

Decision No. 92115

BEFORE THE PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA

In the Matter of the Application of)
 SOUTHERN CALIFORNIA EDISON COMPANY)
 for a Certificate that present and)
 future public convenience and necessity)
 require or will require the participa-)
 tion by Applicant and others in)
 construction and operation of an)
 integrated Coal Gasification Combined)
 Cycle Demonstration Project at a site)
 known as the Coolwater Generating)
 Station, together with other appurten-)
 ances to be used in connection with)
 said project.)

ORIGINAL

Application No. 59268
(Filed November 9, 1979;
amended November 28, 1979)

William T. Elston, Attorney at Law, T. L. Reed, Rodney Larson, for
 Applicant.
Randolph L. Wu, Attorney at Law, William Thompson,
Higino Paula, for the Commission staff.

O P I N I O N

By Application No. 59268, Southern California Edison Company (Edison) seeks (1) a certificate of public convenience and necessity to participate in the construction and operation of an integrated Coal Gasification Combined Cycle Demonstration Project (Project) at the Cool Water Generating Station near Daggett, California; a finding that the joint venture organizing the Project and any entities participating in the Project, excluding Edison, are not public utilities subject to the Commission's jurisdiction under Public Utilities Code Section 216; and a finding that the participation by Edison or any other California public utility in the Project does not involve (a) the issuance of securities, or other evidence of interest, or ownership, or indebtedness, or (b) the assumption of any obligation or liability as Guarantor, endorser, surety, or otherwise in respect of the securities of any other person, firm, or corporation. Edison further requested preliminary approval of the method of funding the Project, including the recovery of "fuel processing fees" through the Energy Cost Adjustment Clause (ECAC) and the recovery of its own capital investment through base rates.

SUMMARY OF DECISION

This decision grants a certificate of public convenience and necessity to Edison to participate in construction of a 100 MW Coal Gasification Combined Cycle Demonstration Project.

The applicant requested recovery of \$302 million in fuel processing fees, \$176 million in coal expense, and \$53 million for its capital investment including a return of 12 percent. Edison further requested recovery of the entire \$531 million during the seven-year demonstration period. The decision authorizes recovery of an amount estimated to be as much as \$466 million through ECAC during the seven-year demonstration period. The amount of recovery during the demonstration period is limited to the value of electricity generated by the Project at Edison's marginal cost. Any costs exceeding that value are recoverable after the demonstration activity is completed, when the Project results can be evaluated.

The applicant further requested a finding that the joint venture organizing the Project is not a "public utility" subject to the Commission's jurisdiction. The decision concludes that since the primary purpose of the Project is to ascertain the commercial feasibility of Texaco's coal gasification process and not to provide electricity to Edison's ratepayers, the Project facilities have not been dedicated to public use. Therefore, the joint venture organizing the Project does not own, control, or operate public utility property and is not a public utility subject to the Commission's jurisdiction.

A commercial scale test of the coal gasification combined cycle process has benefits for Edison's ratepayers in that if the process is successful an alternative to reliance on expensive imported fossil fuel may evolve. Given this potential for long-term benefits to Edison's ratepayers and California, we believe it is reasonable to permit ratepayer funding of Edison's share of this experimental undertaking.

BACKGROUND

Texaco, Inc. (Texaco) and Edison have proposed this Project to demonstrate over a seven-year period the commercial feasibility of integrating Texaco's coal gasification process with a combined cycle powerplant. The Project is not needed as a resource to meet Edison's electric generating needs, and no attempt has been made by Edison to designate this Project as a planned generating resource because of its experimental nature.

On December 21, 1979, the California Energy Resources Conservation and Development Commission (CEC) approved Edison's Application for Certification (AFC) of the Project. Certification was granted pursuant to the expedited siting procedure established by the Legislature in the Coal Gasification Generation Act, Chapter 7.5 in Division 15 of the Public Resources Code. Shortly before issuance of the CEC's decision, Edison applied to this Commission for a certificate of public convenience and necessity (CPCN) under Section 1001 of the Public Utilities Code and General Order No. 131-B.

Many of the issues formerly addressed by the Commission in CPCN applications already have been resolved by the CEC in its AFC proceeding. Section 1001 of the Public Utilities Code provides in part that:

"The Commission, as a basis for granting any certificate pursuant to the provisions of this section shall give consideration to the following factors:

- (a) Community values.
- (b) Recreational and park areas.
- (c) Historical and aesthetic values.
- (d) Influence on environment.

With respect to any thermal powerplant or electrical transmission line for which a certificate is required pursuant to the provisions of Division 15 (commencing with Section 25000) of the Public Resources Code, no certificate shall be granted pursuant to this section without such other certificate having been obtained first, and the decision granting such other certificate shall be conclusive as to all matters determined thereby and shall take the place of the requirement for consideration by the commission of factors (a), (b), (c), and (d) specified in this section." (Emphasis added)

In its decision, the CEC determined that the Project meets the need specified by the Legislature in Public Resources Code Section 25651 (b) for the development, demonstration, and commercialization of new and advanced technologies such as coal gasification. Additionally, the CEC found that the Project may be constructed and operated in an environmentally acceptable manner during the proposed seven-year demonstration period by certifying an Environmental Impact Report prepared pursuant to the California Environmental Quality Act.

As a result, although the matters remaining for the Commission to consider are few, they are of great importance. We must decide whether the estimated \$531 million total cost of the Project is reasonable and acceptable in terms of rate impacts on Edison's customers. Also, we must evaluate the method of cost recovery proposed for the Project by Edison and then determine whether the proposal is consistent with the public interest.

Hearings were held in Los Angeles on February 19 and 25, 1980 and in San Francisco on March 6, 1980 before Administrative Law Judge John J. Doran. Edison presented evidence and testimony through two witnesses: T. L. Reed, its project manager, and Rodney Larson, supervisor of regulatory costs. The staff witnesses were Higinio Paula, senior utilities engineer and William Thompson, financial examiner.

The matter initially was submitted on March 6, 1980 subject to the receipt of a late-filed exhibit from Edison and the filing of concurrent briefs by both parties. After reviewing Edison's late-filed Exhibit 8, the staff filed a motion to strike several statements made by Rodney Larson and to admit into evidence a declaration of William Thompson. That motion was granted on May 1, 1980 by the Administrative Law Judge, and the matter was submitted based upon the revised record.

PROJECT DESCRIPTION

Edison's project manager testified that Texaco and Edison have sponsored the Project to test and demonstrate the feasibility of integrating a commercial-size coal gasifier using the Texaco gasification process with a conventional combined cycle electric generation plant. The Project's goal is to demonstrate that the integration of coal gasification with combined cycle technology should be viewed as a commercial alternative to traditional energy sources used by many United States industries. The organizers of the Project contemplate testing various types of domestic coal, which, in the event of successful performance, could permit an orderly transition from oil to gasified coal in both retrofit and new plant applications in California and throughout the nation. Successful demonstration could expedite commercial implementation of coal gasification technology, since the efficiency and environmental acceptability of the process will have been adequately demonstrated.

The Project involves the design, construction, testing, and demonstration of an integrated coal gasification combined cycle demonstration plant (Plant) at the Edison Cool Water Generating Station located near Daggett, California. The Plant will be designed to produce synthesis gas (carbon monoxide and hydrogen) from coal. The synthesis gas will be supplied to a new combined cycle electric generating unit (owned by the Project) and may also be supplied to an existing conventional boiler (owned by Edison) in the event of temporary interruptions in the operation of the combined cycle electric generating unit.

The Project will have a generation capacity of about 100 MW. The coal gasification process uses the concept of partial oxidation of coal to produce a medium Btu gas approaching 300 Btu per cubic foot. Coal is ground and mixed with water to form a slurry. The slurry is fed into the gasifier with oxygen where partial combustion

takes place. The resulting gas is cooled in a reaction heat steam generator prior to cleanup. Most of the ash will be removed as slag. Remaining particulate matter is removed from the gas in carbon scrubbers. Carbonyl sulfide and hydrogen sulfide contamination are removed in a sulfur removal and recovery system. The cleaned gas will be burned in a gas turbine which will in turn drive an electric generator. Electricity produced by the Project will be transmitted to Edison's service center over the existing 200 kv transmission system. No new offsite transmission facilities will be required. It is estimated that the full load net heat rate of the Project will be approximately 11,000 Btu/kWh for an efficiency of about 31 percent.

PROJECT ORGANIZATION AND FUNDING

Edison presented, through its project manager, the Edison and Texaco agreement (Agreement) dated July 31, 1979 and first amendment to it dated February 5, 1980 which provides for the joint ownership of the Plant by each present and subsequent party to the Agreement. Each party will own an undivided percentage interest based on its capital contribution to the Project. At all times Edison will retain ownership of the plant site. At the present time Texaco, Edison, and the Electric Power Research Institute (EPRI) have agreed to contribute a total of \$100 million towards funding of the Project, and it is expected that other organizations will become parties to the Agreement and contribute capital.

Texaco and Edison have each committed \$25 million to the Project, and EPRI has committed \$50 million. Bechtel and General Electric are in the final phases of negotiations to commit \$25 million, respectively, totaling one-half of the estimated capital cost of \$292 million. Negotiations also have been started with Pacific Gas and Electric Company for its participation in the Project. Edison's witness further stated that the target date for full funding of the Project is the end of 1980.

The Agreement provides that the Project will be funded by the contributions of participants and sponsors. Each participant will commit a minimum of \$25 million to the Project and will agree to assume a proportionate share of all Project costs. Each sponsor agrees to commit a minimum of \$5 million but less than \$25 million to the Project and will agree to assume a proportionate share of all Project costs up to the amount of its contribution. All participants except EPRI will be subject to unlimited liability, and it is contemplated that participants will indemnify sponsors for liability incurred in excess of their contributions. Funding of the Project will be totally financed through the above-described commitments. The Agreement does not provide for additional outside money in the Project or for the issuance of any bonds or other forms of long-term debt by the Project.

The Agreement provides that a Board of Control will be the governing body for the Project and will be comprised of each participant who will have one vote. A two-thirds vote of the Board members without a dissenting vote by Edison or Texaco will be required for all decisions although this aspect may be changed to expedite the progress of the Project. A Management Committee will be the operations group and will report to the Board of Control. The Committee will be comprised of each participant who will have one vote; decisions and directions will require a two-thirds vote except that if Edison or Texaco cast a dissenting vote, the matter must be submitted to the Board of Control for resolution. Sponsors will have no Project management responsibilities.

Edison will supply the coal to be processed by the Project, will retain title to the resulting synthesis gas, will operate the combined cycle unit, and will own the electrical power produced from the synthesis gas fed into the combined cycle unit. Edison will pay the Project a fee for the processing of its coal. The amount of the fee paid for gas consumed by the combined cycle unit will be based upon a formula intended (assuming the Plant achieves an

average operating capacity of 77 percent) to repay to each particip-
cipant (except Edison) its net capital plus its pro rata share of
the Project's estimated operation and maintenance costs and to
repay to each sponsor one-half of its capital contribution. The
fee which Edison will pay for synthesis gas, which may be supplied
in the event of temporary interruptions in the operation of the
combined cycle generating unit to an existing Edison-owned generat-
ing unit located at the Plant site, will be calculated on a
replacement fuel cost basis.

The Agreement provides that at the end of the estimated
duration of the Project (seven years) or upon earlier termination,
the Board of Control will dispose of the Plant. Edison will have
a right of first refusal to purchase the Plant or any discrete
portions thereof. The price at which Edison may exercise its
right of first refusal will be the lesser of (a) the highest bona
fide offer for the Plant or any discrete portion thereof net of
dismantling and Plant site restoration costs and other costs of
the sale, or (b) the amount of unrecovered net capital plus the
estimated net salvage value. The proceeds from the sale of the
Plant will be distributed to participants (except Edison) and
sponsors: (1) to cover demolition and restoration costs, if any;
(2) to cover previously unrecovered operation and maintenance
costs, if any; and (3) as a return of net capital plus estimated
net salvage value. Excess proceeds, if any, are payable to Edison
and would flow through to the ratepayer.

The Agreement provides that participants and sponsors will
receive certain royalty payments and/or grants and licensing rights
preferences related to the technology developed by the Project and
access to information relating to the technology and operations of
the Project.

The Agreement provides that the Project will terminate:
(a) after conducting Plant tests for a period of at least seven
years; (b) if either Edison or Texaco withdraws, however, the

Project may continue in existence up to seven years if the remaining participants decide by unanimous vote to continue the Project; or (c) on the bankruptcy, insolvency, or liquidation of any participant, unless otherwise decided by unanimous vote of the remaining participants.

The Agreement provides that the Board of Control may also terminate the Project at any time upon the unanimous vote of its members. In addition, the Project will be terminated if any action or inaction by this Commission or other state or federal agencies would significantly delay or impede the Project or prevent recovery of net capital or recoverable costs.

PROJECT COSTS

Edison's project manager testified that the total estimated capital expenditures for the construction of the Project is estimated to be \$292,000,000 and that in accordance with the terms of the Agreement, the net estimated recoverable capital for the participants, excluding Edison, was \$198,300,000.^{1/} The full \$198,300,000 will be reimbursed only if the Project operates at an average capacity factor of 77 percent over the seven-year demonstration period. Any capacity factor less than the 77 percent goal will proportionally reduce the reimbursement. Any capacity factor greater than 77 percent will not increase the reimbursement.

^{1/} The net recoverable capital will be reduced if the Project attracts "sponsors," who will recover only one-half of their capital contributions. Also, the net recoverable capital will be reduced by 10 percent if the Internal Revenue Service approves an Energy Tax Credit for the Project.

Further, the witness testified that the total operating expense for the seven-year demonstration period is estimated to be \$302,029,000 for the fuel processing fee and \$176,390,000 for the cost of coal used in the process (both at a 77 percent capacity factor). The witness explained that the fuel processing fee is calculated to cover the estimated operating and maintenance expense of the coal gasification facility and the net recoverable capital of \$198,300,000. Edison proposes that the above-estimated \$478,419,000 be furnished by the ratepayers to the Project through ECAC rate proceedings over the seven years of the demonstration.

The witness also stated that Edison proposes to place its \$25,000,000 participation share in rate base and amortize it over the seven-year demonstration period (not to be recovered through ECAC). A total of \$53,088,000 would accrue to Edison during the demonstration period through base rates when a 12 percent rate of return is included. The total amount to be charged ratepayers in both base rates and ECAC over the seven-year demonstration period of this coal gasification facility is estimated to be \$531,507,000 at a 77 percent capacity factor. The fuel processing charges were estimated by Edison to increase the ECAC billing facts by .035¢/kWh, at or above a 77 percent average capacity factor. Inclusion of Edison's \$25 million investment in rate base would raise base rates by .010¢/kWh. Both increases would occur over the seven-year life of the Project.

STAFF POSITION

The Revenue Requirements Division (staff) reviewed the cost and rate impacts of the Project and submitted an alternative cost recovery method for this Project. For the purposes of this proceeding, the staff accepted Edison's projections of a \$292 million capital cost and \$531 million total cost for the Project. The staff also agreed that the proposed repayment to participants, other than Edison,

of all their capital contributions and repayment to sponsors of only one-half of their contributions through ECAC is fair and reasonable. However, the staff takes issue with (1) Edison's request for the recovery of the entire \$531 million Project cost from the ratepayer during the demonstration period, and (2) Edison's proposed recovery through base rates of its own capital contribution with a return.

The staff points out that most of the technology involved in this Project is proven, but the Project will be the first commercial-sized combination of a combined-cycle facility with a coal gasifier. Consequently, there is a less than five percent probability that the Project will not generate electricity.^{1a/} However, regardless of the amount of electricity generated, the Project results may show that the combined technologies are not economically or environmentally feasible in California. In that event, the ratepayer would pay the total Project cost of \$531 million if enough electricity is generated to achieve an average capacity factor of 77 percent over the seven-year demonstration period. At the same time, however, coal gasification would not be a commercially proven process in this state, and the ratepayer would have gained very little at great expense.

The staff characterized the various benefits that may accrue from the Project as "tangible" and "intangible" benefits. A "tangible" benefit is the electricity that will be generated from the Project while "intangible" benefits include the rights to the combined-cycle facility at salvage value, royalty income that may be received from patents or other licenses developed from the Project, the royalty credits for future use of Texaco's Coal Gasification Process by Edison, and the possible advancement of an alternative technology which will reduce the utility industry's

^{1a/} If the Project is a complete failure and does not generate any electricity, Edison will request recovery only of its capital investment with no return component. Since the capacity factor of the Project would be 0 percent, the ratepayer would not pay any "fuel processing fees" through ECAC.

dependence on imported oil.^{2/} The staff's characterization of "tangible" and "intangible" benefits distinguishes between the benefits that materialize during the demonstration period and those that may occur afterwards. In the staff's view, Edison's ratepayers during the seven-year demonstration period should not be asked to pay for more than what they are receiving. The staff maintains that the customers during that period benefit only from the electricity that is generated from the Project. Accordingly, the staff asserts that those customers' financial support of the Project should be limited to the value of electricity they receive. All other costs incurred during the demonstration period may be charged to future ratepayers, those customers who at the conclusion of the demonstration period may reap the rewards of the "intangible" benefits.

The staff offers two reasons in support of its cost recovery method. First, the staff contends that its method is the most equitable allocation of costs and benefits of the Project. Under Edison's proposal, all costs of the Project may be paid for during the demonstration period by the ratepayer. Under that proposal, the present ratepayer bears the entire cost of developing an alternate technology while future consumers of electricity derived from coal gas would receive a large share of the Project benefits. In comparison, the staff contends that its method limits the ratepayer's contribution during the demonstration period to the value of electricity received; the excess cost of electricity produced by the Project would be set aside until after the demonstration

^{2/} Edison's project manager testified that Edison does not have any plans for coal gasification facilities in this decade and that if this Project is successful, coal gasification will become a viable alternative for the following decade (1990's).

period when coal gasification is a commercially proven technology. In this way, the staff argues that the true beneficiaries of the Project would be required to pay a share of the demonstration cost for advancing coal gasification technology.

Second, the staff notes that Edison's proposal allows it to recover its \$25 million capital investment plus a 12 percent return regardless of this Project's performance. Edison would have no economic stake in the success or failure of the Project since it would recover \$53.088 million through base rates whether or not the Project demonstrates the commercial feasibility of coal gasification in California.

Under the staff method, Edison would not recover all Project costs during the demonstration period. Instead, costs exceeding the value of electricity would be deferred until after the demonstration period. If the Project is successful,^{3/} then the deferred costs, accrued allowance for funds used during construction (AFUDC), and a return would be paid by the ratepayer. If the Project is unsuccessful, then only the deferred amount would be paid by the ratepayer over a five-year period. The staff contends that its method gives the Commission an opportunity to evaluate the Project at the conclusion of the demonstration period. At the same time, Edison is given an incentive to minimize the costs of this Project and to ensure that the Project is successful. The staff contends that if a utility does not have an economic stake in the outcome

^{3/} The staff's definition of a "successful" Project means that the Project must prove the commercial feasibility of coal gasification in California. The Project will be considered a success by the staff if it shows that coal gasification is an economic and environmentally sound alternative to established energy resources and leads to the construction of other larger coal gasification facilities. Edison's concept of a "successful" Project is based on the capacity factor achieved by the Project during the demonstration period. If the Project reaches an average capacity factor of 77 percent over the demonstration period, the Project would be considered a successful demonstration.

of a project, then the ratepayer has no assurance that the utility's management will be reasonably prudent in the selection, construction, operation, and management of commercial demonstration projects.

Lastly, the staff notes that if the Commission finds that the Project's facilities are not public utility property as requested by Edison, then Edison's \$25 million capital investment cannot be included in rate base and recovered through base rates.^{4/} The staff maintains that the ratepayer cannot be compelled to pay a rate of return on property which is not dedicated to public use.

ISSUES PRESENTED

This project is the second application brought before us for certification of a powerplant demonstrating an alternative energy technology. The first application involved San Diego Gas and Electric Company's (SDG&E) Heber Binary Geothermal Project, A.59280. We authorized special ratemaking treatment for the Heber Project because of SDG&E's marginal financial condition. In doing so, we emphasized that because of the special circumstances involved in the application, that decision did not set a precedent for other projects. (SDG&E Heber Binary Geothermal Project (1980) _____ CPUC _____, Decision No. 91271 issued January 29, 1980). Thus, this Project application will be our first resolution of the important economic issues raised by ratepayer support of a commercial demonstration project.

^{4/} Recovery of a rate of return through ECAC is not permissible since fuel adjustment clauses cannot contain any element of profit for the utility. (Southern Cal. Edison Co. v. Public Utilities Comm. (1978) 20 Cal.3d 613, 616, 619.)

The issues and questions raised in this application are as follows:

1. To what extent and in what manner should electric utility customers finance or otherwise support the construction and operation of a commercial-sized demonstration power plant?
2. Is the \$531 million total cost of this Project and Edison's proposed recovery of that cost reasonable and acceptable in terms of rate impacts on Edison's customers?
3. Is the joint venture or any of the participants organizing the Project a public utility subject to this Commission's jurisdiction under Public Utilities Code Section 216?

DISCUSSION

A. Ratepayer Support of Commercial Demonstration Projects

One goal of regulation is to attempt to match benefits with costs, i.e., to try to assure that the beneficiaries of a project pay the cost of that project. An equitable allocation of the benefits and costs of a commercial demonstration project is somewhat difficult to make for a number of reasons. First, the benefits of such a project cannot be foreseen with certainty, and, consequently, it is nearly impossible to identify those individuals who will benefit therefrom. Second, most of the benefits from a demonstration project occur after the demonstration activity is concluded; however, most of the cost of a project obviously must be paid prior to and during the life of the project. Because of the difficulties in allocating costs and benefits of commercial demonstration activities, a large portion of those activities usually are subsidized by government grants. In this way, the financial burden is carried by the general body of taxpayers instead of a single group of customers.

Unfortunately, Edison so far has not attempted to obtain federal grants for the Project but has solicited funding only from private sources. Edison's project manager stated that federal funding has not been sought because of the length of time involved in applying for federal grants and the conditions usually attached to government funding. In the event that Edison is unable to secure sufficient private funding, Edison will apply for federal funding of the outstanding amount. If private contributions are inadequate, we expect Edison to pursue all possible sources of federal funding, in particular any loan or grant programs established pursuant to the Energy Security Act of 1980, recently enacted by Congress.

As an inducement for private investment, Edison has requested that nearly all of the costs of this Project be paid for by the ratepayer during the demonstration period. In other words, Edison seeks to impose on its ratepayers the risk that the Project is unsuccessful even with achievement of a 77 percent average capacity factor. Other participants and sponsors in the Project share the risk of lower capital recovery if the Project does not reach the targeted 77 percent capacity factor. Edison, however, seeks a guaranteed recovery of its entire capital contribution including a return.

We agree with the staff that there are benefits in this Project that will accrue to both present and future consumers of electricity derived from coal gas. Present consumers receive the immediate benefits from electricity produced by the Project. Future consumers will benefit from the development of coal gasification into an economic industry. Presumably, the Project will show whether the coal gasification process can produce electricity in the California environment at a cost reasonably competitive with the cost of other established sources of electricity. Therefore, we find that the staff's cost recovery method provides a matching of costs with benefits of this Project that is reasonable and will

adopt the staff proposal for that reason. The equitableness of the staff method is that it requires those who benefit from a coal gasification industry to pay for the demonstration cost of developing that industry.

The staff initially approximated the value of electricity that will be generated by the Project using Edison's system average price of 8.5¢/kWh. Edison advocated use of a marginal cost of 11.5¢/kWh to calculate the value of electricity. We are of the opinion that marginal cost is appropriate for a commercial demonstration project of this type. Since the development of alternative energy technologies is extremely important both for ratepayers and society, it is reasonable to encourage the development of these resources by authorizing Edison to charge its marginal cost for electricity produced from the Project.

Using a marginal cost of 11.5¢/kWh,^{5/} the cost of electricity to the ratepayer over the seven-year demonstration period would be about \$466 million if the Project achieves a 77 percent average capacity factor. This would require Edison to carry the balance of the \$531 million total Project cost, amounting to \$65 million in deferred costs, until the conclusion of the demonstration period. At that time, Edison may apply for recovery of these deferred costs, including accrued AFUDC, if the Project results warrant such recovery.

^{5/} Edison's supervisor of regulatory costs testified that the average marginal cost over the demonstration period is about 11.5¢/kWh. If 11.5¢/kWh is not an accurate estimation of Edison's marginal cost, we will use a different figure to approximate the value of electricity produced by the Project during the demonstration period.

B. Recovery of Project Costs.

Edison has requested recovery of the following Project costs over the seven-year demonstration period:

Operations and Maintenance Expense	\$103.72 (million)
Net Recoverable Capital	<u>\$198.3</u>
Total Fuel Processing Fees	\$302.029
Coal Expense	\$176.390
Edison's Capital Contribution	<u>\$ 53.088</u>
Total Project Cost	\$531.507 (million)

Edison proposes that the fuel processing fees and coal expense are to be recovered through ECAC. Edison's \$25 million capital contribution, including a return, amounting to \$53.088 million is to be recovered through base rates.

1. ECAC Recovery

The staff did not review the projected coal expense or the estimated operations and maintenance expense for the Project. At the time this proceeding was submitted, Edison had not secured a coal supplier for the Project. Accordingly, the reasonableness of those expenses must be shown by Edison in future ECAC proceedings. Our acceptance at this time of these two cost items does not foreclose the staff or any other party from examining those expenses in an ECAC proceeding.

The estimated capital cost of the Project is \$292 million. Approximately \$198 million is net recoverable capital which is to be returned to participants in the Project through ECAC collections. Edison's project manager testified that the capital cost may be

overstated by as much as \$40-50 million. The attraction of "sponsors" and the approval of an energy tax credit by the IRS may reduce the net recoverable capital by as much as \$50 million. Thus, the net recoverable capital may be as low as \$148 million.

Additionally, Edison's project manager testified that there is a less than 10-percent probability that the Project will operate at or above an average 77 percent capacity factor during the demonstration period. As a result, the capital actually collected through ECAC may be less than the allowable net recoverable capital since the amount of capital paid back to participants and sponsors is controlled by the capacity factor achieved by the Project.

With the above observations in mind, we find that the recovery through ECAC of fuel processing fees and coal expense is reasonable. Since we adopt the staff method of cost recovery, the recovery through ECAC during the demonstration period is limited to the value of electricity produced by the Project. We expect Edison to use its best efforts to minimize expenses and direct the staff to examine the O&M expense and the coal cost in the upcoming ECAC proceedings. We also note that the amount of net recoverable capital may be significantly less than the projected \$198 million stated in the application. Since we are adopting the staff method of cost recovery, Edison will not recover all Project costs during the demonstration period but will defer recovery of costs exceeding the value of electricity generated at the Project. We believe the deferral of any excess cost gives Edison an incentive to minimize the capital cost by actively soliciting sponsors for the Project and establishing eligibility for tax credits.

2. Base Rate Recovery

Edison requested recovery of its \$25 million capital contribution through base rates so that it could earn a return on its

investment during the demonstration period. However, at the same time, Edison requested the Commission to find that the Project is not a public utility. We make such a finding, as explained hereafter, but then cannot allow Edison to enter its \$25 million share in non-public utility property into rate base. Property which has not been dedicated to public use is not properly included in rate base. Furthermore, we will not authorize recovery of Edison's capital investment including a rate of return through ECAC since the fuel adjustment clause is confined to a dollar-for-dollar recovery of expenses. Consequently, we are compelled to treat Edison like all other participants during the demonstration period. Edison may recover its capital contribution through ECAC to the extent that the staff cost recovery method will permit such recovery. At the conclusion of the demonstration period, Edison may apply for recovery of any deferred cost, including AFUDC, and a return. If the Project does not succeed, ~~but we find that the deferred cost was prudently incurred,~~ Edison should recover ^{the} that deferred cost, *at least to the extent of currently projected costs,* plus an AFUDC factor accrued during the seven-year demonstration period. The purpose of this Project is to test the commercial feasibility of coal gasification in California. Whether the Project results indicate commercial feasibility or infeasibility, the demonstration purpose will have been met. AFUDC covers the investors' risk when a Project is undertaken and carried through to completion, and Edison's investors will be entitled to compensation for the cost of money used during the demonstration phase. If the Project is successful, then recovery of the deferred cost, accrued AFUDC, and a return will be authorized.

The net effect of the staff method of cost recovery is similar to our present accounting treatment of construction work in progress in that the investor is compensated when the demonstration phase is concluded and the plant is included in rate base at which time it can earn a rate of return. The cost of any deferred money used during the demonstration period but collected afterwards is accounted for through the addition of AFUDC to the investment. In this way, the financial burden is shifted from present ratepayers to future ratepayers to account for the entry of the plant facilities into regular utility service at a future date.

C. Public Utility Status

A remaining issue is the applicant's request for a finding that the joint venture or any of the participants in the Project is not a public utility as defined by Section 216 of the Public Utilities Code and therefore not subject to the jurisdiction of this Commission. That request was based solely upon Section 246 of the Public Utilities Code.^{6/}

The staff pointed out during the hearing that Section 246 applies only to contracts approved by the Commission prior to January 1, 1979. The Texaco/Edison Agreement upon which this Project is structured is dated July 31, 1979 and was filed with the Commission on November 9, 1979. Clearly, the provisions of Section 246 cannot apply to this Project application since the Texaco/Edison Agreement was not even submitted for approval by the Commission before January 1, 1979.

Edison's project manager explained that the request for an exemption from Section 216 was caused by the desire of other participants to avoid regulation by this Commission and other regulatory agencies. A finding that the Project is a public utility and therefore that participants in the Project are subject to the jurisdiction of the Commission would deter capital funding from private sources. To avoid that problem, Edison and Texaco structured this Project so that Edison purchases all coal fed into the coal gasifier and owns all electricity generated from the combined-cycle unit. The Project, however, is a joint venture, and the participants have undivided interests in all project

^{6/} Section 246 was added to the Public Utilities Code to facilitate a sale and leaseback of SDG&E's Encina 5 generating unit to Lloyds Bank of California. See SDG&E Encina 5 (1978) 84 CPUC 105 (Decision No. 89067 issued July 11, 1978).

facilities. (Texaco-Edison Agreement, Section 3.1.) Edison does not retain an exclusive ownership interest in the combined-cycle unit although it is the primary operator of the unit.

Section 216 defines as a public utility every gas and electrical corporation. Sections 218 and 222 define gas and electric corporations respectively as every corporation or person owning, controlling, operating, or managing any gas or electric plant for compensation in California. Sections 217 and 221 define gas and electric plant as all real estate, fixtures and personal property owned, controlled, operated, or managed to facilitate the production, generation, transmission, delivery, underground storage, or furnishing of gas or electricity for light, heat, or power.

The Project falls within the Section 216 definition of a public utility both as a gas corporation and as an electrical corporation. The coal gasification facility would be "gas plant" operated to produce gas for power within the meaning of Section 217. The combined cycle unit clearly would be "electric plant" used to generate electricity for light, heat, or power. The Project participants then would own, manage, and operate both gas plant and electric plant; consequently, the joint venture could be considered both a gas corporation and an electrical corporation.

The only limitation on the broad language contained in Sections 216, 217, 218, 221 and 222 is the prerequisite that property must be dedicated to public use before it is subject to public utility regulation by this Commission. (Richfield Oil Corp. v. PUC (1960) 54 Cal.2d 419; California Water and Telephone Co. v. PUC (1959) 51 Cal.2d 478.) In the Richfield case, the Court determined that the Richfield Oil Company by delivering gas to Southern California Edison Company's Mandalay steam-electric plant had not dedicated its gas reserves and pipeline transmission facilities to public use. The Court relied upon the fact that Richfield's gas was delivered and sold pursuant to a negotiated

contract with Edison and that similar service was denied to others. (Richfield, supra at 439.) Because Richfield had never shown a willingness to sell gas to the public or to offer its pipeline for the public transmission of gas, the Court concluded that Richfield was engaged in nonpublic utility activities and was not a public utility subject to the Commission's jurisdiction. (Richfield, supra at 439, 441.)

This Project resembles the Richfield case since Edison pursuant to contracts negotiated with each participant will purchase all coal that is processed into gas and will own all the electricity generated by the combined-cycle unit. Gas or electricity produced by the Project is not directly available for sale to any other party. Furthermore, the primary purpose of the Project is to demonstrate the commercial feasibility of a coal gasification-combined cycle facility. The Project will not be constructed as a generating resource to provide gas or electricity to the public but as an experimental facility to allow the participants to test different types of coal at a gasification-combined cycle plant.

For the foregoing reasons, we find that although this Project falls within the literal language of Section 216, the Project is not a public utility as long as the participants do not dedicate the Project facilities to public use. Such a finding, however, also precludes Edison's request that its \$25 million capital contribution be included in rate base. Both the staff and Company witnesses agreed that nonpublic utility property is not properly included in rate base. The reason for that is the ratepayer should not be compelled to pay a rate of return on property which is not dedicated to public use. Because we adopt the staff's cost recovery method, which limits Edison's recovery during the demonstration period to the value of electricity at marginal cost, Edison will recover its costs solely through ECAC. However, after the demonstration period, if Edison acquires the Project

facilities and dedicates them to public use; additional recovery through base rates may be authorized.

Findings of Fact

1. The Legislature in Public Resources Code Section 25651(b) has specified a need for the development, demonstration, and commercialization of new and advanced technologies such as coal gasification.

2. On December 21, 1979, the California Energy Commission (CEC) approved the Application for Certification, Docket No. 78-AFC-2 of the Cool Water Coal Gasification Demonstration Project (Project).

3. In its decision, the CEC determined that the Project meets the need specified in Public Resources Code Section 25651(b) and certified an Environmental Impact Report prepared pursuant to the California Environmental Quality Act.

4. Much of the technology involved in this Project is proven, and the purpose of the demonstration is to ascertain the economic and environmental acceptability of a coal gasification-combined cycle electric generation facility. The applicant estimates a less than 5 percent probability that the Project will not generate electricity.

5. The U.S. electric utility industry, as represented by EPRI, supports the proposed Project and will contribute \$50 million to the financing of the Project.

6. Coal gasification technology based upon Texaco's process has been employed in small pilot plants and industrial facilities but has never been demonstrated in a commercial-sized power plant.

7. Edison is proposing to participate in the design, construction, and operation of a 100-MW coal gasification combined-cycle demonstration project at its Cool Water Generating Station near Daggett, California.

8. The extent of Edison's participation in the Project is set forth in a negotiated agreement with Texaco.

9. Edison currently is soliciting other participants and sponsors for the Project and expects to obtain the required funding from private sources. Grants from DOE or other government agencies will not be sought until private sources are exhausted.

10. Staff has not made an independent analysis of the coal expense and O&M cost for the Project and has assumed the reasonableness of those costs as specified by the applicant.

11. The estimated total Project cost for construction and demonstration is \$531 million. The applicant proposes to recover \$302 million in fuel processing fees and \$176 million in coal expense through ECAC rate adjustments. The applicant's proposed capital recovery through base rates amounts to \$53 million, including rate of return, for the seven-year demonstration period.

12. The staff cost recovery method limits the ratepayer's contribution to the value of electricity received during the demonstration period with recovery of all other costs deferred until the demonstration period is concluded. Use of marginal cost is appropriate to calculate the value of electricity generated by this Project.

13. The staff cost recovery method matches costs with benefits of the Project in that future beneficiaries of a coal gasification technology will share the cost of this Project.

14. The staff cost recovery method gives the applicant an economic stake in the outcome of the Project and a financial incentive to select, construct, operate, and prudently manage worthwhile demonstration projects.

15. Adoption of the staff proposal will not require renegotiation, revision, or amendment of the Texaco-Edison Agreement.

16. Edison will purchase all coal processed in the Project's coal gasification facility and will own all electricity generated from the combined cycle unit. No other individual or entity may directly purchase electricity generated from this Project.

17. The Project is not intended to meet the electric generating needs of Edison or to be entered into regular utility service, and no attempt has been made to include this facility in Edison's resource plans.

18. Other participants and sponsors may be deterred from contributing capital to the Project if the joint venture owning and managing the Project is found to be a public utility subject to this Commission's jurisdiction.

19. Recovery through ECAC of project costs limited to the value of electricity is reasonable, including the repayment of capital to participants and sponsors.

20. Edison's request for a finding that the Project does not involve (a) the issuance of securities, or other evidence of interest, or ownership, or indebtedness, or (b) the assumption of any obligation or liability as guarantor, endorser, surety, or otherwise in respect of the securities of any other person, firm or corporation, was not adequately supported or explained in the record; accordingly, that request is denied.

Conclusions of Law

1. The Legislature has specified a need for projects developing and demonstrating coal gasification.

2. The CEC has determined that this Project meets the need specified by the Legislature for the development, demonstration, and commercialization of coal gasification.

3. The staff cost recovery method is preferable and more reasonable than the applicant's financing proposal since it better matches costs with the benefits of this Project. The staff method also is superior in meeting the public interest as it gives the

utility an incentive to promote worthwhile demonstration projects. For the foregoing reasons, the staff cost recovery method using Edison's marginal cost to calculate the value of electricity is reasonable and should be adopted.

4. Since the Project is proposed for experimental reasons only and since it is not intended to provide a reliable source of electric power to the public during the demonstration period, its facilities have not been dedicated to public use, and the joint venture owning, managing and controlling the Project is not a public utility subject to the jurisdiction of this Commission.

5. The projected capital cost of \$292 million is reasonable; any capital expense exceeding the \$292 million estimate must be justified as a prudent expenditure by the applicant before any recovery of that expense is authorized. In addition, the applicant will be required to demonstrate the reasonableness of the Project's coal expense and O&M in future ECAC proceedings.

6. The applicant's capital contribution of \$25 million to the Project cannot properly be included in rate base until the Project facilities are dedicated to public use as public utility property. Accordingly, base rate recovery of \$53 million, including rate of return, during the seven-year demonstration period as requested by the applicant is unreasonable and should be denied because the Project is not normal electric plant in service.

7. Because the Coal Gasification Generation Act (1978) provides that coal gasification demonstration projects are to be expedited by state agencies, this order shall become effective on the date of signature.

O R D E R

IT IS ORDERED that:

1. A certificate of public convenience and necessity is granted to Southern California Edison Company (Edison) to participate in the construction and operation of the 100 MW project entitled the Cool Water Coal Gasification Demonstration Project to be constructed at Edison's Cool Water Generation Station in San Bernardino County.

2. Edison is authorized upon commencement of operation of the Project to recover through ECAC costs of the Project limited to the value of electricity generated by the Project during the demonstration period. All costs are subject to review in an ECAC proceeding.

3. Edison is allowed one year after the commencement of operations of the Project within which to file a combined cost report for its participation in the Project and related structures, equipment, and facilities.

4. No participant, sponsor, or other entity involved in the Project shall solely by virtue of its participation in the Project be deemed a public utility under Public Utilities Code Section 216.

5. Edison shall file prior to construction of the Project an updated report on the capital cost and coal expense for the Project. The report shall include a detailed explanation of any cost overruns incurred or anticipated at the time the report is submitted, and shall include copies of any coal supply agreements. The effective date of this order shall be the date hereof.

Dated AUG 19 1980 , at San Francisco, California.

 J. E. Boy
President

 Thomas L. Sturgeon

 Richard D. Gravelle

 Richard D. Gravelle
Commissioner

Commissioner Richard D. Gravelle, being necessarily absent, did not participate in the disposition of this proceeding.