

**From:** Jack McCurdy <pjmccurdy@sbcglobal.net>  
**To:** "Dominic Gregorio" <dgregorio@waterboards.ca.gov>  
**Date:** 12/7/05 5:52PM  
**Subject:** Workshop comments

Hi Dominic:

Please forward my complete comments at today's workshop to the appropriate board members.

Thanks,  
Jack

Date: Dec. 7, 2005

To: Members, State Water Resources Control Board

Subject: Implementation of federal Clean Water Act §316(b) regulations for cooling water intake structures.

My name is Jack McCurdy. I am co-president of the Coastal Alliance on Plant Expansion, a nonprofit citizens group that is

an official intervenor in the regulatory review of Duke Energy's application to replace the existing Morro Bay Power Plant with

a new, larger plant.

I could not attend the Laguna Beach workshop but I did read the transcript, and I want to congratulate Mrs. Secundy and

Silva for zeroing in on the bottom line issue: the economics, or cost, of using alternative cooling. Cost is what the regulatory

decisions have usually turned on with respect to repowering California coastal plants.

Alternative cooling technologies, specifically closed-cycle cooling, such as dry cooling, have been rejected because they

have usually been considered to be too costly compared to either the benefits or EPA standards.

But it is a myth--a myth that has been developed by dischargers, embraced by regulatory agencies and perpetuated

throughout the energy community in a pattern that can only be labeled deception.

There is only one little problem with that myth--it doesn't square with reality, as reflected by the hard evidence in the

records of agency reviews

I want to describe one glaring example of how that myth was created in

the Morro Bay plant siting case. The Energy

Commission approved a restoration program as mitigation for the significant adverse impacts from entrainment of 17% to

33% of larvae from the Morro Bay National Estuary, sampled in a year-long study. The mitigation plan was devised after

the Commission staff recommended dry cooling to avoid the impacts entirely.

To justify its opposition to dry cooling, Duke claimed the additional cost of the dry-cooling condensers range from more

than \$100 million to more than \$200 million, depending on which of two possible sites a new plant would be located on.

The CEC staff and a veteran power consultant estimated the added cost of dry cooling would be between \$40 million and

\$50 million--about 6% of the projected overall \$800 million cost of building a new plant and tearing down and removing the

existing one.

How could there be such a disparity in cost estimates?

The main reason is that Duke proposed dry cooling units much larger than necessary to accommodate ambient

temperatures significantly higher than those typically experienced in Morro Bay, according to CEC staff. Duke claimed the new

plant must be capable of generating 1200 megawatts at 85 degrees. The staff said this is "irrational" because the ambient

temperature in Morro Bay is 64 degrees, and temperatures of 84 degrees occur only .04% of the time. Therefore, much

smaller and less costly units would be needed.

The additional cost of the appropriately sized units would be less than .004 cents per kilowatt, which the staff said "does

not seem to be an unreasonable cost in light of the impacts caused by the applicant's proposed use of once-through cooling."

The other major reason for Duke's excessive cost estimate for dry cooling is that Duke wanted the existing plant to

continue to operate--while a new plant was being built--to provide a revenue stream over about two years. Duke insisted that

the old plant could operate for many years, while the staff estimated a much more limited life span.

In order to make room for the equipment and material to build the dry cooling units at the preferred new plant site, Duke

argued, it would be necessary to move numerous, large ancillary facilities needed to allow the existing plant to operate--

driving up the cost of dry cooling to around \$200 million.

Not only were the units to be unnecessarily large, as proposed by Duke, but as it turned out, the staff was right: two of

the generating units at the existing plant were shut down in fall, 2003, and the other two have operated minimally starting

in fall of 2004.

The CEC bought this fiction hook, line and sinker, ignoring the very clear evidentiary record that the cost of dry cooling

would not be unreasonable or infeasible on the site. It is clear that the existing plant is virtually shut down, eliminating the

need to spend \$100 million to keep it operating while dry cooling units are installed at a new plant. Add that savings to the

savings of using smaller, appropriately-sized air-cooled condensers and Duke's estimate winds up to be about the same as the

CEC staff's.

Incidentally, the existing plant now sits on 107 acres, but Duke insists it must only use 14 of those acres for the new

plant, making it seem difficult, if not impossible, to squeeze dry cooling units on the restricted acreage. Another trick to make

dry cooling appear to be infeasible.

As a staff consultant with 30 years in the power business remarked during the hearings about Duke's claims of excessive

costs of dry cooling, "they all say that." They--the power companies--make the too-costly argument and threaten not to build

if required to install closed-cycle cooling, not with facts, but by manipulating the data.

This despite the fact that of the new plants licensed by the Commission between 1996 and 2002, 19% will be cooled

with recycled water in closed-cycle systems. The Commission's 2003 Integrated Energy Policy Report states that two inland

projects using dry cooling became operational between 1996 and 2001. A third in San Diego County has been licensed by the

Commission.

In spite of these developments inland, coastal repowering projects have still been allowed to use sea water for cooling.

This shows that--because power companies have become so successful at manipulating the process--reliance on cost benefit

analysis will probably never curb destruction of marine life by power plants--and certainly will not result in protection of our

coastal resources as envisioned by Gov. Swarzenegger's Ocean Action Plan and the California Ocean Protection Act.

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