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Decision 99-03-055 March 18, 1999

BEFORE THE PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA

Application of Southern California Edison Company (U 338-E) for Authority to Recover Capital Additions to its Fossil Generating Facilities Made Between January 1, 1996 and December 31, 1996 and Related Substantive and Procedural Relief.

ORIGINAL

Application 97-10-024
(Filed October 3, 1997)

(See Appendix A for list of appearances.)

INTERIM OPINION

Summary

This decision adopts revenue requirements for non-nuclear capital additions added to rate base in 1996 by Southern California Edison Company (Edison). The amounts adopted in this decision for capital additions will be included in Edison's Transition Cost Balancing Account for recovery pursuant to Public Utilities (PU) Code § 367. This decision adopts \$82.4 million for capital additions at this time, and reopens the case for limited further submittals regarding approximately \$12.5 million in capital additions which were not cost justified on the record as it stands to date.

I. Procedural Background

In Decision (D.) 97-09-048, in the Electric Industry Restructuring rulemaking (R.) 94-04-031, the Commission ordered Edison, Pacific Gas and Electric Company (PG&E), and San Diego Gas & Electric Company (SDG&E) to file applications no later than October 3, 1997 to seek recovery of 1996 capital additions to nonnuclear generating plant (hereinafter referred to as "capital

additions") based on an ex post facto review of recorded expenditures. The Commission required the applications in order to satisfy the requirements of PU Code § 367 and set forth certain criteria for evaluating capital additions.

PG&E, Edison, and SDG&E filed these applications on October 3, 1997, consistent with D.97-09-048. The Office of Ratepayer Advocates (ORA), The Utility Reform Network (TURN), and intervenor James Weil (Weil) filed protests to the applications and subsequently submitted testimony in response to utility testimony.

Subsequently on December 1, 1997, PG&E, Edison, and SDG&E filed a joint petition requesting authority to establish memorandum accounts to track the revenue requirements associated with the anticipated earnings on the capital additions which are the subjects of these applications and those which were completed in 1997. No party protested the request and the Commission granted it in D.98-01-051.

On March 13, 1998, SDG&E and ORA submitted a "joint recommendation" resolving all outstanding disputes between them. On March 25, 1998 PG&E, ORA, TURN and Weil submitted a "joint recommendation" resolving outstanding disputes between them. We adopted these joint recommendations in D.98-05-059.

The Commission held four days of hearings regarding Edison's application. The parties filed briefs on May 11, 1998 which addressed Edison's application.

II. Background

Assembly Bill (AB) 1890, which guides the implementation of electric restructuring requires the Commission to review the reasonableness of the electric utilities' capital additions expenses which were "incurred" after 1995.

Section 367 states in pertinent part:

The Commission shall identify and determine those costs and categories of costs for generation-related assets and obligations, consisting of generation facilities...(including) the appropriate costs incurred after December 20, 1995, for capital additions to generating facilities existing as of December 20, 1995, that the Commission determines are reasonable and should be recovered provided that these additions are necessary to maintain the facilities through December 31, 2001.

In recognition of § 367, we articulated our expectations of this review in D.97-09-048. There, we set forth certain criteria for evaluating the reasonableness of 1996 capital additions:

1. Consistency with recent capital budgets and expenditures for respective power plants;
2. The need for compliance with other regulatory requirements;
3. Cost-effectiveness; and
4. The impact of the capital addition on the unit's heat rate and output.

These various criteria were established to elaborate on the terms "reasonable" and "necessary" as they are used in § 367. They are not considered lightly. Our scrutiny of these generating costs is critical because our approval of them means they will be recoverable by way of the competitive transition charge (CTC), a surcharge which may not be bypassed by customers. The implication is that non-generation customers will assume certain costs of generation after the initiation of direct access. Edison's competitors are affected because they may not pass along such costs to Edison's nongeneration customers. The recovery of the costs anticipated in § 367 thereby creates a competitive advantage for Edison. In assessing the reasonableness of Edison's 1996 capital additions, therefore, we

must consider two competing concerns: the need to satisfy the requirements of § 367 and the effects on competition and captive customers of including such costs in the CTC.

As the parties have observed, this proceeding is distinguished from traditional reasonableness reviews. Normally, our review would emphasize whether the costs were reasonable in light of the information known at the time and consistent with industry practice. In this proceeding, however, resolving such questions would not be enough. Section 367 does not provide that all of Edison's capital additions that were reasonable may automatically be recoverable by way of the CTC. In addition to a finding of reasonableness, we must also find that Edison's capital additions were "necessary to maintain the facilities through December 31, 2001." In this proceeding, therefore, Edison may demonstrate that its investment decisions were reasonable in light of information it had at the time, reasonable in light of prevailing industry practice, and cost-effective, and yet fail to demonstrate that the capital additions qualify for recovery by way of the CTC. Such a result could occur because the capital additions were not "necessary to maintain" Edison's system through 2001. In that event, Edison is not denied an opportunity to recover those costs. Instead, it simply assumes the risk that they may not be recoverable in the competitive generation market.

We proceed to review Edison's 1996 capital additions in light of the statutory requirements and the criteria we established in D.97-09-048.

III. Edison's 1996 Capital Additions Budget

Edison's application seeks recovery of \$100.3 million in capital additions for 1996. Controlling for retirements and accounting adjustments, the net amount Edison would increase its rate base for the period in question is \$61.3 million.

Edison introduces its case by stating that its capital additions for 1996 were at levels below recent capital additions budgets and that many were required to ensure the safety of employees, to comply with regulation or legislation. It believes its investments were reasonable considering the circumstances and information available at the time they were made. Edison states that many of the 1996 capital additions were required to comply with environmental or safety regulations, and hydroelectric relicensing requirements. It argues that all of its capital addition were cost-effective, observing that it has sold its gas-fired facilities for almost twice their book value and believes that their market value is evidence of the value of maintaining the plants.

ORA proposes a \$31.6 million disallowance to the gross capital additions. TURN proposes disallowances totaling about \$25.6 million (from the table in the comparison exhibit). If the Commission were to adopt all of TURN and ORA's proposed disallowances, the amount would equal \$36.9 million.

TURN and ORA do not oppose Edison's investments in projects required to fulfill safety or environmental standards, regulatory or hydroelectric relicensing requirements. They do oppose recovery of some of the costs associated with investments designed to improve reliability and forestall obsolescence.

IV. Issues In the Proceeding

A. Is It Reasonable to Assume that Edison's Capital Additions are Cost-Effective on the Basis that Associated Generating Plant Sold at Levels above Book Value?

Edison argues that a reasonableness review of its 1996 plant additions is unnecessary because associated generating plant has sold at levels above book value. Edison argues that market has proven that its plants are economic by valuing them above their book value and that, accordingly, the

capital additions which are a part of those plants must also be economic and therefore reasonable.

ORA opposes Edison's contention in this regard. ORA argues that the book value of an Edison power plant is irrelevant to the cost-effectiveness and the reasonableness of the decision to install a capital addition. It argues that the market value of the power plant at the time of sale by itself is also irrelevant to the cost-effectiveness and reasonableness of the decision to install a capital addition. Instead, ORA proposes that the relevant issue is the difference between the market value before the capital addition was installed and the market value after the capital addition was installed minus the undepreciated value of the capital addition. The problem with undertaking such an analysis, according to ORA, is that the Commission does not know the market value of the plant prior to the time the plants were sold. Accordingly, the Commission must undertake a reasonableness review as a proxy for the market.

Section 367 provides explicit direction to the Commission in its assessment of post-1995 capital additions. It provides that related costs may be recovered "that the Commission determines are reasonable and...are necessary to maintain the facilities through December 31, 2001." This type of reasonableness standard would be meaningless if we were to accept the implication of Edison's position that any and all investments in generating plant are automatically reasonable if the market value of the plants exceeds the book value.

The test of whether a capital addition is reasonable is not whether the associated plant may be sold at levels above book value. The test is whether it adds to the value of the plant. That is, the cost of the investment should not exceed its value. Edison's proposal to measure the reasonableness of a capital addition by determining whether the plant is worth more than its book value

would not permit such an analysis. A capital addition could cost more than it is ultimately worth and yet still not bring the net value of the plant below book value in cases where the plant's market value was high enough to cushion the uneconomic investment.

We evaluate the standard Edison proposes here by considering the corollary view, namely, whether the fact that a plant sold below its book value was evidence that capital additions to that plant were automatically unreasonable. We find that it would not be because the capital additions might have mitigated the losses realized from the plant sale by adding value to the plant.¹

As Edison itself observes, § 367 requires that the Commission find that the capital additions were necessary to maintain the plant through the end of 2001. Edison's proposal to allow market values to determine whether an investment is recoverable would require us to ignore this requirement because market values of a facility provide no insight into whether an upgrade of that facility was required during any particular period.

We reject Edison's suggestion that we analyze the cost-effectiveness of its 1996 capital additions according to whether the market value of the plant exceeds book value.

**B. What Is the Appropriate Method for
Determining Cost-Effectiveness of Capital
Additions?**

Having determined that the sale price of the facilities is not a sound measure of the cost-effectiveness of the associated capital additions, we must

¹ In fact, Edison's brief states that it lost \$80 million on the sale of its Ormond Beach Generating Station. Edison does not propose that this loss is evidence of unreasonable capital additions in the Ormond Beach Generating Station.

determine how to determine whether or not the capital additions were cost-effective. The parties do not agree on the method for this determination.

Edison and ORA agree that the Commission should review 1996 capital additions by considering the information that was available at the time of the investment. They do not agree, however, on the appropriate cost-effectiveness measures.

Payback Periods. Edison's cost-benefit method generally assumes a payback period of 20 years,² consistent with the period it used in its test year 1995 general rate case and the long term nature of Standard Offer 4 contracts.

ORA and TURN assume a six-year payback period which purportedly "reflects the uncertainty as of 1994 and 1995 regarding the future revenue streams that underlie project benefits." ORA and TURN believe Edison inappropriately considered the physical life of a capital addition at the time of assessing their costs and benefits and should have instead considered the economic life of the capital additions. ORA and TURN believe Edison knew in the mid-1990s that its business environment was changing and should have modified its investment approach accordingly. They point to the Biennial Resource Plan Update (BRPU) decisions, the "Yellow Book" issued in 1993 as a precursor to our industry restructuring rulemaking, the Preferred Policy decision issued in R.94-04-031 and the Commission's general move in the direction of increased competition.

We agree with TURN and ORA that Edison knew its business environment was changing in ways that created additional uncertainty about how generation investments would be recovered. Nevertheless, we are not

² In evaluating some projects, Edison used a payback period based on the estimated project life, which may be longer or shorter than 20 years depending on the project.

convinced that Edison should have drastically changed its assumptions regarding the payback period of its capital additions. Edison's assumption of a 20-year payback is generally consistent with the approach the Commission has taken in general rate cases. During 1994 and 1995, we determined the ratemaking treatment of generation assets for Edison in general rate cases. Applying a six-year payback period for investments made during this period appears arbitrary. For example, why is six years more reasonable than three years or twelve years in the context of the policy changes which have evolved? Although Edison knew our intent to promote competitive generation markets by the early 1990s, Edison could not have known at that time how such changes would specifically affect ratemaking or the utilities' existing liabilities. Such issues were not resolved until the passage of AB 1890 in August 1996. Because Edison's 1996 capital additions were completed in 1996 but were initiated in the years prior to 1996, we find that a 20-year payback assumption is reasonable for 1996 capital additions. This does not preclude the Commission from considering different payback periods for subsequent investments in generation plant.

Appropriate Capacity Values. Edison states its estimates for capacity values are based on the cost of a combustion turbine. The source of its calculations is unclear from the record. Edison observes that its capacity value assumptions were originally provided to the Commission as part of a response to a data request issued in December 1994 in R.94-04-031.

ORA states as a preliminary matter that its analysis of capacity values assumes that the reliability of Edison's system should not be compromised. It also observes that regulation may provide an incentive for Edison to invest more than necessary in capital additions because capital additions reduce operation and maintenance (O&M) costs. The problem may arise, according to ORA, because regulatory treatment of capital additions and

O&M is different. Edison receives dollar-for-dollar recovery of capital costs approved by the Commission for § 367 treatment but Edison is at risk for its O&M costs because they must be recovered in the market. The utilities therefore have an incentive to overspend on capital additions in order to reduce O&M costs for which they are at risk.

In assessing the cost-effectiveness of Edison's capital additions, ORA and TURN use Edison's own forecasts of capacity values from the mid-1990s, as presented in the BRPU proceeding and used by Edison in evaluating qualifying facility (QF) projects. These estimates are based on the cost of a combustion turbine times the energy reliability index, a methodology adopted in previous Commission orders.³ TURN observes that Edison assigned significantly higher capacity values to its plants economic evaluations than it had to QF capacity evaluations. Edison responds that TURN's estimates were not available to Edison at the time it made the capital additions which were included in rate base for 1996 and which are the subject of this proceeding.

An important component of the BRPU proceeding was to estimate the value of capacity added to a utility system. In that proceeding, Edison presented estimates of capacity values on the basis of its analysis of system requirements. Those analyses were undertaken at about the same time Edison was or should have been assessing the cost-effectiveness of its own capital additions. Edison has presented no reason here to depart from the analyses it proposed in the BRPU proceeding and upon which it relied in paying QFs for capacity.

³ The document upon which ORA and TURN rely, dated May 23, 1995, is titled "Economic Justification Tables" and is included as Attachment D to Exhibit 33.

Edison states it did not have the BRPU capacity values when it made many of the investments for which it seeks full recovery here. On the other hand, Edison has not convinced us that the information upon which it would have the Commission rely in this proceeding was germane to Edison's decisions to invest in the capital additions which are the subject of this proceeding. To the contrary, the record does not clarify how Edison calculated the values it presents or otherwise provide any justification for their use.⁴

Moreover, we consider this matter in the context of the requirement in § 367 that we may only include in the CTC those capital additions that are "necessary to maintain" Edison's facilities through the end of 2001. In that context, it matters not at all whether Edison's investment decision in 1995 was reasonable if we now know that the capacity is not needed to maintain Edison's system through 2001. The arrangement struck in AB 1890, as we stated earlier, is

⁴ We explicitly reject Edison's argument that its estimates represent the Commission's views regarding appropriate capacity values. Edison reaches this conclusion by referring to an Administrative Law Judge (ALJ) data request issued in R.94-04-031 in December 1994. There, the ALJ directed Edison, PG&E, and SDG&E to estimate stranded generation investment assuming various market prices for energy. The purpose of the ALJ's data request was to estimate how market prices might affect utility stranded investment for the purpose of fulfilling an inquiry by the State Legislature. In its rebuttal testimony, Edison argues that the ALJ's data request is evidence that Edison's capacity value estimates "can not be considered unreasonable" on the basis that "SCE reasonably believed that the Commission itself, through an ALJ data request, thought capacity values would be much higher than SCE capacity values used in SCE cost effectiveness analyses of its 1996 capital additions." We clarify first that Edison wrongly assumes that the ALJ's data request held energy values constant for any particular purpose or even that the ALJ understood the significance of holding energy values constant. More critically, an ALJ data request is not evidence. It is certainly not evidence of what "the Commission" thought since the ALJ represents the substantive views of the Commission only to the extent his or her proposed decision is adopted by a majority of Commissioners. Edison therefore may not rely on an ALJ's data request as evidence of the Commission's views or even the ALJ's views on the subject of capacity values.

that even reasonable investments must be disallowed from CTC if they were not required to maintain the system through the end of the transition period. In that context, the use of BRPU capacity values actually gives Edison the benefit of the doubt since capacity values have fallen since that time.

We therefore assess the cost-effectiveness of Edison's capital additions by comparing them to the capacity values presented here by ORA and TURN and which formed the basis for QP payments in 1995. Consistent with our previous finding, we adjust ORA and TURN's numbers by extrapolating them out from six years to twenty years, an adjustment which is highly favorable to Edison in two ways. First, it assumes a much longer horizon for the usefulness of the capital additions. Second, we use Edison's proposal to assume an Energy Reliability Index (ERI) of 1.0 after 2001. The ERI adjusts capacity values to account for the system need for capacity. Therefore, an ERI which exceeds 1.0 reflects a condition of system shortage. An ERI below 1.0 suggests the system has more capacity than required. Since the ERI in the years prior to 2002 is between 0.1 and 0.35, assuming a jump to 1.0 in 2002 is highly favorable to Edison because its capacity additions are not discounted to recognize excess capacity in the system. The resulting capacity value which we compare to Edison's costs is therefore \$962/MW/day. Those projects which cost more (and which were not required to satisfy health, safety or regulatory requirements) will be disallowed from recovery in the CTC and therefore subject to the risk of recovery in the market.

Forced Outage Factor. In assessing the cost-effectiveness of 1996 capital additions, Edison multiplied BRPU capacity values times a "forced outage factor" of 2.47. Edison explains that this forced outage factor recognizes that in order to maintain system reliability it would have to build 2.47 megawatts to replace a single megawatt. Edison states it based this forced outage factor on the

results of a study completed "in the late 1980s." Edison observes that its 1996 capital additions projects are cost-effective even if the forced outage factor is not used, with one exception. The Huntington Beach Unit 5 Peaker Replace Control System project would no longer be cost-effective.

We reject Edison's use of a 2.47 forced outage factor. Edison presented no evidence either to support its use of the factor here to analyze past decisions or to demonstrate that it actually used such a factor at the time the capital additions were under consideration. Its witness believed the forced outage factor was recommended in a report but could not produce the report or recall its specific purpose, methodology or use. Further, Edison cites no Commission decision which adopted a forced outage factor to assess the cost-effectiveness of capital additions or new plant, the value of non-utility capacity on the utility system. To the contrary, the Commission has endorsed the use of a combustion turbine, adjusted for the ERI, in many decisions during the 1980s and 1990s. We have stated that our adopted methodology yields a simulated market value for reliability. (See, for example, D.91-11-057.) The method adopted for calculating QF payments in various decisions over the years is the same one we have found should be used to test the cost-effectiveness of proposed resource additions. (See, for example, D.88-03-079.) The Commission has never applied the multiplier Edison proposes here.

Finally, Edison presents no compelling logic to explain how, in order to maintain the reliability of the system, the company must build 2.47 units of capacity to replace a single unit. The proposal is weakened further when we consider that Edison would apply it to a period during which Edison argued before the Commission that the value of capacity was zero.⁵ Therefore, the method adopted here for testing the cost-effectiveness of Edison's capital additions will not include a forced outage factor.

⁵ As a procedural matter, Edison failed to identify the forced outage factor until it submitted supplemental rebuttal at the end of the proceeding. Having raised this factor, with suspect origins and negligible substantiation for the first time in supplemental rebuttal is highly improper.

TABLE 1

**1996 Capital Additions
Eligible for Recovery
(\$000)**

Fossil-Fired (Oil & Gas/Coal) Generation

Item	\$ Gross Additions	Recalculated B/C Ratio [✓]
(1) Safety, Environmental, Regulatory Mandated Projects	25,857	N/A
(2) Site Specific General	4,153	N/A *
(3) Maintenance Projects (a) Over \$100,000		
1320-4024 • Mohave • replace Units 1&2 furnace waterwalls	3,911	2.4
1610-0621 • Huntington Beach G- replace Units 1&2 North and South boiler feed	2,979	4.32
1214-0986 • Redondo • Unit 7 HP/IP overhaul	2,829	2.62
1330-0790 • Four Corners 94-14 replace Unit 5 economizer	2,744	1.58
1320-0449 • Mohave • cooling tower rebuild program	2,395	4.04
1330-0797 • Four Corners 94-11 main steam line Unit 5	2,193	2.16
1516-0833 • El Segundo install Unit 1&2 controls for monitoring shut	2,070	2.71
✓ 3393-0044 • Cool Water blanket-spare parts	1,415	1.70 N/A *
1320-0450 • Mohave • replace Unit 1 first point feedwater heaters	1,367	10.60
1712-0535 • Mandalay • add economizer section surface area, Unit 2	1,284	2.27
1214-0995 • Redondo • replace air compressor	1,267	2.13
1313-0805 • Etiwanda make-up demineralizer neutralization system & foundation	1,113	1.67
1321-0509 • Mohave Centrifuge, Unit 1, replace 2 each, 1A East and 1A West	1,058	2.68
1321-0501 • Mohave Centrifuge, Unit 2, replace 2 each, 2C East and 2C West	1,036	2.68
1321-0507 • Mohave Centrifuge, Unit 2, replace 2 each, 2J East and 2J West	1,035	2.68

✓ N/A = Not Applicable.

• Pending future review

Item	\$ Gross Additions	Recalculated B/C Ratio ^{2/}
1321-0506 - Mohave Centrifuge, Unit 2, replace 2 each, 2H East and 2H West	1,002	2.68
1321-0505 - Mohave Centrifuge, Unit 2, replace 2 each 2G East and 2G West	1,001	2.68
1321-0508 - Mohave Centrifuge, Unit 2, replace 2 each, 2K East and 2K West	961	2.68
1321-0500 - Mohave Centrifuge, Unit 2, replace 2 each, 2A East and 2A West	953	2.68
1321-0503 - Mohave Centrifuge, Unit 2, replace 2 each, 2E East and 2E West	940	2.68
1413-4192 - Alamitos - reconstruct to new Unit 4 HP turbine nozzle B	929	8.68
1712-0537 - Mandalay - Replace Unit 1 second point feedwater heater	569	1.96
1320-0476 - Mohave pwee-replace air preheater baskets on Units 1	513	10.91
1619-0626 - Placement of Units 3&4 long term reserve/add dehydrator	497	3.25
1214-0341 - Redondo - Unit 7 replace fourth point heater	484	1.14
1413-0394 - Alamitos - replace Unit 4 main boiler feed pump	447	1.75 *
✓ 1020-0044 - MDSS blanket - spare parts	443	N/A *
1330-0780 - Four Corners 94-16 auxiliary steam line modifications unit	433	N/A !*
1211-7740 - Redondo Unit 5&6 intake screenwell and outfall cross-T	415	3.06
1310-8036 - Etiwanda replace Unit 3 sootblowing service rotary air	376	1.49 *
1320-0472 - Mohave - replace Units 1&2 slurry loop piping between	374	2.37
3398-0412 - Cool Water replace CT-32 row 2 vane segments	367	7.44
3316-0494 - Long Beach - replace combustion turbine heat recovery boil	345	1.26
1410-1090 - Replace Unit 4 east and west circulating pump	320	2.76
1413-0389 - Alamitos - Replace Units 3&4 water chemistry monitoring system	318	2.52
3316-0495 - Long Beach - combustion turbine heat recovery boil	306	1.26
1413-0376 - Alamitos replace Unit 4 east and west circulating pump	305	2.93

^{2/} N/A = Not Applicable.

* Pending future review

Item	\$ Gross Additions	Recalculated B/C Ratio [✓]	
1712-0543 - Mandalay - Replace U/1 first point feedwater heater	301	8.93	
1313-4054 - Etiwanda - Replace 8th stage seals and packing	289	3.89	*
3318-0415 - Long Beach replace combustion turbine heat recovery boil	285	1.72	
1320-7731 - Mohave installation of centrifuge crane rail extension	280	1.79	
1414-0385 - Alamitos - Replace Units 5&6 water chemistry monitoring system	277	2.20	
3316-0464 - Long Beach purchase new turbine blades, vanes, heatshield	273	1.69	
✓ 1320-0044 - Mohave blanket-spare parts	269	N/A	*
1712-0544 - Mandalay - replace U/2 second point feedwater heater	263	8.62	
✓ 1516-0076 - El Segundo blanket-lab/test and tech equipment	246	N/A	*
✓ 1320-0100 - Mohave blanket-motors under \$25,000	241	N/A	*
1214-0335 - Redondo Unit 7 LP overhaul	234	3.13	
1214-0347 - Redondo PWEE-replace Unit 7 south boiler feed pump imp	232	9.94	*
1214-0981 - Redondo Units 7&8 controls replacement	224	2.09	*
3316-0496 - Long Beach replace combustion turbine/heat recovery boil	195	1.26	
3398-0407 - Cool Water CT 32 row 1 vane segments (complete row)	184	2.50	
1320-0486 - Mohave add crane north side Unit 1 centrifuge	180	1.79	
1712-0545 - Mandalay replace U2 no hot end APH baskets	178	2.50	
1320-0527 - Centrate piping modification	170	14.50	
1720-0528 - Ormond Beach replace boiler and turbine monitoring/display	169	6.31	
1712-0546 - Mandalay - Replace U/2 HP/IP turbine 12th stage buckets	166	3.53	
1712-0549 - Mandalay - Replace U/2 HP/IP turbine packing	154	2.32	
3398-7717 - Cool Water add air separator to spare gas turbine rotor	141	3.62	
1413-0374 - Alamitos replace Unit 4 1st stage reheat turbine blade	128	1.89	
1712-0538 - Mandalay - Replace Unit 2 first point feedwater heater	127	3.14	

✓ N/A = Not Applicable.

* Pending future review

Item	\$ Gross Additions	Recalculated B/C Ratio ^y
1413-0375 - Alamitos replace Unit 4 HP, IP and LP turbine packing	127	2.30
1214-0991 - Redondo replace impeller on Unit 7 north condensate PU	104	2.03 *
1612-7712 - Huntington Beach - Add one power operated control valve	102	1.74
1410-0365 - Replace Units 3&4 annunciator system	102	2.95 *
1310-8060 - Etiwanda - 4kV switchgear enclosure on Units 1&2	100	1.54
(b) Under \$100,000	1,932	N/A
Subtotal (3)	43,843	
Fossil-Fired Total (1), (2), & (3)	69,700	

Hydroelectric Generation

Item	\$ Gross Additions	Recalculated B/C Ratio
(1) Projects required to fulfill safety or environmental standards, regulatory or hydro relicensing	6,776	N/A
(2) Site Specific General Projects	2,685	N/A *
(3) Maintenance Projects cost-effective under PD method		
(a) Above \$100,000		
2130-0384 - Florence Lake-Resurface dam arches	2,371	14.5
2313-0469 - Kern River No. 1 - Rewind Unit 3 stator and replace core	761	3.4
2013-0471 - Kern River No. 1 - Replace trash rake	580	1.06
2230-0577 - Big Creek No. 3 - Replace No. 1 transformer bank	478	26.9
2229-0454 - Big Creek No. 3 - Replace circuit breakers	390	3.48
2230-0580 - Big Creek No. 8 - Replace circuit breakers	376	7.13
✓ 2237-0317 - Portal - Replace equipment damaged in fire	249	38.20 *

^y N/A = Not Applicable.

* Pending future review

Item	\$ Gross Additions	Recalculated B/C Ratio ^{2/}	
2234-8021 - Big Creek 2A - Replace U-fin cooler	217	347.29	*
2522-8002 - Bishop Creek No. 2 - Replace excitation	215	3.87	*
2237-8016 - Portal - Replace turbine shutoff valve	204	1.10	
0328-0438 - Kern River No. 3 - Upgrade	200	1.15	
supervisory control equipment			
2120-8020 - Shaver Dam - Install acoustic velocity meter	135	1.54	
2313-0470 - Kern River No. 1 - Upgrade	130	1.47	*
supervisory control equipment			
2211-8007 - Big Creek No. 1 - Repair asphalt paving	126	1.94	
2328-8072 - Kern River No. 3 - Replace powerhouse roof	101	3.46	*
(b) Under \$100,000 ^{2/}	1,308	N/A	
Subtotal (3)	5,945		
Hydroelectric Total (1), (2), & (3)	12,721		
Grand Total (excludes projects marked with an *)	82,421		

^{2/} N/A = Not Applicable.

^{2/} Vermilion Gate House project of \$14,000 removed.

* Pending future review

C. How Does the Cost-effectiveness Method Affect Individual Investments?

We apply the adopted cost-effectiveness principles to all projects to determine whether they may be recovered in the CTC. Table 1 identifies which projects qualify for recovery in the CTC. We do not discuss individual projects here except those for which an outstanding issue remains unresolved by our findings above with regard to the appropriate method of assessing cost-effectiveness.

Projects Costing Less than \$500,000. Of Edison's total requested 1996 capital additions budget, \$26 million is for projects that cost less than \$500,000.

TURN proposes disallowing \$13.3 million of Edison's request in this category on the basis that Edison failed to provide any analysis of the projects or their cost-effectiveness. TURN would permit recovery of those projects which appear to have been undertaken to promote safety or environmental quality.

Edison responds that its practice here is consistent with past practice in general rate case proceedings. It believes it demonstrated the cost-effectiveness of its small projects, using the forced outage factor and assuming a 20-year life. Edison observes that, unlike TURN, ORA does not argue that Edison failed to support its request for recovery of the small projects. Instead, ORA recommends disallowances on the basis that they are either associated with larger projects which ORA believes should not be funded or they are not cost-effective using ORA's assumptions regarding payback and capacity value.

Consistent with our earlier findings, the cost-effectiveness of a project should be measured using a 20-year payback period and eliminating Edison's 2.47 capacity factor multiplier. We make those adjustments for each

category. In addition, based on TURN's petition to set aside submission discussed more fully in section VI below, we have identified several projects under \$500,000 for which Edison did not provide cost justification on the record to date. These projects are marked with an "*" symbol in Table 1. We will not decide the fate of these projects at this time, but will issue a further ruling to set a schedule for Edison to provide justification for these projects.

Of Edison's total request of \$100.3 million in capital additions for 1996, about \$3.2 million is for projects under \$100,000. This amount includes \$1.9 million for fossil-fired generation and \$1.3 million for hydroelectric generation. Edison has grouped projects under \$100,000 together. When adopting a settlement, we noted in D.98-05-059 that the parties in PG&E's capital additions proceeding⁶ recommended that detailed information for projects under \$100,000 was not needed for PG&E. We stated that "we interpret this to mean that the parties wish to create a standard of regulatory review which is commensurate with the relative magnitude of the cost at issue, and we agree that this is a reasonable regulatory objective." We also clarified that our findings in that decision with respect to these projects did not bind the Commission in future proceedings. While the settlement is not precedential under our rules, we believe the reasoning that formed the basis for our approval remains sound. Under the facts and circumstances in this proceeding, given the large number of the projects under \$100,000 and the relative magnitude of the amount requested in this proceeding, we do not believe that it is necessary for this Commission to require Edison to provide detailed information on small projects under \$100,000.

⁶ Application (A.) 97-10-015.

Spare Parts. Edison requests \$2.6 million for five fossil projects which it identifies as "blanket" work orders. These projects are comprised of spare parts and equipment needed to maintain certain generating units.

We agree with Edison that having an appropriate supply of spare parts is necessary for maintenance of its generation system. Although Edison did not provide specific information on several projects with respect to spare parts, it made a reasonable argument that its investments in those spare parts were necessary to maintain its system. For example, in the case of the Cool Water Blanket Spare Parts, Edison stated that the availability of a spare rotor shortened the duration of the outage during the retrofit project.⁷ This shortened outage resulted in increased unit availability and overall system reliability, which benefited the ratepayers. However, despite this showing of necessity, Edison did not provide cost justification for these spare parts investments. Edison must either provide this cost-effectiveness justification, or provide further explanation why the Commission should deviate from D.97-09-048 which established cost-effectiveness as a required showing. The Commission will issue a further ruling setting forth a schedule for Edison to provide this cost-effectiveness showing for spare parts investments and other costs identified in this order and marked in Table 1 with an "*" symbol.

Furniture and Office Equipment. ORA would disallow about \$3.5 million for office equipment, furniture, telecommunications system upgrades, and personal computers. ORA argues that Edison has not met its burden to show that these items were required to maintain Edison's plant

⁷ See Edison's Exhibit 4, Rebuttal Testimony, March 13, 1998, p. 25.

through the end of 2001.⁸ Edison replies that the replacement of such equipment was necessary and reasonable.

Although it presented scant evidence to support its claim, Edison's witness made a reasonable argument that its investments in office equipment, furniture, telecommunications upgrades, and personal computers were necessary to maintain its system through the end of 2001. We do not accept ORA's assumption that Edison should have foregone any investments in new equipment for the same reasons we reject ORA's view that the appropriate payback period for evaluating cost-effectiveness should be six years. That is, Edison could not have known precisely how its obligation to serve or Commission regulation would change after the passage of AB 1890. We find that Edison has made a reasonable case that it required the furniture and office equipment capital additions to maintain generation plant through the end of 2001. However, Edison did not provide cost justification for the total amount of these expenditures, which are shown in Table 1 as "Site Specific General" costs for both fossil-fired and hydroelectric generation plants, and are marked with an "*" symbol. Edison must either provide this cost-effectiveness justification, or provide further explanation why the Commission should deviate from D.97-09-048 which established cost-effectiveness as a required showing. The Commission will issue a further ruling setting forth a schedule for Edison to provide this cost-effectiveness showing for these "Site Specific General" costs.

Green Lights Program. ORA would disallow all 1996 costs associated with Edison's Green Lights Program. Green Lights is a voluntary program sponsored by the US Environmental Protection Agency to encourage

⁸ ORA's witness went so far as to testify that he did not require any office furniture or a modern computer to do his job well.

businesses to install energy efficient lighting and appliances. ORA believes the Green Lights Program is not necessary to maintain Edison's generation plant, and thus does not meet one part of the statutory requirement for recovery. TURN argues for a partial disallowance of the Green Lights Program. TURN argues that Edison inappropriately calculates the cost-effectiveness of the program by comparing its costs to the full cost of electricity, including distribution, transmission and generation. TURN argues the correct comparison is to the ECAC rate or PX price since the associated conservation savings will only reduce generation costs.

Edison responds that its Green Lights program was cost-effective, approved in its 1995 general rate case and consistent with state policy.

Edison has not shown that the program improved lighting at its facilities. Edison's claims that because the program is consistent with state policy regarding conservation – a claim with which we can agree – and because Edison agreed to work with the EPA to show that environmentally friendly lighting systems could be installed and operated cost-effectively do not amount to a showing of necessity under the relevant Code Section. On the other hand, ORA does not provide any rationale for disallowance beyond a statement that the program was not necessary and that ORA does not support the Green Lights Program. ORA's lack of support of the program is irrelevant. Given that some lighting replacement would seem logically to be necessary to maintain the plants, the Green Lights program can reasonably be considered an alternative lighting maintenance program, and thus necessary. Therefore, the question becomes whether this program was the proper approach; i.e., was it cost-effective? Edison claims that the program was cost-effective, based on full utility tariffed rates. ORA agrees that the program was cost-effective, even if a seven-year recovery period is used instead of twenty years.

The record shows that the Green Lights Program was approved in the previous general rate case as a capital cost, and thus was considered cost-effective at that time. TURN's argument for partial disallowance because the actual savings – and thus the cost-effectiveness calculation – should be based solely on ECAC costs or the PX rate has merit. However, we will decide this issue in the same way as every other issue in this case: either full recovery is allowed or no recovery is allowed. The record as a whole shows that the Green Lights Program was cost-effective and should be approved for recovery.

V. Comments by Parties to Proposed Decision and Alternate Decisions

ORA, TURN, and Edison filed comments and reply comments to the proposed decision of the ALJ. Among other things, TURN observes that the table attached to the proposed decision and provided by Edison erroneously provides funding for projects which were not demonstrated to be cost-effective, as the decision requires. The table has been corrected accordingly.

Both ORA and Edison comment that the discussion of Edison's motion to strike portions of ORA's brief is legally unsound. Specifically, in its motion to strike Edison claimed that ORA had included extra-record material in its brief. The proposed decision denied Edison's motion, finding that the Commission's order was based on the record evidence of the proceeding and implying that the Commission does not strike portions of briefs. The ALJ modified the proposed decision by eliminating the discussion of Edison's motion to strike after ORA agreed that it had improperly included extra-record material in its brief.

Comments on the proposed decision were otherwise reiterations of earlier argument regarding the resolution of various issues.

Edison and TURN/ORA filed comments on the alternate order of President Bilas. Minor clarifications were made to the alternate in response to the comments of TURN/ORA. Otherwise, these comments reiterated previous

arguments and in other respects have been dealt with through the petition of TURN to set aside submission.

VI. Petition by TURN to Set Aside Submission and Reopen the Proceeding

Following the publication of the proposed decision of the ALJ and several alternate orders sponsored by Commissioners, TURN filed a petition to set aside submission and reopen the proceeding on January 29, 1999. TURN alleges infirmities in the proposed decision and the alternate decisions which TURN believes justify setting aside submission. On February 11, 1999, TURN filed a motion to withdraw its January 29 petition and filed a revised petition to set aside the proceeding. The revised petition is substantially similar to the original with the exception that TURN corrects "overstatements" presented in the first petition. We herein grant TURN's motion to withdraw the original petition. Edison filed a response to TURN's original petition which, according to a telephonic consultation from Edison's attorney to the assigned ALJ, adequately addresses matters in the revised petition. We address the parties' positions on the matters raised by TURN.

TURN argues first that Edison has not provided any cost-effectiveness analysis of certain projects costing less than \$500,000. TURN alleges that, instead, Edison improperly relied on workpapers presented to the Commission for the first time after the date of submission. Edison provided these workpapers to support its Table 1, in response to an ALJ ruling, dated September 21, 1998. The ruling directed Edison to prepare a table consistent with the findings of the proposed decision. Edison responds that the workpapers presented after the close of the record are based on record evidence "for the most part." A review of the record supports TURN's allegations in part. Edison failed to provide record evidence to justify the cost-effectiveness of over a dozen projects costing between

\$100,000 and \$500,000.⁹ The proposed decision explicitly found that Edison may not recover the costs of projects which it did not demonstrate to be cost-effective. Nevertheless, Edison included in its Table 1 projects which it had not demonstrated to be cost-effective, and provided extra-record information about the projects after the close of the record. In so doing, Edison violated a Commission ruling and a most basic principle of due process. Parties to the proceeding have not had an opportunity to analyze or comment on the new data and the Commission may not base the findings of a decision on extra-record material. Accordingly, this decision does not decide whether these projects may be recovered as capital additions. Instead, these projects are noted with an "*" symbol in Table 1 and a further ruling will set forth a schedule for Edison to demonstrate cost-effectiveness for these projects.

TURN also alleges that Edison erroneously included in its Table 1 projects which were not cost-effective using a 20-year payback period, consistent with the ALJ ruling. Edison responds that it requested funding for projects with payback periods in excess of 20 years. TURN is correct that the table Edison filed with the Commission assumed recovery for projects which were not cost-effective using a 20-year payback period, in contravention of the ALJ's September 21 ruling which required Edison to provide information consistent with the proposed decision. The proposed decision found that a 20-year payback period was reasonable. Following a review by the Commission staff, the assigned ALJ modified Table 1 to conform it to the intent of the proposed decision. We make a further adjustment here of approximately \$200,000 to recognize that the Portal turbine

⁹ Edison did provide record evidence of cost-effectiveness for some projects costing between \$100,000 and \$500,000. As shown in Table 1, these projects are eligible for recovery.

shutoff valve is not cost-effective using a 20-year payback period.¹⁹ Edison presented no justification for recovering projects for which the payback period exceeds 20 years. We cannot therefore approve funding for those projects. Table 1 attached to this order is consistent with our finding that a 20-year payback period is reasonable, consistent with Edison's position. We disallow about \$1 million on this basis.

TURN also alleges that Edison's Table 1 inappropriately assumes recovery of costs associated with projects which Edison did not demonstrate to be cost-effective. Specifically, TURN observes that Edison did not provide cost-effectiveness information for the projects listed under the category of "site specific general." Edison replies that the proposed decision found "site specific general" expenses to be reasonable. Edison states that the SCENet portion of these "site specific" costs was proven cost effective in its Test Year 1995 general rate case (GRC). We agree with TURN, although the proposed decision requires some clarification with regard to its intent. Edison made a reasonable case that certain of these items were required to maintain generation plant through the end of 2001 as the proposed decision recognizes. Edison did not, however, present any evidence that "site specific general" costs were cost-effective. Edison's Table 1 erroneously assumes those projects are recoverable even though they were not demonstrated to be cost-effective. To the extent the SCENet project was found cost effective in the 1995 GRC, Edison should not seek double recovery for these costs as a capital addition. If these are additional SCENet expenditures above and beyond the GRC request, Edison must show that the incremental investment is cost effective.

¹⁹ We could have also disallowed this project on the basis that SCE did not provide record evidence of its cost-effectiveness.

We have modified this alternate decision to state that the Commission will issue a further ruling to set a schedule for Edison to demonstrate the cost-effectiveness of these "site specific general" costs which we have also denoted with an "*" symbol in Table 1. We therefore grant TURN's petition to set aside submission and reopen the proceeding in part. The proceeding will be reopened only for the purpose of considering whether or not to allow Edison to recover the items marked with a "*" symbol in Table 1 or present justification for a deviation from this cost-effectiveness criteria. TURN's petition is denied in all other respects.

Findings of Fact

1. The findings of this decision affect the extent to which Edison will sustain a competitive advantage in electric markets because its competitors will not be able to recover capital costs by way of a surcharge which the customer cannot avoid.

2. The sale price of a utility generating plant does not resolve the reasonableness of a capital addition to the plant and would not fulfill the requirement of § 367 that the Commission determine whether the capital addition was required to maintain the plant through the end of 2001.

3. The regulatory environment during the period over which Edison made its capital additions was changing but Edison could not have known at the time how such changes would specifically affect ratemaking, liability for existing assets, or obligations to serve.

4. Edison does not justify the capacity values it would assign to capital additions in determining their cost-effectiveness.

5. Edison does not justify the use of a "forced outage factor" for evaluating the cost-effectiveness of its capital additions and does not adequately explain why it must build 2.47 units of capacity to replace a single unit of capacity.

6. In D.98-05-059 the Commission noted that the parties in that proceeding had agreed that detailed information for projects under \$100,000 was not needed for PG&E.

7. Given the large number of the projects under \$100,000 and the relative magnitude of the amount requested in this proceeding, it is not necessary for this Commission to require Edison to provide detailed information on these projects.

8. Edison made a reasonable showing that its investments in spare parts were required to maintain its system reliability through the end of 2001, but did not provide cost-effectiveness justification for these investments.

9. Edison makes a reasonable argument that its investments in furniture and office equipment were required to maintain its system through the end of 2001, but it has not provided cost-effectiveness justification for any items in the "site-specific general" category.

10. The Green Lights Program is generally consistent with the Commission's policy to encourage conservation, is necessary to maintain plants through 2001, and is cost-effective.

11. Edison did not provide cost justification for several projects costing under \$500,000 which are denoted with an "*" in Table 1.

Conclusions of Law

1. In recognition of the requirements of § 367, this proceeding is distinguished from a traditional reasonableness review in that, in order for the Commission to permit recovery of subject investments in the CTC, Edison must demonstrate that its investments were required to maintain its system through 2001 as well as demonstrating that the investments were otherwise reasonable.

2. It is reasonable to apply a 20-year time horizon rather than a six-year time horizon in assessing the cost-effectiveness of Edison's capital additions. A longer time horizon is not reasonable because Edison did not justify a longer period.

3. It is reasonable to evaluate Edison's capital additions by comparing them to the values assigned to QF projects in the Commission's BRPU proceeding, as ORA and TURN propose.

4. It is reasonable to permit CTC recovery of projects costing less than \$500,000 to the extent Edison has provided cost justification for these projects. The Commission should issue a ruling setting forth a schedule for Edison to provide cost justification for those projects under \$500,000 denoted with an "*" in Table 1.

5. It is reasonable to permit recovery of projects costing less than \$100,000 in this proceeding.

6. The Commission should issue a further ruling setting a schedule for Edison to either demonstrate the cost-effectiveness of its spare parts investments and "site specific general" investments, which include costs of office furniture and related equipment, or provide further explanation why the Commission should deviate from the criteria set forth in D.97-09-048.

7. The cost of the Green Lights program should be recoverable in the CTC, consistent with § 367 requirements that the program must be demonstrated to be required to maintain the system through the end of 2001.

8. The Commission should permit Edison to recover in its CTC the costs of those capital additions which are consistent with this decision as presented in Table 1.

9. TURN's petition to set aside submission for the purpose of taking additional evidence should be granted in part so that the Commission may examine cost justification for Edison's "site specific general" costs, spare parts, and certain projects less than \$500,000, all of which are denoted with an "*" in Table 1.

INTERIM ORDER

IT IS ORDERED that:

1. The application of Southern California Edison Company (Edison) for recovery of certain capital additions pursuant to § 367 of the Public Utilities Code is granted to the extent set forth herein and consistent with Table 1 of this decision. Edison shall adjust the Transition Cost Balancing Account (TCBA) and shall do so in a way that does not provide for double recovery of authorized amounts, or recovery of disallowed amounts, a circumstance which might occur in cases where net proceeds from divested plant have recognized subject capital additions and have been authorized as credits to the TCBA.
2. Application 97-10-024 will remain open for further submittals as set forth in this decision, in a manner to be detailed in a further ruling.
3. TURN's motion to withdraw its petition to set aside submission, dated January 29, 1999, is granted.
4. The revised petition of The Utility Reform Network to set aside submission and reopen the proceeding for the taking of additional evidence, dated February 11, 1999, is granted in part to the extent set forth herein and in all other respects is denied.

Dated March 18, 1999, at San Francisco, California.

RICHARD A. BILAS
President
HENRY DUQUE
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