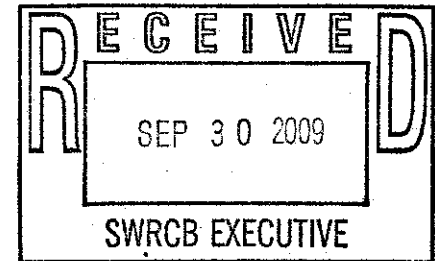


commentletters - Comments on Proposed Policy on the Use of Coastal and Estuarine Waters for Power Plant Cooling

From: "Monique and David" <moniqueanddavid@sbcglobal.net>
To: <commentletters@waterboards.ca.gov>
Date: Tuesday, September 29, 2009 9:36 PM
Subject: Comments on Proposed Policy on the Use of Coastal and Estuarine Waters for Power Plant Cooling

KINDLY SEND EMAIL REPLY TO ACKNOWLEDGE RECEIPT. THANK YOU.

State Water Resources Control Board
1001 I Street, 24th Floor
Sacramento, CA 95814
September 29, 2009



Dear Board Members,

The State Water Resources Control Board is to be congratulated in moving to enact a policy aimed at addressing the use of once-through cooling by power plants along the California coast and their widespread killing of aquatic life, which the California Energy Commission in 2005 recognized in an IEPR report as a major source of destruction to marine resources and the economies of coastal communities.

But after studying once-through cooling (OTC) for 10 years and being involved as intervenors in state agency reviews of a proposed new and larger power plant in Morro Bay, the Coastal Alliance on Plant Expansion (CAPE) concludes that the board's PROPOSED WATER QUALITY CONTROL POLICY ON THE USE OF COASTAL AND ESTUARINE WATERS FOR POWER PLANT COOLING, dated July 2009, is deficient and unacceptable. This is because it fails to terminate or sharply limit OTC within a reasonable time period. Its implementation schedule allows up to 13 years for all plants to comply with no reasonable justification.

In fact, there is no assurance in the policy that OTC will be ended or restricted appropriately at all, given the inexplicit wording of compliance requirements and the lack of definition of many enforcement measures, allowing power plant owners to exploit opportunities for delays potentially indefinitely. Considering that possibility, the policy would not comply with the 2007 United States Court of Appeals for the Second Circuit decision in the *Riverkeeper* case requiring use of best technology available for plant cooling throughout the nation.

The lack of reasonable expectation that OTC would be phased out by compliance dates listed in the policy is due to its failure to define such key terms as "wholly disproportionate," "feasible," "cost-benefit," "alternative, less stringent requirements," "any relevant information" and "to the extent practicable." We are at a loss to understand how the policy could be enforced without such terms being defined and their proper application being explained.

Such vague nomenclature has caused substantial uncertainty and controversy over statutory requirements, which have been—and continue to be—dealt with by the courts (e.g., *Riverkeeper* cases) and other state and federal agencies. The board must recognize and learn from this, requiring staff to draft a clear and unambiguous policy, providing guidance as to what is meant or not meant by these terms that will be straightforward to implement and thereby avoid further legal disputes.

Additionally, there are numerous inconsistencies. For example, the policy Implementation Schedule calls for the Morro Bay Power Plant to achieve compliance by meeting requirements for termination or sharp restriction of OTC by 2015. Yet the Schedule states that the "plant is not needed" after 2011 to help meet grid reliability requirements. There is no explanation as to why compliance should be delayed four years after the plant's use is no longer needed. Therefore, we implore the board to require that the plant be required to be in compliance in by 2012.

Also, data on plant intake flows, which may be used to determine enforcement, are sometimes outdated, invalid and inappropriate in the use of baseline figures from years past, given the significant changes that have occurred at plants in those respects over the past five to six years. And the policy contains use of the Moss Landing plant as a possible model for wholly disproportionate analysis, which is inappropriate because of the plant's age, continued litigation over its operational status and the questionable record of mitigation for OTC impacts.

In planning for heavy, continued reliance on existing OTC plants to meet grid reliability demands, the policy fails to consider a new and promising alternative that would avoid the global warming and marine life impacts of such plants. That viable option is urban photovoltaic, which the California Energy Commission on June 17 determined is a feasible, cost-effective option to the state's existing coastal plants. In light of that development, the proposed policy is outdated and should be revised to factor photovoltaic, and possibly other alternative energy sources, into planning for replacement of energy from OTC plants. Hence, earlier retirements of those plants.

The board policy's plans to protect grid reliability, based on the asserted need for the existing coastal plants, fails to take into account the board's own study, "The Electric Grid Reliability Impacts from Regulation of Once-Through Cooling in California," April, 2008, conducted by a respected independent consultant, which concluded last year that "more than enough power plants are expected to be operating in 2015 to more than compensate for any or all OTC plant retirements." The board policy was drawn from recommendations of the CEC, CPUC and CAISO, but the policy makes no mention of its own study.

The State of California undoubtedly has the right to enact standards more stringent than those proposed or initiated on a federal level, as the California Air Resources Board has done often to the benefit of citizens. Now that the vast damage caused by OTC has been irrefutably proven, the SWRCB's policy should adopt and even go beyond the standards set forth in the Second Circuit decision, and we urge the board to do so by declining to apply the wholly disproportionate test, drawn from the U.S. Supreme Court's approval of the cost-benefit concept. But it should be recognized that the Supreme Court held that wholly disproportionate may be considered but it is not required to be part of the analysis. It is the board's choice, and nothing in the policy makes the case that it is necessary to employ use of wholly disproportionate, instead of urgently pursuing the requirement that power plants convert to best technology available, as now required by law, if they choose to continue to operate. As one of the most environmentally-conscious states, California should be loathe to use an option, and nothing more, that has the clear potential of diverting us from our goal of ending the decimation of fish and other species in our coastal waters.

We also raise the question of whether mitigation, using habitat restoration, for example, is permissible under a cost-benefit or a wholly disproportionate analysis since the Second Circuit decision explicitly prohibited habitat restoration by name as compensation for OTC impacts. If mitigation is to be required of plant owners, we urge that it be designated to finance new alternative energy sources as planned substitutes for power plants, especially photovoltaic solar energy, which has been recognized by the California Energy Commission as a feasible, cost-effective alternative to existing power plants.

In terms of how to prioritize the phasing out of operating plants most logically and efficiently, we urge that the oldest, most inefficient plants (such as Morro Bay and Redondo) be the focus of such efforts because of their antiquated technology and relatively insignificant energy generation. At the same time, the phase-out of OTC should be designed to cover the relatively newer plants (like Moss Landing) as well as the nuclear

plants, depending on their different circumstances.

Following are specific comments to support general points made above:

1. UNCLEAR LANGUAGE, LACK OF INFORMATION, CONTRADICTIONS.

--The draft policy often uses vague, unclear, ill-defined, contradictory, lacking essential information and, most importantly, without dates certain by which the policy will comply with the court decision and OTC will end. Instead, power plant owners are presented with opportunities to exercise options made available in the policy to delay and avoid achieving the board's stated goal of "protecting the state's coastal and estuarine waters."

--The policy requires plants to virtually end use of OTC by stated dates but then offers an escape clause if the plant owner can demonstrate that compliance is "not feasible." But no criteria, explanation or definition of feasible is provided.

--It requires plants that are not generating electricity or engaged in critical system maintenance to "cease intake flows" within one year of adoption of this policy, but then allows intakes to continue if the owner can demonstrate (no definition or criteria is provided) it "is necessary for operations." Necessary must be defined.

--The policy states that "no later than one year after the effective date of this Policy, the owner or operator of an existing power plant unit that is not directly engaging in power-generating activities, or critical system maintenance, shall cease intake flows, unless the owner or operator demonstrates to the Regional Water Board that a reduced minimum flow is necessary for operations. It also requires demonstrating to the Regional Water Board's satisfaction that the interim impacts are compensated for by the owner or operator's participation in funding an appropriate mitigation project.

--Critical terms such as "demonstrate," "wholly disproportionate," "feasible," and "cost/benefit" are not defined in the SWRCB's draft policy and should be. Such nomenclature has caused substantial controversy which has been, and continues to be, dealt with by the courts (e.g., *Riverkeeper* cases) and other state and federal agencies. The SWRCB must recognize and learn from this, and draft a clear and unambiguous policy, providing guidance as to what is meant or not meant by these terms that will be straightforward to implement and avoid further legal disputes.

--Track 1 calls for reduction of the intake flow rate at each unit, while Track 2 calls for a reduction for the facility as a whole. Why are these different standards used? The SWRCB should only consider the intake flow rates at each, individual intake structure for reduction and all other purposes.

--How is compensation for impacts to be demonstrated? The policy does not say. In the absence of an answer to this question, funding alone could be accepted as adequate to mitigate with no evidence of effectiveness and with no direction on how that money will be allocated or whether it would be related in any way to OTC impacts on marine life.

--The Second Circuit decision explicitly does not permit mitigation, such as habitat restoration, which is settled law. To quote from the decision:

Page 40: Restoration measures correct for the adverse environmental impacts of impingement and entrainment...

Page 41: ...our holding in *Riverkeeper I* was and remains clear: restoration measures contradict the unambiguous language of section 316(b).

Page 42: As we noted in *Riverkeeper I*, restoration measures substitute after-the-fact compensation for adverse environmental impacts that have already occurred for the minimization of those impacts in the first instance....Restoration measures are not part of the location, design, construction, or capacity of cooling water intake structures, *Riverkeeper I*, 358 F.3d at 189...

Therefore, mitigation required under the board policy may not under the decision be used for "restoration measures." This should be made clear in the policy and to regional water boards that will administer the policy. In our comments on the board's previous draft OTC policy, we expressed strong reservations about use of mitigation because of concern that mitigation funds paid to the water board or regional boards could become habit-forming and might influence the agencies to not pursue aggressively the goal of ending OTC. However, if mitigation, under circumstances that may be permissible under the *Riverkeeper* decisions, is incorporated into the policy, we strongly believe that it should be used, not to compensate for and potentially prolong OTC, but to assist in development of new alternative energy sources, particularly urban photovoltaic, that would directly serve to replace coastal power plants, especially the oldest and least needed plants, and thereby contribute to earlier attainment of the state's global warming goals.

--This statement seems contradictory: a plant not engaging in power-generating activities must cease intake flows but can resume intake inflows if it demonstrates it needs to. Again, demonstrate is not defined.

--Using data based on historically permitted use instead of actual current capacity to determine how to phase out old plants overstates the amount of generation lost by the plants being phased out and distorts the need for the energy they produce.

2. POLICY DOES NOT CONFORM TO EXISTING LAW (Second Circuit court decision of 2007)

--The proposed policy fails to comply with the binding Second Circuit court's requirements to use best technology available and ensure an end to the killing of aquatic life by stopping the use of bay, estuary and ocean water for plant cooling by a time certain, even with delays in requiring compliance that we believe are unjustified.

3. SCHEDULE FOR PHASING OUT OTC

--Now that the tremendous harm to the environment is proven, it is critical for the SWRCB's policy to phase out use of once-through cooling in all power plants as quickly as possible. However, due to age and production capacity, it is impractical to think all OTC plants should be treated the same, following the same time lines. We urge the SWRCB to tailor its policy to address three separate categories of power plants using once-through cooling: old, inefficient coastal plants (like Morro Bay); newer coastal plants (like Moss Landing); and nuclear coastal power plants (like Diablo). Clearly, outmoded power plants like Morro Bay using antiquated technology should be the first ones to be retired because they are most inefficient and least productive. The SWRCB's policy lacks urgency. Despite the well documented and widely recognized damage to marine life caused by power plants using OTC, the policy allows this devastation to continue for many years to come. All OTC plants should be retired as soon as possible but, as part of the process, we recommend a policy to expedite the phasing out of old (e.g., 40- to 50-year-old) inefficient power plants.

4. UNJUSTIFIED DELAYS

--California faces a federal legal mandate to prevent coastal power plants from continuing to decimate sea life, but the proposed policy will take up to 13 years to require all remaining 19 plants to comply, which is a violation of the spirit and intent of the law. In even 10 years, many of the plants will be 50 to 60 years old, highly inefficient and unnecessary ongoing sources of significant air pollution.

--The board policy's timeline is unacceptable because little evidence has been provided to justify allowing the destructive and needless practice of devastating sea life to continue for more than another decade.

5. POLICY FAILS TO CONSIDER PHOTOVOLTAIC AS AN ALTERNATIVE ENERGY SOURCE

--Photovoltaic represents a significant opportunity to transform California's dependence on pollution-emitting power plants--that the EPA has concluded imposes a severe risk to public health ranging from asthma to premature death in people with heart or lung disease--to a brand new technology using solar panels (photovoltaic) on rooftops, mainly on parking lots and warehouses (termed urban PV), which are the most practical, available and cost-effective sites. Just a few months ago on June 17, the California Energy Commission recognized for the first time photovoltaic's vast, momentous potential to revolutionize energy generation both here and nationally. The Commission's groundbreaking ruling in the case involving proposed gas-fired peaker units at the Chula Vista power plant concluded that photovoltaic (PV) is a feasible, cost-effective alternative to conventional gas-fired power plants, which means it now will be considered in the regulatory process of selecting the most efficient, effective and environmentally-safe ways to generate electricity and serve California markets. PV on a broader scale has the potential of expediting the state's widely-praised goal of converting its energy generation to 33% renewables by the year 2020.

--The Energy Commission's June 17 decision elevating PV to its new status may have come after the drafting of the Board policy, which was released to the public on June 30. Therefore, given the immense importance of PV as a new, officially-recognized, potentially-major source of energy, the board's policy should be reviewed and revised if for no other reason.

--The board's proposed OTC policy is based largely on a report by the "Energy Agencies" (California Energy Commission, California Independent System Operator, California Public Utilities Commission), which discusses ways to avoid relying on existing power plants in order to end use of OTC. But it cites a main way to accomplish this goal is "to rely more upon remote generation." Reliance on remote solar sources would mean more, very costly and potentially environmentally-damaging transmission lines, which urban PV, as well as utilizing home and business roofs, would not require because they would be in local areas where power plants to be phased out are located. Therefore, this report has not taken PV into account as a source of energy to replace that of power plants, a major omission.

--In light of the omission of PV in calculating future energy sources to meet grid reliability, the policy should be postponed and revised.

6. WHOLLY DISPROPORTIONATE ANALYSIS (ALSO KNOW AS COST-BENEFIT)

--The State of California undoubtedly has the right to enact standards more stringent than those proposed or initiated on a federal level. The California Air Resources Board has set this precedent long ago. Now that the vast damage caused by OTC has been irrefutably proven, the SWRCB's policy should adopt and even go beyond the standards set forth in the 2007 Second Circuit *Riverkeeper* case, and we urge the SWRCB to do so. Furthermore, in its review of the cost-benefit ruling of the *Riverkeeper* case, the U.S. Supreme Court held cost-benefit may be considered but it is not required to be part of the analysis.

--The question is raised on Page 79 of the draft policy: "Should the proposed policy include a wholly disproportionate cost-benefit test?" We strongly urge the SWRCB not to include a disproportionate test or analysis as part of the phase-out process. To do otherwise allows power plants to totally circumvent any policy to phase out OTC plants, rendering the policy totally ineffective and virtually worthless. A wholly disproportionate cost analysis is nothing new; it has been part of the CEC's power plant application process for many years. But use of wholly disproportionate analysis has accomplished nothing more than delays and diversions from reaching the policy goal of ending marine impacts. The enormous damage caused to marine life by OTC is essentially accepted through costs of mitigation, but it is virtually impossible to assign a cost to this damage. For one thing, we don't fully understand all impacts of OTC on all aspects of the marine ecosystem, which makes it scientifically impossible to identify that which is to be mitigated. For another, it's virtually impossible to translate these harmful impacts into a monetary amount. On top of this,

power companies refuse to release profit data, claiming a proprietary interest. So, how can a wholly disproportionate cost analysis be accurately and effectively used when the costs of switching to best technology can't be compared to the profits achieved? To eliminate these inequities of the analysis -- and the uncertainty and cost of resulting legal challenges -- the wholly disproportionate cost analysis should be removed completely from the equation. This is especially true since it is well known that power plants all over the world--including three on the California coast--have been and are being built without OTC; the fair inference of this is that cost is not a disproportionate or unreasonable factor.

-- By not adopting wholly disproportionate criteria, it is our belief that the SWRCB will promote investment in new energy technologies, rather than wasting time, money and other resources on helping OTC plants limp along.

--In the event the board insists on including a wholly disproportionate analysis in its OTC policy, under no circumstances should the Moss Landing power plant be used as the model. It is stated on page 79 that "at the State level, the §316(b) BTA standard has been evaluated using the cost-benefit approach (e.g., Moss Landing), although it is not a common practice." It is further stated that although "there are no statewide policies or plans that include a cost-benefit test for power plants...Case-by-case BPJ permits have been issued for some of the State's OTC facilities (e.g., Moss Landing)." It is inappropriate to use the Moss Landing case as a model in any manner to determine a new wholly disproportionate policy since the state water board-approved use of wholly disproportionate and habitat restoration as mitigation for marine impacts in the Moss Landing case are challenged in litigation pending before the California Supreme Court. In addition, the case is 10 years old and the effectiveness of the habitat restoration at Moss Landing is in serious question.

--The key to avoiding policy compliance is for plant owners to use the cost-benefit (referenced as wholly disproportionate in the board policy) analysis opportunity approved by the U.S. Supreme Court on April 1, 2009, despite there being no mention of any such caveat in the Clean Water Act, as the Second Circuit decision made clear. Cost-benefit was the only aspect of the wide-ranging Second Circuit decision that was successfully challenged by the power industry. It allows plant owners to argue that ending OTC would be too costly, compared to the benefit of saving sea life from destruction. The proposed policy also provides that opportunity, even though it contains no standards, criteria or ground rules on how cost versus benefit is to be decided by authorities. Adding such a standard will only increase the SWRCB's burden to implement and administer the policy and no doubt result in costly litigation.

--The policy alludes to environmental benefits of compliance, including the reduction of entrainment provided as calculated in terms of "habitat production foregone," or "some other appropriate method approved by a regional water board." The policy's Definition of Terms contains this reference: Habitat Production Foregone -- Refers to the product of the average proportional mortality and the estimated area of the water body that is habitat for the species' source population. Habitat production foregone is an estimate of habitat area production that is lost to all entrained species. For example, if the average proportional mortality of estuarine species is 17% and the area of the source water estuary is 2000 acres, then the habitat production foregone is equal to 17% of 2000 acres, which is 340 acres. To make habitat production foregone a valid instrument in measuring marine impacts, the board must provide in the policy a reference to the regulatory or scientific basis for its use in order to bestow legitimacy as a standard. Further, evidence must be presented as to why it is acceptable to measure impacts in terms of the average proportional mortality, rather than several species that may be most significantly impacted, both in numbers and in proportion of the species inhabiting a water body area. With proportional mortality measured in acres, what standard would be used to determine acceptable and unacceptable impacts in terms of acreage?

--The owner or operator of an existing power plant must reduce impingement mortality and entrainment impacts to the extent practicable, the policy requires, as evidenced by the wholly disproportionate demonstration, and as determined by a regional water board. The difference in impacts to marine life resulting from alternative, less stringent requirements shall be fully mitigated. A required process for

measuring those impacts should be stated.

--On page 84 of the policy, under the heading "Reasonably Foreseeable Means of Compliance," it states that numerous technologies have been developed over the last several decades that attempt to minimize either impingement mortality or entrainment, or both, which are summarized in terms of "the basic characteristics of the more widely used technologies" that can be used by existing power plants to mitigate and comply with the board's proposed OTC policy "either in whole or part." One of those "technologies" is the aquatic barrier net. It should be removed from the list of technologies that can be used to comply with the policy because numerous studies, including those submitted to the Energy Commission during its review of Duke Energy's application for a new power plant in Morro Bay, as well as to other governmental agencies, have shown that such technology is not effective mitigation for OTC.

7. NO STATED LEGAL GUIDANCE FOR POLICY

--The policy contains no legal precedent or guidance for development of the OTC policy and ignores the 2004 (new plants) and 2007 (existing plants) *Riverkeeper* decisions by the United States Court of Appeals for the Second Circuit, which gave rise to the board's effort to adopt new OTC policy several years ago. This omission is misleading because it conveys the notion that the board's pursuit of a new policy is voluntary, not a legal obligation, hence less urgency.

--Currently, the policy states there are no applicable nationwide standards implementing Section 316(b) for existing power plants. Consequently, the state board and regional boards must implement Section 316(b) on a case-by-case basis, using best professional judgment. The failure to mention any authority to guide exercise of best professional judgment is a serious omission, allowing the potential for arbitrary and subjective findings in implementation. The appropriate authority is the January, 2007 *Riverkeeper II* decision by the United States Court of Appeals for the Second Circuit, which stated that best professional judgment could be used by administrative agencies pending revised U.S Environmental Protection Agency regulations and that best professional judgment should be based on the decision's rulings.

--This policy also establishes uniform requirements governing the exercise by the regional boards of best professional judgment in the implementation of §316(b) for cooling water intake structures at existing coastal and estuarine power plants that must be implemented in NPDES permits. This statement fails to identify the legal or regulatory standard or standards that the uniform requirements must reflect, and the obvious source, the Second Circuit decision, is not mentioned.

8. GRID RELIABILITY

--The policy asserts that continued operation of many, if not most, of the 19 remaining coastal power plants indefinitely is necessary to protect electricity grid reliability and ensure availability of power to the public. But the board's own consultant concluded last year that "more than enough power plants are expected to be operating in 2015 to more than compensate for any or all OTC plant retirements." "The Electric Grid Reliability Impacts from Regulation of Once-Through Cooling in California," contracted for by the California Ocean Protection Council and State Water Resources Control Board, April 2008. The report is unjustifiably omitted as a key source for developing compliance dates for this policy.

9. NPDES PERMITS

--The policy states that regional water boards shall reissue or, as appropriate, modify NPDES permits issued to owners or operators of existing power plants to ensure that the permits conform to the provisions of this Policy. The permits shall incorporate a final compliance schedule that requires compliance as soon as possible but no later than the deadlines contained in Table 1, Section 3.E. The regional boards are required to reopen the relevant permits and modify the final compliance schedules, if appropriate, based on modifications to the policy approved by the state board. If an owner or operator selects Track 2 as the

compliance alternative, the NPDES permit shall include a monitoring program that complies with Section 5 of the policy. Given the long-expired and out-of-compliance permits among coastal power plants, including Morro Bay's nine-year expired permit, no permits should be reissued until demonstration of compliance with policy standards is achieved.

10. MORRO BAY UNDER THE POLICY

--The most glaring inconsistency in the staff analysis, from which the proposed policy was drawn, is contained in an Implementation Schedule calling for the Morro Bay Power Plant to cease use of once-through cooling in 2015 in order to reach compliance with the policy. Yet the same Schedule states that Dynegy's contract for sale of energy from the plant to Southern California Edison expires in 2011 and the "plant is not needed" after that to meet grid reliability requirements. There is no mention of the outfall lease expiring in 2012, which could be another significant factor in the operational status of the plant, and no explanation why the policy would allow the plant to operate and use OTC for four years after it "is not needed."

---The Design Flow on Table 4, page 35, shows the design flow for the four original units (i.e., 668 mgd). This number should be reduced to reflect the flow for the two units currently operating since the other two have been permanently taken off line.

--Though the design capacity of these two remaining units is 300 MW per unit or 600 MW combined, the Dependable Capacity is far less than this because the plant cannot run anywhere near full capacity without exceeding air pollution limits.

--The Capacity Utilization figures listed on page 35 are for the years 2001 to 2006. The board should require the report to use data from more recent years in order to give a more accurate picture of the current situation. This includes dependable capacity as well as all utilization and operational realities, given the significant changes that have occurred at the plant in those respects over the past five to six years.

--In Table 10 on page 49, the Morro Bay power plant's capacity is listed as 1002 MW. Again, this represents the four original units, and the table should instead provide the megawatt data for only the two operating units.

--Table 13 on page 62 uses a different set of years than the Capacity Utilization chart on page 35, showing years 2000 to 2005 instead of 2001 to 2006. Again, data from more recent years AND data for the same years or time period should be used.

--Table 13 on page 62 lists the Design Intake Flow as 668. Again, this is outdated and no longer valid since it represents the original four units instead of the two operating units.

Sincerely,

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