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ORIGINAL

Decision No. 78410

BEFORE THE PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA

In the Matter of the Application of SOUTHERN CALIFORNIA EDISON COMPANY and SAN DIEGO GAS & ELECTRIC COMPANY for a Certificate that Present and Future Public Convenience and Necessity require or will require the construction and operation by Applicants of two new nuclear steam electric generating units, to be known as Units 2 and 3, at their San Onofre Nuclear Generating Station, together with other appurtenances to be used in connection with said operating station.	Application No. 52045 (Filed July 16, 1970)

Rollin E. Woodbury, Harry W. Sturges, Jr., David N. Barry III and Charles R. Kocher, by David N. Barry III and Charles R. Kocher, Attorneys at Law, for Southern California Edison Company; Chickering & Gregory, by Sherman Chickering, C. Hayden Ames, Edward P. Nelsen and Frank Bayley, Attorneys at Law, for San Diego Gas & Electric Company, applicants.

Patrick A. O'Brien, for Group United Against Radiation Dangers, protestant.

Gilbert A. Jones and James S. Stewart, for California Society of Professional Engineers, interested party.

Elinore C. Morgan, Attorney at Law, and Norman R. Johnson, for the Commission staff.

INTERIM OPINION

Southern California Edison Company (Edison) and San Diego Gas & Electric Company (San Diego) jointly request a certificate of public convenience and necessity to construct and operate two

additional nuclear steam electric generating units, to be known as Units 2 and 3, at their San Onofre Nuclear Generating Station, together with other appurtenances.

The San Onofre station is located on the shoreline of the Pacific Ocean within the boundaries of the United States Marine Corps Base, Camp Pendleton, California, approximately four miles southeast of the City of San Clemente. It is the only established nuclear generating station site in the southern coastal region of California and consists of 84 acres. The existing unit, San Onofre Nuclear Steam Generating Unit 1, has an effective operating capacity of 430 megawatts and has been in operation since January 1968.

An interim certificate was granted for Unit 1 in Decision No. 67810, dated May 5, 1964, in Application No. 45231. The interim certificate was made final in Decision No. 74182, dated May 28, 1968. New Units 2 and 3, which applicants propose in this application, would be located southeast of and immediately adjacent to existing Unit 1 and have an electrical net output rating of approximately 1,140 megawatts each.

Public hearing on this application was held before Examiner Main in San Clemente on October 5, 6, 7, 8, 9, 14 and 15, 1970, and the matter was submitted subject to the receipt of concurrent closing briefs, which have been received.

The Need for More Generating Capacity

Substantial growth in electrical loads is expected to continue in Southern California but probably at a lower rate than that experienced during the rapid expansion of the past 15 years.

Edison and San Diego project that their respective net system peak demands of 7,804 megawatts and 1,215 megawatts in 1969 will increase at compound rates of about 8 percent and 8.8 percent per year during the 1970-1980 period. They project their annual sales of electric energy at comparable growth rates.

Within this period, Edison's net system peak demand is forecast to increase in 1976 by 1,020 megawatts to a total of 13,900 megawatts, and in 1977 by another 1,160 megawatts to a total of 15,060 megawatts. Its energy transmitted is forecast to increase by 6 billion kilowatt-hours in 1976 and by another 6-1/2 billion kilowatt-hours in 1977. In 1976 San Diego's net system peak demand is forecast to increase by 181 megawatts to a total of 2,227 megawatts, and in 1977 by another 196 megawatts to a total of 2,423 megawatts. Its energy transmitted is forecast to increase by 800 million kilowatt-hours in 1976 and by another 900 million kilowatt-hours in 1977.

To meet this growth in power needs, while providing for adequate margins between load and resources, net capacity additions totaling 15,244 megawatts, 12,451 megawatts by Edison and 2,793 megawatts by San Diego, are planned through 1980. As the principal additions to resources for the 1976-1977 time frame, applicants plan San Onofre Unit 2 with a net electrical output capability of about 1,140 megawatts for commercial operation on or

before June 1, 1976, and a virtually duplicate unit, San Onofre Unit 3, for commercial operation on or before June 1, 1977. Edison's and San Diego's respective shares of the output of the two units would be 80 percent and 20 percent, as is the case with the output from existing San Onofre Unit 1.

A primary determinant in the scheduling of generating capacity additions is the level of reserve margins. To evaluate the adequacy of resource programs, Edison uses three criteria to test reserve margins. The first such criterion is installed capacity margin of at least 15 percent of annual peak demand; the second is installed capacity after deducting scheduled maintenance sufficient to allow loss of the larger of (a) the two largest risks (generating unit or interconnection), or (b) 7 percent of system demand plus the largest risk; and the third is reliability based upon calculations measuring the probability, expressed as a reliability index, of successfully meeting all of the varying system-loads throughout the year. (An index of 97 percent, which implies a 3 percent chance of failure, is acceptable to Edison, while an index of around 85 percent, which carries five times greater risk of failure, is not.) For purposes of system planning, Edison requires that a proposed resource program exceed all three criteria.

None of the three criteria is satisfied in the years 1976 and 1977 without Edison's share of the output of San Onofre Units 2 and 3 or equivalent capacity; the criterion of reliability based upon probability calculations is the most stringent, however, in that time period. With San Onofre Unit 2, or equivalent capacity,

in 1976, Edison's reliability index would be 96.7 percent. With San Onofre Unit 3, or equivalent capacity, in 1977, Edison's reliability index would be 97.3 percent. Without San Onofre Units 2 in 1976 and 3 in 1977, or equivalent capacity, the corresponding reliability indices would be 86.3 percent and 83 percent, respectively, and with neither unit available in 1977, the reliability index would fall to 31.2 percent.

Reserve margins on San Diego's system will also be inadequate in 1976 and 1977 without its share of San Onofre Units 2 and 3, or equivalent capacity. Without such capacity in 1977, San Diego's net capability margin would be reduced from 15.4 percent of adverse peak demand to a deficit of 1.6 percent of adverse peak demand.

The evidence presented by applicants and tested by the parties to this proceeding supports the proposed resource programs through 1977 and establishes the need for 2,280 megawatts of additional baseload-type generating capacity, the amount proposed in this application, during the 1976-1977 period.

Generating Capacity Alternatives

Edison's witnesses testified to the effect that there are no reasonable alternatives to proposed San Onofre Units 2 and 3 capable of meeting commercial operating dates in 1976 and 1977.

A potential nuclear site acquired by Edison in the Point Conception area of Santa Barbara County cannot be developed with nuclear units prior to 1979. Similarly, placing the San Onofre

new units inland and partially underground, if feasible at all, would involve a minimum two-year delay. San Onofre Nuclear Generating Station is the only site in Southern California capable of further development with nuclear units in the 1976-1977 time period.

Remote fossil-fueled generation resources presently under construction are planned to meet Edison's capacity requirements prior to the 1976-1977 time period. East Coal, planned for development in Southern Utah, has many practical and technical problems yet to be resolved. The project may not be feasible at all, and, in any event, could not be developed with generating units for commercial operation prior to 1979 or 1980. Even if East Coal could be developed in the 1976-1977 time period, Edison's share of the output would be less than its requirements.

Edison's Ormond Beach Generating Station in the South Coast Basin of California could be developed with fossil-fueled generating units in the 1976-1977 time frame. However, this alternative has the disadvantage of increasing emissions of oxides of nitrogen in the South Coast Basin. Gas turbine peaking units, which would also have the effect of increasing such emissions, do not constitute an alternative to proposed San Onofre Units 2 and 3 because of energy considerations, and, at present, geothermal generating capacity cannot be developed in sufficient quantities to serve as an alternative. Thus, there appear to be no alternatives to San Onofre Units 2 and 3 for the 1976-1977 time period requirement which would not increase emissions of oxides of nitrogen in the South Coast Basin. Conversely, the availability of the San Onofre Units should result eventually in significant reductions in oxides of nitrogen emissions from Edison Power Plants in the South Coast Basin, while also avoiding the increased emissions of oxides of nitrogen associated with alternatives.

San Diego analyzed, as alternatives to proposed San Onofre Units 2 and 3, gas turbine peaking units, fossil fuel-fired baseload

units, and fossil fuel-fired steam cycling units. While any of the alternatives would have been possible, the requirements, size, and timing of resource additions in Southern California is such that nuclear units are desirable.

Cost comparisons with hypothetical alternatives, such as two additional Ormond Beach units, were prepared by Edison. Such comparisons show an energy cost advantage for proposed San Onofre Units 2 and 3. A similar advantage exists for San Diego. Further development of the San Onofre nuclear station would tend to strengthen resource-deficient southern areas of Edison's system, and the station is so located as to enable it to efficiently serve both Edison and San Diego.

Proposed San Onofre Units 2 and 3

The existence and successful operation of San Onofre Unit 1 has a significant bearing on the suitability of the San Onofre site for further development with nuclear units.

The site consists, as previously indicated, of approximately 84 acres entirely within the United States Marine Corp Base, Camp Pendleton. The population of the area varies from a maximum of 40,000, located on Camp Pendleton at distances of 2 to 15 miles from the site, to 18,200 at the City of San Clemente, which is located approximately 4 miles to the northwest. It is projected that by 1980 a population of 228,000 will be located within a 20-mile radius of the site.

The land use in the vicinity of the site may be described as unimproved to semi-improved. An area of approximately 1/2-mile radius surrounding the plant is designated for use only for military operations, agricultural, recreational, and other similar uses.

The meteorological conditions are typical of the general Southern California coastal climate. The predominant atmospheric stability condition at the site is Pasquill's category E, that is, slightly stable, with an associated average wind velocity of 3.3 meters per second.

The results of extensive geologic and seismic investigations, conducted both in connection with the development of Unit 1 and in connection with the planning for Units 2 and 3, reveal that there are no indications of subsidence in the site area, that the soils in the site area are suitable foundations soils and are not subject to liquefaction during an earthquake, and that there are no active onshore or offshore faults located in the vicinity of the site. The Geological Survey, however, has not completed its review of this matter as it relates to Units 2 and 3.

The plans for proposed San Onofre Units 2 and 3 contemplate the installation of two nuclear steam supply systems, two steam turbine generators, and related structures, facilities and equipment. Certain auxiliary facilities will be common to the two units in order to provide for a completely integrated two-unit generating facility.

The nuclear steam supply systems each will be of a pressurized, light water cooled and moderated, closed cycle, forced circulation design. Each will have one reactor, two steam generators, and other associated equipment. Each will have a nominally rated steam flow capacity of approximately 15,090,000 pounds per hour, at a pressure of approximately 900 psia and a temperature of approximately 532° F. The thermal power rating of each nuclear steam supply system will be 3,410 megawatts (t).

The steam turbine generators each will be of a tandem compound design with one high pressure turbine element and three low pressure turbine elements on a single shaft rotating at 1,800 rpm. Each turbine will be coupled to a single generator which will be nominally rated at 1,175 megawatts (e). The corresponding net electrical plant output will be 1,140 megawatts (e) for each unit. On the basis of the present design status of similar steam turbine generators, it is estimated that the net station heat rate for the new units at maximum net output will be approximately 10,200 btu/kwh.

Proposed Units 2 and 3 will be designed as outdoor types, with the exceptions of portions of the nuclear steam supply and auxiliary systems which will be located within containment buildings and adjacent structures. Control systems will be of the multiple redundancy type required by the United States Atomic Energy Commission (AEC), and will be centered in a single control room common to the two units. As with existing San Onofre Unit 1, sea water obtained from the Pacific Ocean will be used for condenser cooling purposes.

Edison and San Diego will share the costs and output of the proposed new units on a respective 80 percent/20 percent basis. Edison, as project manager and operating agent, will have primary responsibility for design, construction and operation of the units.

It is anticipated that the power output of proposed Units 2 and 3 would be transmitted to applicant's respective electrical systems as indicated on Exhibits 6 and 7. This is to some degree tentative inasmuch as precise design information is not

yet available. Pursuant to the requirements of General Order No. 131, applicants will file applications for certification of certain of the required new transmission facilities.

To meet the scheduled dates of commercial operation, i.e., not later than June 1976 for proposed Unit 2 and not later than June 1977 for proposed Unit 3, applicants have estimated that construction must begin not later than July 1971. To start construction during July 1971, preliminary work, such as temporary relocation of existing switchyards to permit site preparation, and site preparation must be commenced prior to July 1971.

The capital costs of proposed Units 2 and 3 are estimated to be $436,960,000 and the annual expenses to be $76,344,000. It is estimated, on the basis of an assumed 80 percent capacity factor and an average fuel cost over the first ten years of operation of 14.2¢ per million btu, that the average cost of energy at the plant site will be 4.78 mills per kilowatt-hour. In Edison's case the average cost of energy delivered to its interconnected system is estimated to be 4.95 mills per kilowatt-hour.

With the exception of the turbine generators, the financing of which was authorized in Decision No. 77760 in Application No. 52156, the proposed San Onofre Units 2 and 3 project will be financed by applicants by traditional utility financing methods. The ability of applicants to finance the project is indicated by their respective financial statements, Exhibits 11 and 12.

Opposition to Proposed San Onofre Units 2 & 3

Many people living in or near the City of San Clemente oppose the proposed addition of nuclear steam electric generating units at the San Onofre Station. The main thrusts of the testimony, statements and petitions presented by local residents are to the effect that the Nuclear Generating Station should be located either farther away from San Clemente or built inland and underground, and that beach frontage should not be occupied by power plants.

A citizens group called GUARD, an acronym of Group United Against Radiation Dangers, was formed about a year ago to oppose possible expansion of the San Onofre Nuclear Generating Station. It purports to have 15 to 20 central members and an indeterminate informal membership. GUARD actively participated in this proceeding. Its primary concern is radiation hazards and its secondary concerns include thermal effects, scenic pollution and recreational use of beaches. As argument in support of its primary concern, GUARD points to the current controversy by experts over safe radiation levels, the vulnerability of nuclear power plants to sabotage or enemy action, and an alleged lack of a complete evacuation plan for the residents of San Clemente.

Safety

Rigidly conceived and enforced safety standards have been designed in from the inception of nuclear power plants, and proposed nuclear power plants are subject to a long series of safety reviews by the utility, the equipment suppliers and the

United States Atomic Energy Commission. On this record applicants presented considerable testimony as to the design features and steps which will be taken to assure that there will be no undue hazard to the public.

For proposed San Onofre Units 2 and 3 each reactor and reactor coolant system will be housed in a reinforced concrete containment structure which is the shape of a vertical right cylinder with a shallow dome roof and a flat foundation slab. The approximate dimensions are 130 feet inside diameter, 185 feet inside height, 4 feet wall thickness, and 3-1/2 feet dome thickness. The containment structure will be lined with steel to provide a high degree of leak tightness. All penetrations will be pressure resistant, leaktight, welded assemblies designed, fabricated, and tested in accordance with applicable sections of ASME Nuclear Vessel Code, Section III, for Class B vessels. Anchorages of all penetrations are designed to resist all forces and moments caused by postulated pipe rupture, thermal and seismic loads. An equipment hatch and two personnel locks are provided. The two personnel locks are double door, interlocked, welded assemblies.

The containment will be tested during construction and prior to operation. During operation a continuing surveillance program will be carried out. The containment is designed for all credible conditions of loading, including normal loads, loss of coolant accident loads, test loads, and loads due to adverse environmental conditions such as earthquake and wind loads.

Each reactor has an inherent safety feature in that its over-all power coefficient is negative. This means that the response of the reactor core containing the nuclear fuel, uranium dioxide slightly enriched, to an increase in reactor thermal power is a decrease in reactivity. Every component of each reactor and reactor cooling system is planned, designed and fabricated with safety first in mind.

In the event of incipient malfunction while in operation, visual and audible enunciators in the control room alert the operator to take corrective action. As a further response, if necessary, a completely automatic reactor trip system will shut the reactor down and thereby protect the reactor core and the reactor coolant system pressure boundary from any excursion or any accidental release into containment.

To cope with accident situations, there are several special safety systems designated as engineered safety features. These systems are designed to protect plant personnel and the public from accidental release of radioactive fission products. They function to localize, control, mitigate and terminate loss of coolant accidents and to limit off-site exposure levels to those prescribed in 10 CFR Part 100. The first is the safety injection system which is designed to prevent fuel and cladding damage that would interfere with core cooling, and to limit zirconium-water reaction. The second is the containment spray system which is designed to maintain containment pressure and temperature below design conditions, and to remove airborne contaminants from the containment atmosphere. The third is the

containment emergency atmosphere cooling system which is also designed to maintain containment pressure and temperature below design conditions. All are designed for any size break in the reactor coolant system, up to and including a double ended rupture of the largest reactor coolant pipe. The engineered safety features systems will be engineered and fabricated to detailed specification and a stringent quality control program will ascertain compliance with specification. They will be designed to operate in the environment to which they might be exposed in an accident situation and will be provided with integral testing systems.

Fuel handling and storage facilities are designed for safe handling, storage, and shipment of fuel assemblies. New assemblies are delivered to the site in AEC approved containers and are stored dry in a storage vault. Room is provided for storage of two-thirds of a core. Spent fuel is handled under water and is stored under water in the spent fuel pool. Storage is provided in the spent fuel pool for 1-2/3 cores. When it has been sufficiently cooled, spent fuel is shipped offsite in licensed containers for reprocessing. After processing, radioactive fission product wastes are disposed of by the fuel processor in accordance with AEC regulations.

The radioactive waste management systems are designed to provide controlled handling and disposal of liquid, gaseous and solid wastes generated during operation of the plant, and to minimize or preclude discharges to the environment of radioactive liquids, gases, or solids of plant origin. The waste management

systems are designed to remove radioactivity from process streams as completely as possible and at the earliest feasible point in the stream. Liquid wastes will normally be processed and held for reuse. Optional capabilities will exist for controlled discharge to the circulating water outfall or for shipment offsite by an AEC licensed contractor. Radioactive gaseous wastes will be collected and compressed into storage tanks for decay and sampling prior to controlled release through absolute filters to the plant vent. The plant vent is continuously monitored to verify that all releases are well within applicable regulatory limits. Solid radioactive wastes will be packaged in ICC and AEC approved containers for shipment offsite for disposal by AEC licensed contractors.

From January 1968 through August 1970, radioactive emissions from San Onofre Unit 1 were 7 percent of permissible regulatory limits for liquid gross beta gamma activity, 0.2 percent of permissible regulatory limits for tritium, and .063 percent of permissible regulatory limits for gaseous gross beta gamma activity. Liquid and tritium emissions from Units 2 and 3 are expected to be less than liquid and tritium releases have been for Unit 1. Gaseous releases from San Onofre Units 2 and 3 may be greater than they have been from Unit 1, but, even if they are proportionally greater, they will still be less than .5 percent of permissible regulatory limits. A radiation surveillance program has been conducted in accordance with regulations of the California Department of Public Health prior to and during operation of Unit 1. The surveillance program has indicated that

operation of San Onofre Unit 1 has not had a detectable radiological effect upon the environment. A radiological monitoring program for San Onofre Units 2 and 3 was approved by the California Department of Public Health on September 28, 1970.

An extensive quality program is planned for San Onofre Units 2 and 3. Quality control will verify that all equipment and materials are specified, selected, manufactured, installed, and tested in accordance with industry codes and standards, and will reject any work not meeting such standards. Quality assurance will verify that quality control procedures, when properly implemented, meet all quality requirements of a large nuclear generating plant and will audit quality control at all levels. A comprehensive testing program is being planned to verify that equipment and systems perform in accordance with design criteria.

Numerous postulated incidents have been considered in the safety analysis of San Onofre Units 2 and 3 to determine their effects on the plant, to determine whether the plant design is adequate to minimize consequences of such incidents, and to verify that the health and safety of the plant personnel and the public are protected from the consequences of even the most severe of the hypothetical incidents analyzed. To provide adequate protection to the public, very pessimistic assumptions were incorporated into the calculation of incident consequences. In all cases, exposures calculated to result are well within 10 CFR Part 100 guideline values.

Security Systems

The testimony of the Edison witnesses on the subject of plant security is consistent with and supplemented by the following excerpts from the Preliminary Safety Analysis Report for Units 2 and 3 filed by applicants with the AEC.

The plant, after completion of construction, is surrounded by an eight-foot chain link fence with normal access through a single entry gate controlled by a security officer. The gate is manned on a 24-hour basis to maintain close security of station property at all times. Periodic patrols are made of the entire property on all passable roads -- including the perimeter fence, reservoir, switchyard, and all outlying areas -- all main structures, and buildings. Any unusual conditions are reported to the watch engineer.

Additionally, a second eight-foot chain link fence surrounds the controlled area which includes the containment, reactor auxiliary building, and spent and new fuel storage building, including access walks and immediate surrounding areas. Normal access to a controlled area is through a control point. All control points are clearly marked and provided with personnel-monitoring instrumentation.

During construction, the total site area will be enclosed by fencing with lockable gates at each entrance point. Temporary fencing will be added to separate Unit 1 from the new units during construction. A security guard will be stationed at each entrance point during working hours. One guard will be on duty at the main entrance after working hours, while the other entrances are

locked. Periodically, he will secure the main gate and then tour the compound for night inspection. Full lighting will be provided and maintained during the evening at the main construction and material storage areas. As many construction workers as possible who had worked satisfactorily and reliably in the past will be employed. Visitors will be required to register with a security guard, and will be accompanied by a staff engineer during their entire tour of the construction area.

Environmental Protection

The proposed construction and operation of San Onofre Units 2 and 3 would be conducted in a manner to minimize their impact on the environment. Specifically, site conditions and preparation, aesthetic and recreational conditions, radiological and chemical effects, and thermal effects are all considered in plant design. Based on environmental monitoring programs conducted over a period of some seven years for Unit 1, no unusual demographic, meteorological, geological or seismological features have been identified which could make unacceptable the operation of Units 2 and 3 from the standpoint of impact on the environment. A significant potential for interaction with the environment is the plant's location on the Pacific Ocean and use of the ocean water for condenser cooling.

An extensive and continuing oceanographic monitoring program has been conducted offshore from the San Onofre site since 1963. The results of the biological monitoring program have demonstrated the lack of any significant adverse effects on the marine environment due to thermal addition from Unit 1.

A decrease in benthic algae in the immediate vicinity of the outfall, believed due to increased turbidity, has been observed. At the same time, a marked increase in fish population has been observed. Based on predicted thermal influence of proposed Units 2 and 3, it is not anticipated that their operation would have any material effects upon the marine environment.

The discharges of heated condenser cooling water into the Pacific Ocean are to be kept within limits set by the State of California and the California Regional Water Quality Control Board, San Diego Region. The liquid and gaseous radioactive effluents from the plant must be kept, as a condition of the operating license, as low as practicable and in any case, within the limits of 10 CFR Part 20. There should be no long-term radiological or thermal effects on the environment because the environmental monitoring programs will provide a basis for detecting and evaluating any impact, which might lead to long-term effects, such that timely corrective action can be taken if required.

The aesthetic design criteria for the plant is to make the completed facility compatible with the surrounding coastal environment. All structures, means of access, and equipment will be designed and located with the objective of making the physical appearance of the facility pleasing and unobtrusive. Landscaping will be installed in all appropriate areas of the plant site. The existing switchyard will be removed and a new switchyard will be stepped down so as to remove all lower equipment from the view of passing motorists.

The San Onofre site was considered in accordance with the provisions of the National Historic Preservation Act, which requires federal licensing agencies to take into account the effect of a proposed undertaking on any site significant in American history, architecture, archaeology or culture. The nearest historic site is some eight miles distant from San Onofre.

Multipurpose use with the public of the site and adjacent properties will be made wherever feasible, as approved by the Atomic Energy Commission, where necessary plant security and safety would not be impaired. Moreover, the San Onofre beaches have not been impaired by San Onofre Unit 1 and, except during construction, will not be impaired by San Onofre Units 2 and 3. Sand from the site excavation will be disposed of by use for beach replenishment purposes. Applicants believe that construction of Units 2 and 3 will improve rather than impair any beneficial uses of the beaches. The combined effects of warmer water and the presence of the outfall structures is expected to result in increased numbers and types of fish in the area.

On March 14, 1964, Edison and San Diego entered into an agreement with the Administrator of the California Resources Agency. In the agreement, known as the State Resources Agency Agreement, the utilities recognized their responsibility to the general public to assist in the protection of the natural resources of the State of California and agreed to conduct extensive marine studies and monitoring programs in connection with San Onofre

Unit 1. An amendment to the State Resources Agency Agreement, dated June 16, 1970, was executed for the purpose of clarifying the understanding of the parties with respect to the total environmental considerations of constructing and operating Units 2 and 3, including the actions to be taken to ameliorate any adverse effects of the facilities upon the environment. While the applicant and the Resource Agency are presently in agreement, if disagreement of the parties should arise as to such actions, appropriate resolution of the matter may be made by this Commission in the exercise of its continuing jurisdiction over the utility companies.

Licenses and Permits

Edison and San Diego filed on June 1, 1970, an application with the Atomic Energy Commission for all necessary licenses to construct and operate the proposed San Onofre Units 2 and 3. The application contains preliminary design information for the complete facilities as well as detailed analyses of plant safety and environmental considerations. On July 28, 1970, they filed, also with the AEC, their Environmental Report for the San Onofre Units 2 and 3 project, in compliance with the National Environmental Policy Act of 1969. This report has been distributed for review and comment to cognizant federal and state regulatory bodies.

At the federal level, in addition to the Construction Permit, Operating License, Special Nuclear Material License, and individual operator licenses sought from the AEC, Edison and San Diego filed on September 4, 1970, with the U.S. Army Corps

of Engineers for a permit for sand disposal and construction of a temporary working area on the beach in front of the plant site. A second application to the Corps for permit to construct the offshore cooling water conduits is being prepared.

Edison and San Diego have sought, or will seek, all permits and authorizations which may be lawfully required by state and local public authorities for the construction and operation of proposed Units 2 and 3. In addition to the certificate sought herein, the agreement consummated with the State Resources Agency, and the radiation monitoring program approved by the State Department of Public Health, such permits and authorizations will include those by the State Water Resources Control Board, the California Regional Water Quality Control Board, San Diego Region, and the State Lands Commission.

In this regard, the establishment of waste discharge requirements for discharges to the Pacific Ocean from San Onofre Units 2 and 3 is within the jurisdiction of the California Regional Water Quality Control Board, San Diego Region, by reason of the provisions of Sections 13260 and 13263 of the California Water Code. Certification of reasonable assurance that an activity resulting in such discharges will not violate applicable water quality standards, as required by the provisions of Section 21(b) of the Federal Water Pollution Control Act, is a function within the jurisdiction of the State Water Resources Control Board, by reason of the provisions of Section 13160 of the California Water Code.

Edison and San Diego are presently processing applications to both agencies for necessary authorizations and certifications. It is anticipated that such authorizations and certifications will be issued prior to the Atomic Energy Commission construction permit hearing on San Onofre Units 2 and 3.

Easement applications have been filed with the State Lands Commission for the sand disposal and temporary work area on the beach, and also for construction of the offshore cooling water conduits. It has been indicated that these State Lands Commission easements are contingent upon issuance of the corresponding Army Corps of Engineers permits.

To meet public demand for electric energy while minimizing the environmental effect of producing this energy, it is the policy of this Commission to rely initially upon the special expertise of appropriate federal and state entities in matters concerning geologic and seismic conditions, radiation,[1/] water quality and other environmental considerations. For this reason, our certification herein will be interim in form pending applicants' obtaining necessary regulatory approvals.

1/ Radiation hazards are subject to the jurisdiction of the United States Atomic Energy Commission. Northern California Association to Preserve Bodega Head and Harbor, Inc., v. Public Utilities Commission; Pacific Gas and Electric Company, 61 C 2d 126 (1964), also Section 274 of the Atomic Energy Act of 1964.

Findings

The Commission finds that:

1. With the continuing growth in electrical demand and energy requirements in Southern California, Edison and San Diego will need additional baseload-type generating capacity equivalent to the proposed San Onofre Units 2 and 3 in the 1976-1977 time period to provide adequate, reliable electric service to the public.

2. The San Onofre Units 2 and 3 project is an economic, efficient and appropriate means of providing the required additional generating capacity for the 1976-1977 time period. There is no alternative project which will better meet the needs of applicants and the public.

3. Applicants have the ability to finance and construct the generating capacity additions needed for the 1976-1977 time period.

4. There is no evidence in the record concerning safety within our jurisdiction which would cause us to reject proposed San Onofre Units 2 and 3 as being unsafe.

5.a. Based on environmental monitoring programs conducted over a period of some seven years for San Onofre Unit 1, no unusual demographic, meteorological, geological or seismological features have been identified which could make unacceptable the operation of proposed San Onofre Units 2 and 3 from the standpoint of impact on the environment.

b. Proposed San Onofre Units 2 and 3 will not create irreconcilable conflicts with the environment, including aesthetics, provided the two nuclear steam generating units, switchyard and attendant facilities are designed in an aesthetically pleasing manner.

c. Environmental monitoring programs will be used to confirm that the applicants are complying with all of the state and federal regulations, and appropriate corrective action will be taken if proposed San Onofre Units 2 and 3 are judged to be adversely affecting the environment.

6. The certification of the San Onofre Units 2 and 3 project, as conditioned hereinafter, will not produce an unreasonable burden on natural resources, aesthetics of the area in which the proposed facilities are to be located, public health and safety, air and water quality in the vicinity, or parks, recreational and scenic areas, or historic sites and buildings or archaeological sites. Collaterally, from the standpoint of reliable and economic electric service in the areas served by applicants, such certification is necessary to promote the safety, health, comfort and convenience of the public.

7. Present and future public convenience and necessity will require the construction and operation by applicants of San Onofre Units 2 and 3, subject to the conditions that the certificate is interim in form and may be made final by further order of the Commission upon issuance by the United States Atomic Energy Commission of final authorization to construct and operate San Onofre Units 2 and 3.

8. A substantial savings in accounting costs would be realized if applicants are permitted to file a combined cost report for San Onofre Units 2 and 3 one year after Unit 3 is placed in commercial operation.

The certificate hereinafter granted shall be subject to the following provision of law:

> The Commission shall have no power to authorize the capitalization of this certificate of public convenience and necessity or the right to own, operate, or enjoy such certificate of public convenience and necessity in excess of the amount (exclusive of any tax or annual charge) actually paid to the State as the consideration for the issuance of such certificate of public convenience and necessity or right.

The action taken herein is for the issuance of a certificate of public convenience and necessity only and is not to be considered as indicative of amounts to be included in future proceedings for the purpose of determining just and reasonable rates.

The Commission concludes that the application should be granted to the extent set forth in the order which follows.

INTERIM ORDER

IT IS ORDERED that:

1. A certificate of public convenience and necessity is granted to Southern California Edison Company and San Diego Gas & Electric Company to construct and operate Units 2 and 3 at its San Onofre Nuclear Generating Station together with other appurtenances generally as described by applicants in this proceeding, subject to the condition that the certificate is interim in form and may be made final by further order of the Commission on the establishment by evidence in the record that final authority has been obtained from the Atomic Energy Commission to construct and operate San Onofre Units 2 and 3.

2. Prior to construction, applicants shall submit an artist's rendition of the San Onofre Units 2 and 3 project based on the architect's design.

3. Within one year after San Onofre Unit 3 is placed in commercial operation, applicants shall file a combined cost report for San Onofre Units 2 and 3.

4. The authorization herein granted shall expire if not exercised within five years from the date hereof.

The effective date of this order shall be twenty days after the date hereof.

Dated at San Francisco, California, this 9th day of MARCH, 1971.

Chairman

Commissioners

Commissioner William Symons, Jr., being necessarily absent, did not participate in the disposition of this proceeding.