

Mailed

MAR 25 1991

Decision 91-03-058 March 22, 1991

BEFORE THE PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA

In the Matter of the Application of
SOUTHERN CALIFORNIA EDISON COMPANY
(U-338-E) for Authority To Increase
Its Authorized Level of Base Rate
Revenue Under the Electric Revenue
Adjustment Mechanism For Service
Rendered Beginning January 1, 1992
And To Reflect This Increase In
Rates.

ORIGINAL

Application 90-12-018
(Filed December 7, 1990)

And Related Matters.

I.89-12-025
(Filed December 18, 1989)I.91-02-079
(Filed February 21, 1991)

(See Appendix A to this decision for appearances.)

INTERIM OPINIONSummary of Decision

The Division of Ratepayer Advocates (DRA) has requested that the Commission address the cost-effectiveness of operating San Onofre Nuclear Generating Station Unit 1 (SONGS 1) in Investigation (I.) 89-07-004, the Biennial Resource Planning Update (Update), rather than in the present application, which is the general rate case (GRC) of Southern California Edison Company (Edison).

DRA's motion is granted because the Update is the Commission proceeding best suited to address the capital costs and cost-effectiveness of continued operation of SONGS 1.

Background

SONGS 1 is one of three electrical generating units operated by Edison at a site about four miles south of San Clemente, California. The unit is powered by a Westinghouse pressurized water reactor (PWR). SONGS 1 began operation in 1967, at a rated electrical output of 436 megawatts (MW). Edison owns 80% of the unit; San Diego Gas & Electric Company (SDG&E) owns the remaining 20%.

In the GRC, Edison is requesting authorization to make capital expenditures for modifications to SONGS 1 during fuel cycles 12 and 13, and to recover the associated revenue requirement in base rates. Capital additions through fuel cycle 11, which Edison expects to end in September 1992, were previously authorized by the Commission. Edison estimates that SONGS 1 will eventually operate through fuel cycle 17, ending December 2004. Only fuel cycles 12 and 13 fall within the three-year GRC cycle considered in the present application. Each fuel cycle lasts about two years.

Edison plans capital additions of \$125 million during fuel cycle 12, followed by \$65 million for cycle 13, and a range of \$65 million down to \$30 million for cycles 14 through 17. These costs are plant totals, without adjustment for Edison's ownership share or jurisdictional factor.

Edison's request concerning SONGS 1 was not included in its Notice of Intent (NOI), filed in October 1990, which preceded the GRC. At that time Edison was planning to file a separate application for review of SONGS 1. Although Edison believes it is not required to file such an application, it planned to do so "out of an abundance of caution." This caution no doubt reflects a previous Commission investigation of SONGS 1, I.83-10-02, which followed a prolonged plant outage in 1982. The outage was caused in part by Nuclear Regulatory Commission (NRC) requirements in the wake of the accident at the Three Mile Island nuclear plant in

Pennsylvania. Edison later decided to include SONGS 1 issues in the GRC.

DRA's Motion On January 25, 1991, DRA filed a motion to consider the cost-effectiveness of the continued operation of SONGS 1 in the Update rather than in the GRC. DRA argues that this would: (1) eliminate duplication of work, (2) reduce the number of issues that must be litigated in the GRC, (3) eliminate inconsistencies between the two proceedings, (4) permit cost comparisons in a single forum, (5) result in a more timely resolution of the issues, (6) facilitate the participation of other parties, and (7) remove from Edison's GRC the evaluation of SDG&E's resource plans.

DRA believes that the evaluation of the continued operation of SONGS 1 is not a unique issue for the Update. The Commission has reviewed, in the Update, whether other existing utility plants, such as Edison's Huntington Beach units and SDG&E's Silvergate units, should be operated or mothballed. According to DRA, the decision whether to continue operation of SONGS 1 or to replace it with other resources is not a new Update issue, but is typical of issues reviewed in that proceeding.

Response of Edison

On February 11, 1991 Edison filed a response in opposition to DRA's motion. Edison argues that considering SONGS 1 cost-effectiveness in the Update would be a fundamental change in Commission policy. According to Edison, the mission of the Update is to consider whether proposed additions of generating capacity can be deferred by qualifying facilities (QFs). The Commission has never considered in the Update whether existing units like SONGS 1 are deferrable. Edison points out that the capital additions in question will neither increase the unit's rated capacity nor extend the lifetime of the unit. The planned capital additions are necessary to meet NRC requirements, to maintain reliable operation, or to improve cost-effectiveness.

Actually the capital expenditures would increase the operational capacity of the unit slightly. To protect the steam generator tubes, the unit has been operated at reduced reactor coolant temperature for several years, resulting in losses of about 10% of rated turbine-generator output. One proposed project during cycle 12 would return the unit almost to its original rated capacity. Despite the present output reduction, Edison, the Federal Commission, and the California Energy Commission (CEC) have used the full rating of the unit for resource planning purposes.

According to Edison, considering SONGS 1 in the Update would change the fundamental purpose of that proceeding. This change should be made only after hearings to allow parties to offer evidence supporting their positions. Edison contends that the cost-effectiveness technique used in the Update (the Iterative Cost-Effectiveness Methodology, or ICEM) is inappropriate for review of existing resources.

Edison seeks review of SONGS 1 in this GRC because: (1) previous SONGS 1 capital additions were considered in a GRC, (2) this GRC can best accommodate SDG&E's participation, and (3) the administrative efficiencies claimed by DRA are illusory. Edison asserts that the Commission must decide SONGS 1 issues before the end of 1991. Fuel cycle 12 will begin in September 1992, during the GRC test year. Edison attached to its pleading a proposed schedule for the SONGS 1 review, calling for a DRA report in June 1991, hearings in August 1991, and briefs with page limits in September 1991. Edison argues that deferral of the issues to the Update would make this schedule impossible and disrupt progress on other Update issues.

Responses of Other Parties

SDG&E opposes Edison's motion to review SONGS 1 in the Update.

As co-owner of SONGS 1, SDG&E also opposes DRA's motion. SDG&E argues that review of proposed capital expenditures in the GRC simply follows a traditional Commission practice. SDG&E also

believes the Update is explicitly limited to evaluating the deferrability of resource additions, not existing resources. DRA points to no Commission decision that would broaden the scope of the Update to consider power plants that are already operating. SDG&E repeats Edison's argument that such a change in scope of the Update requires evidentiary hearings to assess its merits. SDG&E is also concerned about the untimely resolution of SONGS 1 issues if they are moved to the Update.

SDG&E argues that most of the Update issues listed in the DRA motion have already been resolved, either by Commission decisions or by the CEC's 1990 Electricity Report (ER90). DRA should not be allowed to interrupt the GRC process by moving the SONGS 1 issues to another proceeding.

Pacific Gas and Electric Company (PG&E)

While PG&E is not a party to the GRC, it is an active party in the Update. PG&E commented on DRA's motion by letter to the assigned Administrative Law Judge and all parties.

PG&E opposes the motion. PG&E believes that moving SONGS 1 issues to the Update is unlikely to produce the administrative efficiencies claimed by DRA and is contrary to the purpose and scope of the Update. A precedent would be established which would require utilities to prove the cost-effectiveness of every existing resource in every Update review. This expansion of scope would be unmanageable and would undermine the CEC's 1990 Electricity Report process.

PG&E argues that without notice and opportunity to be heard, any revision to the scope of Update would violate Public Utilities Code § 1708.

CEC

The CEC opposes the DRA motion because it would lengthen and complicate the Update, delaying achievement of its objectives with no public benefit. The delay would be caused by the necessity to reconstruct the ICEM process to handle existing resources. CEC

agrees in principle that substantial capital expenditures to maintain older plants should be reviewed and compared with alternative investments in new plants, but CEC disagrees with DRA's judgment that the present Update schedule should be jeopardized to accommodate the SONGS 1 review.

CEC is also concerned that Commission denial of the SONGS 1 capital additions would remove SONGS 1 from ER90 resource forecasts, forcing relitigation of ER90 assumptions in the Update.

Geothermal Resources Association (GRA) and
Independent Energy Producers Association (IEP)

GRA and IEP support DRA's motion, arguing that the Update is uniquely suited to consider SONGS 1 cost-effectiveness. GRA and IEP agree with DRA that the Update is devoted to long-run resource planning, in contrast to the GRC, which must review many issues in a limited time. GRA and IEP are concerned with QF issues. They point to previous Commission determinations to exclude QF issues from GRCs because they clog already overcrowded proceedings.

Toward Utility Rate Normalization (TURN)

TURN supports DRA's motion and reasoning.

Discussion

Should Capital Additions be Compared
With Other Alternatives?

We agree with CEC that major capital expenditures on aging power plants should be carefully compared with other alternatives. Edison's own cost-effectiveness testimony provides such a comparison. Edison's computer model run "without" SONGS 1 allows the dispatching model to select the resources which would replace SONGS 1 if it were taken out of service.

Should Edison Consider Other SONGS 1 Alternatives?

Edison's testimony on SONGS 1 cost-effectiveness analyzes only two scenarios: (1) SONGS 1 in full operation at 70% capacity factor through 2004, and (2) SONGS 1 retirement at the end of fuel cycle 11. The Commission may wish to review other alternatives,

such as retirement following cycle 12, if the \$125 million in capital costs planned for cycle 12 could be substantially reduced. We will not order such studies now, but we remind Edison that other operational alternatives may be considered.

Edison will also have to clarify its determination of the appropriate level of expenditure for SONGS 1. For example, there may be several options for modifying SONGS 1 to meet NRC's new requirements. Some of these options may keep SONGS 1 in service but not restore it to its rated capacity, as Edison currently proposes. This is similar to the choice between refurbishing and repowering an existing plant. It is the kind of planning decision that ICEM was created to analyze.

Should the Review of SONGS 1 Capital Additions be Accelerated?

It is important that the Commission develop a full record on the cost-effectiveness of the SONGS 1 capital additions. The unit has operating characteristics that compel a careful review. First, nuclear plants can be operated only as pure base load. Aging hydroelectric plants and, to a lesser extent, fossil fuel plants can be operated in other than base load modes, allowing their useful lives to be extended at reduced capacity factors. Early retirement of nuclear plant units thus differs from the reduced but continued usefulness of other generating plants. Second, the costs of operating nuclear plants near the end of their useful lives can be substantial. The capital expenditures proposed by Edison, along with ratepayer exposure to decommissioning and spent fuel storage costs, are likely to be far larger than corresponding costs for non-nuclear plants.

For these reasons, we disagree with Edison that an accelerated schedule for the review of SONGS 1 capital additions is necessary. On the contrary, careful review is especially important. More cautious litigation of cost-effectiveness issues may also allow the parties to incorporate resource assumptions soon

to be adopted by the Commission in the Update, such as valuation of air quality benefits.

Is the Update Suitable for Review of SONGS 1 Cost-Effectiveness?

The purpose of the requested capital additions does not require moving SONGS 1 issues to the Update. However, we agree with DRA that the Update is generally suitable for addressing the cost-effectiveness of SONGS 1 because it is devoted to resource planning. We disagree that shifting SONGS 1 issues from the GRC to the Update will substantially improve administrative efficiency. DRA's claimed benefits (less duplication of effort, more effective participation by the parties, and consistency of analysis) may exist, but they are minimal.

Parties opposing DRA's motion have objected that:

(1) the scope of the Update does not presently include analysis of existing resources, and (2) ICEM, as presently used in the Update, does not analyze existing resources. Both objections are incorrect, as we discuss below.

Does the Scope of the Update Include Existing Resources?

Consideration of significant uncertainties is a key part of resource planning. The Update has always recognized this. (For example, see D.86-07-004, 21 CPUC 2d 340, 372.) Utility planning should take into account uncertainty about the continued cost-effectiveness of substantial utility resources.

SONGS 1 contributes substantial energy and capacity to both Edison and SDG&E. At a minimum, Edison and SDG&E should be required to perform sensitivity analyses on the impacts of possible retirement of SONGS 1 after fuel cycle 11.

An issue in the pending Phase 1B decision in the current Update is how best to incorporate the consideration of uncertainty and strategic preference in the Update process. Most parties, including Edison and SDG&E, have supported continued explicit examination of uncertainty and strategic preferences in the Update.

Our choice of proceeding for dealing with SONGS 1 does not depend on the outcome of Phase 1B. The SONGS 1 issue has arisen since the CEC's adoption of ER90, but we cannot ignore it simply because it came too late for the CEC's analysis.

The Update is perfectly suited to the kind of planning decision that SONGS 1 requires. The Update already considers all of Edison's and SDG&E's resource alternatives as required for cost-effectiveness testing of SONGS 1. The Update also involves the proper valuation of environmental impacts. Through ICEM, the Update can weigh the environmental costs and benefits of various resource choices. This is an important capability, because the asserted beneficial impact of SONGS 1 on air quality is a major justification for Edison's proposed capital investments.

Including SONGS 1 with other planning issues in the Update ensures consistency among the many variables that go into resource planning. Consistency is always a regulatory goal, but it is hard to achieve when resource planning decisions take place at different times in different forums.

We conclude that uncertainty regarding SONGS 1 justifies analyzing its continued cost-effectiveness in the Update. This conclusion does not depend on whether some aspect of the investments proposed for SONGS 1 could or should be considered deferrable by QFs. That issue is open. By definition, a resource that already exists cannot be deferred or avoided by another resource. However, the expansion or life extension of an existing resource may be deferrable.

We might find proposed modifications of an existing resource deferrable, and thus subject to competitive bidding by QFs, where among other things the resource operates in base load or intermediate mode and the proposed modifications include energy-related capital costs. (See D.90-03-060, 36 CPUC 2d 2, 45-46.) Edison's proposal for SONGS 1 appears to meet both conditions.

Edison and SDG&E claim that the proposed investments involve neither an expansion nor a life extension of SONGS 1. If the record supports this claim, then no aspect of SONGS 1 would be considered deferrable. However, our fundamental concern here is to see what Edison's and SDG&E's resource plans would look like in the event that continued operation of SONGS 1 is found not to be cost-effective. Without SONGS 1, ratepayers may benefit from additional conservation programs, additional power purchases, new power plants, increased output from existing plants, or some combination of these options. ICEM analysis can tell us both whether SONGS 1 should remain in service and what should replace SONGS 1 if it is removed from service.

Must ICEM Undergo Significant Adaptation to Review SONGS 1?

Edison and the CEC suggest that current ICEM "rules" would have to be adapted substantially for ICEM to compare capital expenditures for an existing plant to other resource options. We disagree.

ICEM is now our chief (though not only) cost-effectiveness planning tool for generation resources. We expect ICEM analysis to be performed on any major proposed power plant capital expenditure, regardless of the proceeding in which we hear the proposal. Any problems which may exist with ICEM in its current form will confront us whether we move SONGS 1 to the Update or leave it in the GRC.

However, we see no major problem in running ICEM in its current form to analyze an existing plant and proposed modifications to that plant. The heart of ICEM analysis is production cost modeling. For each "candidate" resource, model runs are performed in pairs. One of the runs shows system costs with the candidate included among the resources available to the utility; the other shows system costs with the candidate excluded.

The candidate could be any of a number of things, such as a new power plant, a plant returned to service, a repowered or refurbished plant, an aging plant currently in service, or purchase of energy from another utility. For any of these candidate resources, ICEM will: (1) determine the impact on system costs of including it in the utility's resource mix, and (2) compare it to other candidates. The process involves many model runs, but that will be true of the Update regardless of whether SONGS 1 is added to the list of resources to be examined.

One aspect of ICEM that may indeed be inapplicable to SONGS 1 is the so-called "first-year test" by which ICEM determines optimal timing for a new resource. Various factors, such as NRC requirements, may constrain SONGS 1 capital expenditures to commence during the time between fuel cycles 11 and 12. Such constraints--if indeed they exist--mean simply that the first-year test would not be run. They do not prevent ICEM from determining the cost-effectiveness of SONGS 1 relative to other options. Edison should make an appropriate showing on how it determined optimal timing for its proposed investments in SONGS 1.

In short, both the Update and the ICEM are well-suited to deal with the planning issues raised by the proposed modifications to SONGS 1.

Are There Barriers to Review of SONGS 1 Capital Additions in the Update, the GRC, or an Application?

We conclude that there are no substantial barriers to consideration of SONGS 1 issues either in the GRC, in the Update, or in a new application. We must base our choice of forum on the substantive issues to be addressed, as discussed below. Whether the forum is the GRC, the Update, or a new application, a decision can be issued early in test year 1992. No proceeding would result in earlier resolution.

What Is the Best Proceeding for Review of SONGS 1?

We must choose the best forum for resolution of issues within our jurisdiction which have a direct bearing on our utility's rate setting function. The Update is best suited to review resource planning assumptions and alternatives. We choose to litigate SONGS 1 issues in that proceeding. We will grant DRA's motion and

For administrative convenience we will order Edison to file a separate application for SONGS 1 capital additions, then consolidate the application with the Update. This will allow any revenue requirement changes to be adopted in the Update, then incorporated into the GRC test year or attrition year revenue requirements as necessary.

Findings of Fact

1. On January 25, 1991 DRA filed a motion to consider the cost-effectiveness of continued operation of SONGS 1 in the Update proceeding rather than in the GRC.

2. Edison, SDG&E, PG&E, and CEC oppose the motion.

3. GRA, IEP, and TURN support the motion.

4. Edison does not intend that SONGS 1 capital additions during fuel cycles 12 and 13 will increase unit rated capacity or extend unit lifetime beyond current plans.

5. Substantial capital expenditures to maintain aging power plants should be reviewed and compared with alternative investments, such as new plants or demand side management.

6. SONGS 1 has operating characteristics that compel a careful review of the cost-effectiveness of capital additions. Accelerated review, as proposed by Edison, would be unreasonable.

7. Improvements in administrative efficiency resulting from use of the Update to litigate SONGS 1 issues would be minimal.

8. The effort necessary to study existing resources in the Update would not unreasonably compromise the schedule for that proceeding.

9. The Update is best suited to review resource planning assumptions and alternatives.

Conclusions of Law

1. DRA's motion should be granted.
2. Consideration of SONGS 1 cost-effectiveness in the Update will not violate Public Utilities Code § 1708.
3. This order should be effective on the date signed because Commission review of SONGS 1 capital additions should commence promptly.

INTERIM ORDER

IT IS ORDERED that:

1. The motion by the Division of Ratepayer Advocates to consider the cost-effectiveness of continued operation of San Onofre Nuclear Generating Station Unit 1 (SONGS 1) in Investigation 89-07-004, the Biennial Resource Planning Update proceeding, is granted.
2. Consideration of the cost-effectiveness of capital expenditures during SONGS 1 fuel cycles 12 and 13 is removed from this application. The revenue requirement ultimately authorized in this application may incorporate any revenue requirement for SONGS 1 fuel cycles 12 and 13 capital expenditures, or for alternate resources, authorized in Investigation 89-07-004.
3. Southern California Edison Company shall file an application for authorization to make capital expenditures during SONGS 1 fuel cycles 12 and 13, and for recovery in base rates of the revenue requirement associated with the capital additions. The application shall be filed on or before May 31, 1991, or on any other date as the presiding officer in Investigation 89-07-004 may direct. The application shall be consolidated with Investigation 89-07-004.

4. The Executive Director shall cause copies of this decision to be served on all parties to these proceedings and to the Investigation 89-07-004.

This order is effective today.
Dated March 22, 1991, at San Francisco, California.

PATRICIA M. ECKERT

President

G. MITCHELL WILK

JOHN B. OHANIAN

DANIEL WM. FESSLER

NORMAN D. SHUMWAY

Commissioners

I CERTIFY THAT THIS DECISION
WAS APPROVED BY THE ABOVE
COMMISSIONERS TODAY

NEAL J. GOODMAN, Executive Director

APPENDIX A
Page 1

List of Appearances

Applicant: Stephan E. Pickett, Carol B. Henningson, Frank A. C. Nulty, Carol A. Schmidt-Frazee, and Eugene E. Rodrigues, Attorneys at Law, for Southern California Edison Company.

Interested Parties: Messrs. Ater, Wynne, Hewitt, Dodson & Skertritt, by Michael P. Alcantar, Attorney at Law, for Cogenerators of Southern California; Barbara Barkovich, Attorney at Law, for Barkovich & Yap; Patrick J. Bittner, Attorney at Law, for California Energy Commission; Messrs. Jackson, Tufts, Cole & Black, by William H. Booth, Attorney at Law, for California Large Energy Consumers Association; David R. Branchcomb, for Henwood Energy Services; Maurice Brubaker, for Drazen, Brubaker & Associates; Messrs. Kronick, Moscovitz, Tiedemann & Girard, by John L. Bukey, Attorney at Law, for School Committee to Reduce Utility Bills (SCRUB); Messrs. Mc Craken, Byers & Martin, by David J. Byers, Attorney at Law, for Cities of Oxnard and Irvine; Messrs. Brobeck, Phleger & Harrison, by Gordon E. Davis, Attorney at Law, for California Manufacturers Association; Nancy I. Day, and David B. Follett, Attorney at Law, for Southern California Gas Company; David Di Virgilio, for Destec Energy, Inc.; Nancy W. Doyne, David R. Clark, and William L. Reed, Attorneys at Law, for San Diego Gas & Electric Company; Karen Edson for KKE & Associates; Messrs. Grueneich, Ellison & Schneider, by Barry H. Epstein, Attorney at Law, for California Department of General Services; Michel P. Florio and Joel R. Singer, Attorneys at Law, for Toward Utility Rate Normalization (TURN); Sam De Frawi, for the Department of the Navy; Norman J. Furuta, Attorney at Law, for Federal Executive Agencies; Messrs. Biddle & Hamilton, by Richard L. Hamilton, Attorney at Law, for Western Mobilhome Association; Messrs. Ater, Wynne, Hewitt, Dodson & Skertritt, by Paul J. Kaufman, Attorney at Law, for Kern River Cogeneration; Melissa Metzler for Barakat & Chamberlin; Karen N. Mills, Attorney at Law, for California Farm Bureau Federation; Jeff Nahigian, for JBS Energy, Inc.; Mike Nazemi for South Coast Air quality Management District; John D. Quinley, for Cogeneration Service Bureau; James A. Ross for Regulatory & Cogeneration Services; Bartle Wells Associates, by Reed V. Schmidt, for California City-County Street Light Association; Donald W. Schoenbeck, for Midway Sunset Cogeneration Company; Jan Smutny-Jones, for Independent Energy Producers; Messrs. Downey, Brand, Seymour & Rohwer, by Philip A. Stohr, and Ronald Liebert, Attorneys at Law, for Industrial Users; Robert B. Weisenmiller, for Morse, Richard, Weisenmiller & Associates;

APPENDIX A
Page 2

Division of Ratepayer Advocates: Kathleen Maloney and Jean Vieth,
Attorneys at Law, for the Division of Ratepayer Advocates.

State Service: Messrs. Greve, Clifford, Diepenbrock, & Paras, by
Mathew V. Brady, Attorney at Law, for Department of General
Services; Paul W. Fassinger, for Commission Advisory and
Compliance Division; Donna Silvestre, for Commission Consumer
Outreach Office; Dorothy Taylor, for Public Affairs Office.

(END OF APPENDIX A)