft Staff Paper, *Potential Impacts of the South Coast Air Quality Management District Air Credit Limitations and Once-Through Cooling Mitigation on Southern California's Electricity System*, February 2009, CEC-200-2009-002-SD.

[9] A prime mover is the basic source of heat energy for running the generating turbine, e.g. a steam boiler, a combustion turbine, a nuclear reactor.

Analyses of Nuclear Generating Units. The four nuclear generating units located at San Onofre and Diablo Canyon represent unique elements of California's electrical generating system and both its positive and negative dimensions. From the perspective of the SWRCB, these four units are the largest source of biologic harm. From traditional air quality criteria pollutant or GHG perspectives, nuclear plants are viewed as highly beneficial, and OTC mitigation requirements that might cause them to shut down would exacerbate overall problems to be overcome. The nuclear units supply a significant percentage of the energy used by California end-users, operating as baseload units with very high capacity factors. Refitting these plants with alternative cooling systems or replacing their capacity and energy require special studies. Unfortunately, studies of the generation versus transmission tradeoffs of the aging fossil fleet may have different results depending on whether the nuclear units are assumed to operate as they do today for an indefinite future, or whether they are retired when their current Nuclear Regulatory Commission permits expire in 2021-2023.

Creation of a Comprehensive Plan to Enable Preferential Treatment for Some Projects. Creating a formal Plan and adopting that Plan through a CEQA-compliance process could have value by subsequently providing preferential treatment (reduced consideration of alternatives, accelerated time schedule, etc.) in the applicable licensing processes for individual projects or facilities included within the Plan. Multiple agencies now have licensing authority over various infrastructure projects, although the Energy Commission licenses the majority of the likely power plant additions and the CPUC licenses the majority of the expected transmission line upgrades. The individual CEQA reviews now implemented for new power plants and transmission lines might be conducted *en masse* for infrastructure additions part of the Plan. Since the Plan represents a comprehensive, multi-facility replacement of multiple existing facilities, it may be appropriate to revise Energy Agencies' review processes to consider multiple facilities as a package, and to accelerate this consideration. This will be among the alternatives that Energy Agencies will consider when fully developing this alternative approach to OTC mitigation.

Next Steps

This present document represents an attempt to incorporate the feedback to date and internal discussions among the Energy Agencies. The Energy Agencies are now compiling information about the evaluations that are relevant to the OTC power plants in the various regions, and preparing a workplan for those further analyses which are needed. The analytic work will be conducted over the second quarter of 2009.

The CEC will conduct a joint workshop as part of the Energy Commission's 2009 Integrated Energy Policy Report proceeding on May 11, 2009 to solicit input from the generator community, environmental groups, agencies with environmental responsibilities, and the public. The Energy Agencies will participate in this workshop.

JOINT PROPOSAL OF ENERGY AGENCIES – 06/22/2009

Draft Infrastructure Replacement Milestones and Compliance Dates for Existing Power Plants in California Using Once-Through Cooling

Region (Balancing Authority)	Existing Facility Name	Infrastructure Replacement Milestones[1]							
		CAISO Enhanced LCR Study[2]	CAISO-CPUC-CEC Infrastructure Replacement Plan[3]	CPUC Procurement[4]		CAISO Annual Transmission Plan[8]	CPUC Transmission Permitting[7]	Known Replacement Infrastructure Operational[9]	Unspecified Replacement Infrastructure Operational[9]
				LTPP Approval[5]	Gen Project Approval[6]				
Humboldt	Humboldt Bay Power Plant[10]	Not required[19]	Pre-Plan[20]	Complete	Complete	Gen solution	N/A	Q3 2010	N/A
San Diego	South Bay Power Plant (partial capacity)[11]	Not required[19]	Pre-Plan[20]	Complete	Complete	Gen solution	N/A	Q4 2009	N/A
	South Bay Power Plant (remaining units)[12]	Not required[19]	Pre-Plan[20]	Trans solution	Trans solution	Complete	Complete	Q3 2012	N/A
	Encina Power Plant	Q4 2009	Q1 2010	2011	2013	2011	2015	N/A	2017
Bay Area	Potrero Power Plant (Unit 3)[13]	Not required[19]	Pre-Plan[20]	Trans solution	Trans solution	Complete	Complete	Q1 2010	N/A
	Contra Costa Power Plant (1 of 2 units)[14]	Not required[19]	Pre-Plan[20]	Complete	Complete	Gen solution	N/A	Q2 2009[21]	N/A
	Contra Costa Power Plant (second unit)	Q4 2009	Q1 2010	2011	2013	2011	2015	N/A	2017
	Pittsburg Power Plant								
Central Coast	Moss Landing Power Plant[15,16]	Q4 2009	Q1 2010	2011	2013	N/A	N/A	N/A	2017
	Morro Bay Power Plant[16]	Not required	Pre-Plan	complete	complete	N/A	N/A	Q1 2009[22]	N/A
Ventura/Big Creek[17]	Mandalay Generating Station	Q4 2010	Q2 2011	2013	2015	2012	2016	N/A	2020
	Ormond Beach Generating Station								
Los Angeles Basin[17] (CAISO)	El Segundo Generating Station	Q4 2010	Q2 2011	2013	2015	2012	2016	N/A	2020
	Huntington Beach Generating Station								
	Redondo Generating Station								
	Alamitos Generating Station								
Los Angeles Basin[17] (LADWP)	Haynes Generating Station[18]	Not under CAISO balancing authority or CPUC jurisdiction. CEC is conferring with LADWP to understand in-basin capacity requirements and processes for accomplishing OTC mitigation.							
	Harbor Generating Station[15,18]								
	Scattergood Generating Station[18]								
Nuclear Plants	Diablo Canyon Power Plant								
	San Onofre Nuclear Generating Station								

Notes:

[1] These infrastructure milestones assume no litigation about facility permits following appropriate agency approvals.

[2] California Independent System Operator Corporation (CAISO) would conduct an enhanced Local Capacity Requirement (LCR) study identifying the impacts of specific OTC retirements or transmission developments on the local area's LCR projections 10 years out. CAISO will use assumptions about load and generation developed jointly with the California Energy Commission (CEC) and the California Public Utilities Commission (CPUC).

[3] The Infrastructure Replacement Plan developed jointly and updated by the CAISO, CEC, CPUC would identify the complete set of infrastructure needed to make OTC plants/units redundant for grid reliability. It would advise the SWRCB about the reliability designations of specific power plants.

[4] CPUC would modify its Long-Term Procurement Plan (LTPP) proceeding and procurement processes to require the investor-owned utilities (IOUs) to assess replacement infrastructure needs and conduct targeted request for offers (RFOs) to acquire replacement or repowered generation capacity. CPUC also has authority to approve cost-based contacts under AB 1576.

[5] CPUC has authority to order the IOUs to procure new (or repowered) fossil generation for system reliability in the LTPP proceeding. LTPP proceedings are conducted on a biennial cycle and plans are normally approved in odd-numbered years.

[6] Once authorized to procure by a CPUC LTPP decision, it takes 18 months for the IOUs to issue an RFO for generation (new or repowered), sign contracts and submit applications to the CPUC for approval. Approval by the CPUC takes 9 months. If the contract involves a facility already licensed by the CEC, then financing and construction can begin. Generation permitting for thermal technologies >50 MW in capacity is under CEC authority, and may take place before, after or during the CPUC contract approval process. The Warren-Alquist Act authorizes CEC to license certain categories of power plants and related structures. CEC's siting process has been determined to be a certified regulatory program under the California Environmental Quality Act (CEQA) and the functional equivalent of preparing environmental impact reports (EIRs). CEC is the lead agency and consults with other relevant agencies. The standard licensing process is normally conducted in 12 months, but streamlining of the permitting process may be an option so multiple facilities can be considered as a package (planning level EIR). Reviews should be somewhat faster because impacts to water resources are by definition minimized; impacts to the grid reliability are already considered and mitigated; and conformity to state laws and regulation has been considered under the Plan.

[7] Transmission permitting is under CPUC authority. Proposed transmission facilities to meet needs identified in the CAISO Annual Transmission Plan to replace OTC plants/units would be brought to the CPUC for approval.

[8] Transmission solutions (upgrade and/or new addition) that would make specified OTC system redundant would be analyzed in the CAISO Annual Transmission Plan. The CAISO will consider SWRCB directives and schedules limiting or canceling water permits required to operate OTC plants/units in the 2011 and subsequent annual Transmission Planning Process (TPP). The CAISO will conduct analysis as part of its TPP reflecting projected OTC plant/unit retirements as a result of SWRCB directives and schedules, which shall be incorporated in to the CAISO's annual Transmission Plan that serves as the basis for further transmission upgrades or additions.

[9] These compliance dates may change subject to the CAISO-CEC-CPUC Infrastructure Replacement Plan produced in Q1 2010 and updated periodically. All dates assume a generation solution which requires a CEC permit. If a permit has been acquired prior to CPUC contract approval, then an earlier on line date is possible. If transmission solutions are selected, then longer time lines would be expected.

[10] Humboldt Repower generation project is approved by the CPUC and expected operational by Q3 2010. This new infrastructure will eliminate OTC at the Humboldt Power Plant.

[11] Otay Mesa Power Plant is in construction and expected operational by Q4 2009. This new infrastructure is expected to displace a portion of the need for the capacity of the South Bay Power Plant.

[12] Sunrise Powerlink transmission project is approved by the CPUC and expected operational in 2012. This new infrastructure is expected to displace the need for remaining South Bay Power Plant capacity.

[13] TransBay Cable transmission project is expected operational by Q1 2010. This new infrastructure is expected to replace the need for Portrero Unit 3.

[14] The new Gateway Generating Station became operational in January 2009. This new infrastructure is expected to replace the need for one unit at the Contra Costa Power Plant.

[15] Units that have recently been repowered will be addressed separately.

[16] Not needed for local network reliability, according to a November 26, 2008 preliminary CAISO Study, although may be needed for system resource adequacy requirements.

[17] Due to siting/land use and air quality constraints, it is likely that a combination of new generation and transmission infrastructure will be necessary to replace the need for OTC plants/units in the Ventura/Big Creek and L.A. Basin regions.

[18] Owned and operated by the Los Angeles Department of Water and Power, its own balancing authority (not controlled by CAISO).

[19] No further study is required. Existing studies are sufficient to determine reliability designation of specified OTC facilities.

[20] Replacement infrastructure sufficient to determine reliability designation of specified OTC facility was identified prior to development of the Infrastructure Replacement Plan.

[21] Contra Costa Power Plant is under contract to PG&E until 2011.

[22] Morro Bay units 3-4 have contracts with SCE through Q4 2011.