State of California
California Energy Commission

In the Matter of:
Application for Certification of the
Starwood Power-Midway, LLC
Peaking Project

Docket No. 06-AFC-10

Starwood Power-Midway, LLC
Response to the PMPD
Backwash Filter Water

The Starwood Power-Midway PMPD has put the applicant in the untenable position of accepting conditions that offer no ability to improve or provide future mitigation to the California water system, are detrimental to the environment, and do not conform to the state water policy, yet we do not have the luxury of more time to vent the issues. We need to resolve this issues in the next two weeks. Our suggestion is to propose a workshop at the January 3, 2008 to discuss the use of backwash filter water in a peaking power plant.

According to the PMPD, " the principle contested issue is the applicability of SWRCB Resolution 75-58 policy, supported in the IEPR, identifying the use of fresh inland water for power plant cooling as an unreasonable use and only to be permitted if other sources or other methods of cooling would be environmentally undesirable or economically unsound."

> WATER RESOURCES – Summary of Findings and Conditions
> To assure the conservation of high-quality potable water, the project shall use degraded CalPeak groundwater for plant operations such as inlet air-cooling and water injection for NOx control. The project would use bottled potable water for personnel use.
>
> MITIGATION
> The project owner shall use degraded CalPeak groundwater for facility operation to avoid potential life-of-the-project impacts to aqueduct-quality water supplies. Condition: WATER RESOURCES–1.

The Applicant's proposal is to make use of reclaimed wastewater, which provides a net increase in the amount high quality water compared to the PMPD recommendation. We believe the arguments put forth in this letter make a compelling showing that the proposed use of recycled backwash waste water results in no appropriation of existing high quality inland waters for power plant cooling purposes; protects beneficial uses of state's water resources, is reasonable within the context of alternative water sources and is entirely consistent with adopted Energy Commission policies.

Specifically, this letter establishes that:

- The proposal is consistent with SWRCB Resolution 75-58 policy and is supported by numerous IEPR policies beginning in 2003 and continuing through to the recently adopted 2007 IEPR.
- Staff's own description of Baker Farms back wash wastewater demonstrates that the water does not meet the definition of fresh water.
- The PMPD does not allow for a mitigation plan, despite the fact that our proposal creates a new source of water for California in an amount that exceeds our use.
- The proposed requirement to use the CalPeak water is environmentally undesirable and economically unsound compared to the alternative.

The following outlines our evidence that the proposal is consistent with:

- The 2005 IEPR policy that the Commission explores and pursues cost-effective water efficiency opportunities that would save energy and decrease the energy intensity in the water sector.
- The 2005 IEPR policy requiring degraded or recycled water in power plant cooling systems.
- The 2005 IEPR policy that recycled water can substitute for fresh water in power plant cooling.
- The 2005 IEPR policy recommendations to identify new and innovative technologies and measures for achieving energy and water efficiency savings.
- The 2005 IEPR policy recommendations to identify new and innovative technologies and measures for achieving energy and water efficiency savings.
- The state's goals to reduce greenhouse gas emissions, as required under AB32.
- The state's goal to reduce water agency power demand by increasing the linkage between water conservation, energy and climate change.
- The 2006 IEPR Update and sustainable land use planning, also called "smart growth," whereas the PMPD represents a new water quality policy that would discourage sustainable development.
- Encouraging orderly retirement of the state's aging power generation fleet.
- The recently adopted 2007 IEPR, particularly with respect to the water-energy nexus and the policy that places reducing greenhouse gas emissions at the center of government and business agendas.
- SWRCB Resolution 75-58 policy and the letter addressed to CEC Commissioner Bob Laurie, dated May 23rd, 2002.
- Satisfying the objections of the Westlands Water District

Background

The Starwood Midway Peaker Project (SPP) requires water for inlet fogging ("misting" of inlet air) and water injection for NOx control. At its expected annual operating capacity of 400 hours, the project water use would be 14 acre-feet per year. However, since the SPP is seeking permitting for 4,000 annual hours of operation, the maximum water requirement is 136 acre-feet per year. Proportionally, peak water usage would be 71 percent water for NOx control and 29 percent for inlet fogging. (AFC 5.5-9)

The SPP would include a water treatment system using a reverse-osmosis (RO) unit that would feed a demineralizer to provide high-purity water to the gas turbines for water injection/inlet fogging. The water treatment system would include one 75,000-gallon raw water storage tank, a RO unit, a mobile water treatment system, two 75,000-gallon demineralized water storage tanks, and a forwarding system to deliver the demineralized water to the gas turbines. An on-site evaporation pond would collect waste discharge water from the RO unit. (FSA 4.9-8)

The Applicant initially proposed three potential water supplies:

- Semi-confined Aquifer (CalPeak well water) contains low-quality non-potable groundwater from the existing CalPeak Panoche peaker power plant well. Total dissolved solids (tds) are approximately 3,400 mg/L. This degraded groundwater is not expected to supply a domestic, agricultural or public water system due to its high tds. Use of the CalPeak well water requires the construction a new 1,200-feet water pipeline.

- Baker Farms Irrigation Water Filter Backwash is derived from filtering approximately 24,000 acre-feet of fresh aqueduct-quality irrigation water annually. This wastewater is discharged to a series of evaporation ponds. Using Baker Farm irrigation water filter backwash would require constructing an approximately two-mile four-inch diameter pipeline from the evaporation pond collection system to the SPP site. The filter backwash water has total dissolved solids (tds) of approximately 170 mg/L.

- Confined Aquifer Deep Well groundwater is derived from a new 1,500-foot deep well located on-site adjacent to the Reverse Osmosis unit. The groundwater in the confined aquifer has moderately high tds concentrations (820-1,100 mg/L) and is used for domestic purposes by local residents and as a backup to curtailments on deliveries of CVP water for agricultural purposes in the area. (FSA 4.9-10, 11)

The Energy Commission staff concluded in its Final Staff Assessment that use of the CalPeak well water conforms to applicable State Water Policies and causes no significant environmental impacts. However, Staff believes that use of either the filter backwash water or the deep aquifer well water would not be consistent with the California State Water Resources Control Board (SWRCB) Resolution No. 75-58 or the Energy Commission 2003 Integrated Energy Policy Report (IEPR) policy addressing the use of fresh inland water for power plant cooling. Staff also considered the deep-well confined aquifer to be fresh water as defined by Title 22, and the SWRCB's Policy 75-58 and Resolution 88-63. (FSA 4.9-11)

Applicant's Position

The Applicant contested Staff's review and opinions regarding the applicability of Resolution 75-58, etc., to a simple cycle project and to the use of filter backwash water in an Evidentiary Hearing conducted November 19, 2007, and presented environmental information and legal support for the use of the filter backwash water for project operation.

Discussion
The principle contested issue is the applicability of SWRCB Resolution 75-58 policy, supported in the IEPR, identifying the use of fresh inland water for power plant cooling as an unreasonable use and only to be permitted if other sources or other methods of cooling would be environmentally undesirable or economically unsound.

Description of the new water source from the PMPD

Baker Farms Filter Backwash Water
The Baker Farming Company, LLC, which farms approximately 7,000 acres of land in the area, produces sufficient quantities of filter backwash water from their irrigation practices to supply the site with water required for operation. Since most of the water is initially delivered to Baker Farms via an open canal, before water can be used for agricultural purposes, it must be filtered to remove entrained suspended solids (algae, garbage, dirt, etc.). Filtration occurs though a series of sand filters, placed strategically within the water delivery system. The filtered water is then distributed to the agricultural fields. (Alt. Water Supply Analysis, 1-1)

Approximately 24,000 acre-feet of water is utilized in the Baker Farms operations annually. Due to the large volumes of water pumped, it is necessary to clean the sand filters every 3 to 6 hours, depending on the season. This is accomplished by backwashing the sand filters. Each backwash flush cycle takes 2 minutes with a water flow rate of 300 gallons per minute per filter. There are approximately 162 filters which generate 97,000 gallons of wastewater each filter cleaning cycle. The filter wastewater contains suspended solids removed from the irrigation water. The Baker Farms operations produce 160 acre-feet of wastewater on an annual basis. The peak season for this water flow is during the irrigation period, April to September. (Alt. Water Supply Analysis, 1-1)

The wastewater is sent to a number of local settling ponds where the suspended solids precipitate out of solution. Historically, the wastewater was disposed of through evaporation and percolation. To efficiently dispose of wastewater, Baker Farms is in the process of connecting a number of small wastewater settling ponds to a large, centrally located evaporation pond. The network of pipes that Baker Farms is installing to tie the small ponds to the large pond are, at the closest distance, 1.5 miles southeast from the power plant site running along an existing dirt road used and maintained by Baker Farms. (Alt. Water Supply Analysis, 1-1)

By comparison, the CalPeak upper aquifer well water has total dissolved solids (tds) of 3,400 mg/L; whereas the backwash pond water has a tds of 170 mg/L. Therefore, the backwash pond has better quality water than water from the upper aquifer associated with the groundwater well at CalPeak Panoche. (Alt. Water Supply Analysis, 2-4)

The SPP is a simple cycle combustion turbine. The project's water uses are inlet air-cooling and water injection for NOX control. There is no steam cycle associated with the simple cycle turbine and thus the project does not include a condenser or a cooling tower.

Average water use associated with the expected 400 hours of annual project operation is approximately 14 acre-feet. Inlet fogging represents 29 percent of the water use, or 4.0 acre-feet. Water injection for NOx control represents 71 percent of water use, or 10.0 acre-feet. The maximum annual water use for the project would be 136 acre-feet if operating a maximum of 4,000 hours a year.

Based upon the Applicant's Alternative Water Analysis, the filter backwash water to be sold to the SPP is "waste" water from the Baker Farms operation. The 160 acre-feet of backwash water is a scant 0.6 percent of the total water use of 24,000 acre-feet. Based upon the Applicant's testimony, we find that construction of the pumping station and pipeline between Baker's evaporation pond and the SPP will not create any significant environmental impact for air quality, biology, cultural resources, noise, public health, visual resources, waste management, water quality or any traditional CEQA concern.

The use of this high-quality water would also mean that the project's reject ("waste") water from filtering the backwash water would no longer have to be held in a lined evaporation pond. Consequently, any potential impact to wildlife using the evaporation pond waters would be less than with the degraded CalPeak well water. The reject water from the backwash water would be allowed to either evaporate to the atmosphere or percolate back into the groundwater, whereas the reject water from the degraded well water would not be allowed to percolate into the ground. Instead, for the use of degraded well water, the evaporation pond would have to be double lines and a monitoring well established to assure the reject water was not percolating into the ground. Additionally, if degraded well water were used, the dried debris from the bottom of the evaporation pond would be a more hazardous waste in terms of its disposal at an appropriate landfill.

The use of the backwash water would put to use water that, as of now, would otherwise just evaporate to the atmosphere or percolate into the ground. The degraded CalPeak water would be left in the ground, allowing for the present a zero-net-effect from the project. While banking such degraded groundwater for future use would be highly beneficial if the aquifer were over-drafted, in this circumstance, the aquifer is constantly and fully recharged by irrigation, and there is little demand for this degraded water at this location since it is not economically useable for irrigation or domestic purposes.

Discussion

The proposal is consistent with the 2005 IEPR policy that the Commission explores and pursues cost-effective water efficiency opportunities that would save energy and decrease the energy intensity in the water sector.

The 2005 IEPR (Executive Summary, p.4) states:

> "California's water infrastructure accounts for nearly 20 percent of the state's electricity consumption. If not coordinated and properly managed on a statewide basis, water-related electricity demand could ultimately affect the reliability of the electric system during peak load periods when reserve margins are low. Water and wastewater agencies would similarly be unable to meet the needs of their customers without adequate electricity supplies. More efficient water usage, coupled with energy efficiency improvements in the water infrastructure itself, could reduce electricity demand in this sector. The Energy Commission, the Department of Water Resources, the CPUC, local water agencies, and other stakeholders should explore and pursue cost-effective water efficiency opportunities that would save energy and decrease the energy intensity in the water sector. "

The 2005 IEPR report continues (p.148)

> "Because of the large amount of energy consumed in California's water cycle, reducing water use also saves energy. Efficient irrigation techniques hold promise for substantially reducing the amount of water delivered. Agricultural water conservation can also increase on-farm energy demand, such as the energy required to pressurize drip and microspray irrigation systems, but this increase can be more than offset by greater on-farm irrigation system efficiency and operations and by energy reductions associated with delivering less water."

The Baker Farming Company, LLC, which farms approximately 7,000 acres of land in the area, produces sufficient quantities of filter backwash water from their irrigation practices to supply the site with water required for operation. Since most of the water is initially delivered to Baker Farms via an open canal, before water can be used for agricultural purposes, it must be filtered to remove entrained suspended solids (algae, garbage, dirt, etc.). Filtration occurs though a series of sand filters, placed strategically within the water delivery system. The filtered water is then distributed to the agricultural fields. (Alt. Water Supply Analysis, 1-1)

By recycling the Baker Farms backwash filter waste water and making it available for agricultural use, the proposal avoids the use of canal water and the energy associated with its transport and delivery.

The proposal is consistent with the 2005 IEPR policy requiring degraded or recycled water in power plant cooling systems.

The 2005 IEPR (p.139) states:

> "Power plants use a significant volume of water, primarily for cooling. This water demand by power plants can have a significant effect on local water supplies. The 2003 Energy Report adopted a policy requiring new power plants to use degraded

or recycled water or air-cooled systems to reduce the amount of fresh water used in power plant cooling systems. California has a number of power plants along its bays and coastline that use once-through cooling. The state has the opportunity to more comprehensively study the impacts of once-through cooling on the marine environment as part of the Governor's California Ocean Protection Council efforts, as well as the State and Regional Water Quality Control Boards' review of impacts under Section 316(b) of the federal Clean Water Act.

California can implement strategies now to increase water use efficiency, energy efficiency, peak operational flexibility, and renewable generation potential to serve the state's water and wastewater infrastructure."

The use of the backwash water would put to use water that, as of now, would otherwise just evaporate to the atmosphere or percolate into the ground. The degraded CalPeak water would be left in the ground, allowing for the present a zero-net-effect from the project.

The proposal is consistent with the 2005 IEPR policy that recycled water can substitute for fresh water in power plant cooling.

The 2005 IEPR (p.140) states:

"California's growing population is putting great pressure on municipalities to secure enough water to meet that growth. Faced with limited fresh water, many agencies are using recycled water to meet their non-potable needs. The fastest-growing source of new water supplies is recycled wastewater from municipal and other systems. This water is treated to stringent health and quality standards before it is reused. Recycled water can substitute for fresh water in power plant cooling and other industrial processes, landscape irrigation, and to replenish groundwater aquifers."

California uses about 14 trillion gallons of water in a normal year, with about 79 percent going to agriculture and the remainder to the urban sector. Once water is collected or extracted from a source, it is transported to water treatment facilities and distributed to end users. Wastewater from urban end uses is collected and treated before it is discharged back into the environment, where it becomes a source for other uses. In general, wastewater from agricultural end uses is not treated (except for holding periods to degrade chemical contaminants before release to the environment) and is discharged directly to the environment.

Contrary to staff claims in the PMPD, the backwash filter water should not be considered as 'existing' inland fresh water. But for this proposal, this new source of water would not exist. Further, The use of the backwash water would put to use water that, as of now, would otherwise just evaporate to the atmosphere or percolate into the ground. The

degraded CalPeak water would be left in the ground, allowing for the present a zero-net-effect from the project.

The proposal is consistent with the 2005 IEPR policy recommendations to identify new and innovative technologies and measures for achieving energy and water efficiency savings.

The 2005 IEPR (p.151) Recommendation for Energy Savings in Water Use states:

> "The Energy Commission's PIER program should evaluate and conduct research to better understand the interaction of water and energy within the state and identify new and innovative technologies and measures for achieving energy and water efficiency savings. Research should address potential savings throughout the water cycle, especially in Southern California where the energy intensity of water is greatest, and focus on identifying and implementing cost-effective retrofits in the water system that increase efficiency and provide both energy and peak savings. In addition, research should examine opportunities to increase savings through the development of TOU water tariffs and meters, along with increased flexibility in water deliveries."

The proposal to recycle backwash wastewater has applicability to other peaking projects in California and its performance data should be considered as an input to ongoing CEC PIER research efforts.

The proposal is consistent with the state's goals to reduce greenhouse gas emissions, as required under AB32.

The primary source of greenhouse gas emissions is the burning of fossil fuels in motor vehicles, refineries, industrial facilities, and power plants. In California, the transportation sector is the largest source of greenhouse gas emissions, producing 41 percent of the state's total emissions.

Nowhere in the record has the emissions impact of the PMPD recommended condition to require use of the CalPeak well water cost considered the consequent disposal of high salinity Reverse Osmosis (RO) wastewater been addressed. After 400 hours of operation the RO waste pond will be full. Under the PPA, the plant can be called upon to run 4000 hours. This would involve over 2,000 diesel engine truckloads of high salinity water traveling the state highways and further contributing to an increase in California vehicle emissions, including CO2.

The 2005 IEPR Transportation Sector (p158) states:

"A consensus of the subcommittee concluded that:

- New opportunities for reducing greenhouse gas emissions exist in public fleets, freight, and air travel as well as for reducing vehicle miles traveled through smart growth and sustainable development approaches."

The proposal to recycle backwash waste water avoids these vehicle emissions altogether and is an environmentally superior alternative.

The proposal is consistent with the state's goal to reduce water agency power demand by increasing the linkage between water conservation, energy and climate change.

The 2005 IEPR (p.156) states:

> "Water agencies can be instrumental in mitigating the effects of climate change because of the close relationship between water use and energy consumption. Water agencies are the single largest electricity users in California, consuming 3,200 MW of peak electricity. Reducing this demand is possible by greater linkage between water conservation and energy efficiency programs, by adding more storage, and by encouraging water users to shift usage to off-peak periods. Over the longer term, changes in electricity rate design, financial incentives, and demand response programs are recommended.
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> These sectors contribute significantly to the state greenhouse gas inventory and have the potential to contribute significant emissions reductions. Key findings and conclusions from this work are:
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> - Emission reductions are needed from multiple sectors of the California economy to achieve the Governor's targets.
> - Cost-effective reductions are possible (less than $10 to $20 per ton) by 2010, but costlier options will be needed to achieve the 2020 target.
> - Some options face technical or economic barriers or policy or political hurdles, which need to be overcome to fully realize the greenhouse gas reduction benefits."

The PMPD suggests that the Baker backwash water will be available for agricultural purposes if SPP's Midway doesn't use it. As a practical matter, the waste backwash water will not be converted to agricultural use for the foreseeable future, the economics prevent it.

Today the estimated cost of aqueduct irrigation water to farmers is about $120/AF. SPP estimate the cost to capture the backwash filter water as much as $2000/AF. The backwash filters are located remotely in the farmer's field without required electric power or waste water piping system. Westlands staff has reviewed our cost analysis and agrees with the methodology but arrived at a cost of $1000/AF. Regardless, in either case, farmers are not going to voluntarily collect this water because the cost of collection far exceeds their alternative cost of water by at least a factor of 10x. If Midway is not permitted to use it the wastewater, it will continue to be spilled on the ground as it is today. Further reinforcing this point, should the cost of water somehow reach $2000/AF

during Midway's project life, it is likely that most farming operations would be rendered unprofitable.

Accordingly, the proposal provides the Commission with an opportunity to address the economic barrier to recycling backwash waste water that otherwise would not be financial justified.

The proposal is consistent with the 2006 IEPR Update and sustainable land use planning, also called "smart growth," whereas the PMPD represents a new water quality policy that would discourage sustainable development.

The 2006 IEPR Update, (page 72) states:

> "Sustainable land use planning, also called "smart growth," refers to the application of specific development principles to make prudent use of resources and create genial, low impact communities through enlightened design and layout. A September 2006 public workshop launched the investigation, intending to identify:
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> - The extent to which land development processes address energy development, generation, and use.
> - Successes and barriers that enhance or reduce sustainable development.
> - Research that would identify how existing and new development can efficiently use and plan for electricity, natural gas, and transportation fuels.
> - Opportunities to apply land use planning principles that consider energy resources to achieve California's energy policies, goals, and initiatives.
>
> What immediately became obvious is the lack of energy consideration on the part of land use decision making authorities and developers in their planning processes. Energy is not typically highlighted as a smart growth principle, so smart growth planners most often are not including energy in their considerations. Some exceptions exist; however, most planning professionals and the public identify energy—usually electricity or natural gas to cool, heat and light homes and buildings and power equipment and appliances—as a commodity delivered by a service provider, not unlike water and garbage pick up. The host of related support services and infrastructure, such as fueling stations, transmission lines, power plants and pipelines, are rarely considered in planning uses for parcels of land."

The significant economic costs of adopting the water proposal in the PMPD will materially hurt the project. At 4000 hours, the estimated cost of compliance could exceed $3.2 million dollars per year.

The consequence of not providing for an approved project to economically operate to meet the energy needs of the region would result in potentially less efficient units operating to serve the unmet load or the construction of new peaking units to meet the

demand. The latter case would result in incremental environmental impacts.and impacts upon the community.

Additionally, we read the Committee's discussion at the bottom of page 220 and the top of 221 as restricting the project to only use the CalPeak shallow aquifer water.

Consequently, the PMPD does not allow for a mitigation plan, despite the fact that our compromise proposal creates a new source of water for California in an amount that exceeds our use. We believe that this will have a profound impact on future power plant development and power costs in California and is inconsistent with smart growth principles.

Developers reading this language, if it appears in our Final Decision, will discard potentially good sites that have multiple water sources for fear that the "worst" quality water will be mandated by this new policy. Peaker projects like Midway support enable greater integration of intermittent renewables like wind and solar power, which are a key element in advancing sustainable development.

The unintended consequences of imposing uneconomic conditions on peaker projects, as contained within the Midway PMPD, forces the use of shallow aquifer water, while programs that increase the quality and/or volume of high-quality water in the state, as proposed by recycling backwash waste water, would not be allowed. It would also appear that under this new policy no mitigation plans could be proposed.

The proposal is consistent with encouraging orderly retirement of the state's aging power generation fleet.

The 2007 IEPR (p.81) states:

> "Concerted effort by the state's energy agencies is needed to ensure economic, reliable, and sufficient electric supplies in Southern California. At the same time, the state must step up its efforts to evaluate the impacts of retiring, repowering, or replacing aging generation resources with resources compatible with the state's air, water, and greenhouse gas goals, as well as the economic interests of its utility customers.
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> The Energy Commission recommends the following:
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> - The Energy Commission, the CPUC, the California ISO, and other interested agencies such as the Ocean Protection Council, State Water Resources Control Board and SCAQMD should work together to complete the studies needed to better understand the impacts of retiring, repowering, and replacing aging power plants, particularly in Southern California.."

The SPP Midway peaker project will facilitate the retirement of less efficient, older generating resources with cleaner, more efficient generating technology.

The proposal is consistent with the recently adopted 2007 IEPR, particularly with respect to the water-energy nexus and the policy that places reducing greenhouse gas emissions at the center of government and business agendas.

The 2007 IEPR (p. 112) states:

> "The Water-Energy Nexus
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> In the 2005 IEPR, the Energy Commission explored the relationship between water and energy in California, finding that "significant untapped potential for energy savings exists in programs focused on water use efficiency." Since 2005, there has been limited progress in expanding current utility energy efficiency programs to include water efficiency measures. In March of 2006, the CPUC committed to exploring inclusion of water efficiency measures in investor-owned utility programs, but has yet to implement the limited scope water-energy pilot projects planned to inform the 2009–2011 energy efficiency program cycle.
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> The Energy Commission reiterates the need to capture the energy savings benefits of water use efficiency, especially in light of climate change. Potential actions include:
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> - Standardizing and increasing the evaluation and monitoring of water efficiency programs to ensure the delivery of savings and benefits
> - Implementing appropriate mandates, incentives, and funding to maximize the water efficiency potential of existing buildings and new construction
> - Assessing the energy savings potential and associated greenhouse gas emission reductions from aggressive levels of water efficiency and recycling
> - Identifying energy intensive water use by hydrologic region and alternatives for reducing energy intensity of water use in each region
> - Fully incorporating water efficiency into the 2009–2011 energy efficiency program cycle
> - Modifying CPUC or other state policies as necessary to allow for all energy savings associated with water efficiency or recycling to be included in any cost effectiveness analysis and developing accounting mechanisms as necessary to credit costs and savings appropriately
>
> The Energy Commission is committed to using its Building and Appliance Efficiency Standards authority to save both water and energy. Most recently, Governor Schwarzenegger signed AB 662 (Ruskin, Chapter 531, Statutes of 2007) and AB 1560 (Huffman, Chapter 532, Statutes of 2007) expanding and reinforcing the Energy Commission's authority to establish water conservation and efficiency standards for both buildings and appliances. The Energy

Commission will define a Water-Energy Research Development and Demonstration Strategic Plan and Roadmap that explores ways to reduce the energy intensity of the water use cycle and better manage the energy demands of the water system. These actions will be done in coordination with other agencies' efforts and those of the utilities to maximize the effectiveness of these efforts."

The water supply agreement with Baker is for an initial term of 7 years. Baker Farms would be able to construct the gathering and ponding project this year so that the new source of water would be available for irrigation in the summer of 2008, well before the SPP starts operation. Thus, 30 AFY of high-quality water would be made available for the first year and at least 16 AFY each year thereafter. In the event Baker Farms does not extend the current 7-year agreement, then all the water collected from the backwash filters would be available for agriculture use going forward and Midway will revert to use the CalPeak shallow aquifer well water if no other option was available.

The proposal is consistent with SWRCB Resolution 75-58 policy and the letter addressed to CEC Commissioner Bob Laurie, dated May 23rd, 2002.

Water Code Section 237 and Section 462 of the Waste Water Reuse Law, direct the Department of Water Resources to:

237. "...either independently or in cooperation with any person or any county, state, federal, or other agency, including, but not limited to, the State Energy Resources Conservation and Development Commission, shall conduct studies and investigations on the need and availability of water for thermal electric power plant cooling purposes, and shall report thereon to the Legislature from time to time...."

462. "...conduct studies and investigations on the availability and quality of waste water and uses of reclaimed waste water for beneficial purposes including, but not limited to ... and cooling for thermal electric power plants."

Clearly, section 462 contemplates the use of reclaimed waste water as a beneficial purpose with respect to providing cooling for power plants. The proposal goes above and

To support its position that Applicant should not be allowed the opportunity to use reclaimed waste water, Staff points to a statement regarding SWRCB policy that requires the lowest quality cooling water reasonably available from both a technical and economic standpoint.

We have already provided evidence that the condition to use CalPeak water is economically unsound. We also note that this statement was made in a correspondence to a Commissioner regarding follow up from a workshop on combined cycle power plants, and to our knowledge has not been adopted by the SWRCB as an update to the 75-58 policy.

Irrespective of whether the SWRCB updated its written policy, staff overlooks the key conclusion in the letter to Commissioner Bob Laurie, in which the SWRCB policy specifically encourages the use of reclaimed water, or some combination of water saving technology.

> "I note from the information provided at the meeting that many of the new and planned power plants use reclaimed water, dry cooling, or some other combination of water saving technology. This encourages me as it indicates that the policy and the efforts of you and your staff are having the desired effect."

Since the proposal does, in fact, make use of reclaimed waste water, and is consistent with SWRCB Policy 75-58, section 462.

Satisfying the objections of the Westlands Water District.

By its letter of November 19, 2007, the Westlands Water District expressed its opposition to the use of the filter backwash water, stating that "such water should be used for irrigation or other uses that are incidental to agricultural production."

Throughout the PMPD, the document accurately describes the water as waste water, not as fresh water. The PMPD (pp.219-220) states:

> "Based upon the Applicant's Alternative Water Analysis, the filter backwash water to be sold to the SPP is "waste" water from the Baker Farms operation. The 160 acre-feet of backwash water is a scant 0.6 percent of the total water use of 24,000 acre-feet. Based upon the Applicant's testimony, we find that construction of the pumping station and pipeline between Baker's evaporation pond and the SPP will not create any significant environmental impact for air quality, biology, cultural resources, noise, public health, visual resources, waste management, water quality or any traditional CEQA concern.
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> The use of this high-quality water would also mean that the project's reject ("waste") water from filtering the backwash water would no longer have to be held in a lined evaporation pond. Consequently, any potential impact to wildlife using the evaporation pond waters would be less than with the degraded CalPeak well water. The reject water from the backwash water would be allowed to either evaporate to the atmosphere or percolate back into the groundwater, whereas the reject water from the degraded well water would not be allowed to percolate into the ground. Instead, for the use of degraded well water, the evaporation pond would have to be double lines and a monitoring well established to assure the reject water was not percolating into the ground. Additionally, if degraded well water were used, the dried debris from the bottom of the evaporation pond would be a more hazardous waste in terms of its disposal at an appropriate landfill.

We have demonstrated that but for the Applicant's proposal, such water would not exist to satisfy these other uses. We have also demonstrated that the Westlands Water District request is to develop such water resources is not economically feasible in the absence of this project.

Conclusion

Given construction leadtime, financial commitments, and that time is of the essence to ensure reliability, we look forward to the opportunity to resolve this issue at the next meeting.

Respectfully Submitted:

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