# Exhibit C SCE Depreciation Testimony in 2015 CPUC General Rate Case

#### **DOCKET**

## of DANE A. WATSON

### on behalf of SOUTHERN CALIFORNIAL EDISON COMPANY

(Revenue Requirement)

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#### **Table of Contents**

Gloss	ary o	f Acronyms and Defined Terms	2							
I.	WITNESS IDENTIFICATION AND QUALIFICATIONS									
II.		ASSIGNMENT AND SUMMARY OF CONCLUSIONS								
III.		PRECIATION ANALYSIS PHILOSOPHY								
IV.	SC	E BOOK DEPRECIATION STUDY	14							
	A.	Summary of the SCE Study	14							
		Overview of Depreciation Study Method								
		Production and Other Production Plant								
		1. Life of Assets	18							
		2. Net Salvage of Production and Other Production Assets	20							
		3. Depreciation Rate for Production and Other Production Assets								
	D.	Transmission, Distribution, and General Property	22							
		1. Life of Transmission, Distribution, and General Assets								
		2. Net Salvage Rates Transmission, Distribution, and General	24							
		3. Depreciation Rates for Transmission, Distribution, and General								
		Property	25							
	E.	Vintage Year Depreciation of General Plant Assets, FERC Accounts								
		391-398	27							
V.	CO	NCLUSION								
AFFI		IT								

#### Glossary of Acronyms and Defined Terms

Acronym/Defined Term	Meaning
AR-15	FERC Accounting Release 15
BG	Broad Group
Commission	California Public Utility Commission or ("CPUC")
Depreciation Study	SCE Book Depreciation Accrual Rate Study at December 31, 2012
EEI	Edison Electric Institute
FERC	Federal Energy Regulatory Commission
IEEE	Institute of Electrical and Electronics Engineers
SDP	Society of Depreciation Professionals
SCE	Southern California Edison Company
SPR	Simulated Plant Record Method
SP U-4	Standard Practice U-4

1 2		DIRECT TESTIMONY OF DANE A. WATSON
3		I. WITNESS IDENTIFICATION AND QUALIFICATIONS
4	Q.	Please state your name and business address.
5	A.	My name is Dane A. Watson. My business address is 1410 Avenue K, Suite
6		1105B, Plano, Texas 75074.
7	Q.	By whom are you employed and in what position?
8	A.	I am a Partner of Alliance Consulting Group. Alliance Consulting Group
9		provides consulting and expert services to the utility industry.
10	Q.	On whose behalf are you testifying in this proceeding?
11	A.	I am filing testimony on behalf of Southern California Edison Company ("SCE"),
12	Q.	Please describe your educational background.
13	A.	I hold a Bachelor of Science degree in Electrical Engineering from the University
14		of Arkansas at Fayetteville and a Master's Degree in Business Administration
15		from Amberton University.
16	Q.	Please describe your professional experience.
17	A.	Since graduation from college in 1985, I have worked in the area of depreciation
18		and valuation. I founded Alliance Consulting Group in 2004 and am responsible
19		for conducting depreciation, valuation, and certain accounting-related studies for
20		clients in various industries. My duties related to depreciation studies include the
21		assembly and analysis of historical and simulated data, conducting field reviews,
22		determining service life and net salvage estimates, calculating annual
23		depreciation, presenting recommended depreciation rates to utility management
24		for its consideration, and supporting such rates before regulatory bodies.

My prior employment from 1985 to 2004 was with Texas Utilities Electric
Company and successor companies ("TXU"). During my tenure with TXU, I was
responsible for, among other things, conducting valuation and depreciation
studies for the domestic TXU companies. During that time, I served as Manager
of Property Accounting Services and Records Management in addition to my
depreciation responsibilities.

I have twice been Chair of the Edison Electric Institute ("EEI") Property Accounting and Valuation Committee and have been Chairman of EEI's Depreciation and Economic Issues Subcommittee. I am a Registered Professional Engineer in the State of Texas and a Certified Depreciation Professional. I am a Senior Member of the Institute of Electrical and Electronics Engineers ("IEEE") and served for several years as an officer of the Executive Board of the Dallas Section of IEEE. I am also currently Past-President of the Society of Depreciation Professionals.

#### 15 Q. Do you hold any special certification as a depreciation expert?

Yes. The Society of Depreciation Professionals ("SDP") has established national standards for depreciation professionals. The SDP administers an examination and has certain required qualifications to become certified in this field. I met all requirements and hold a Certified Depreciation Professional certification.

#### Q. Have you previously testified at any regulatory commission?

Yes. I have conducted depreciation studies and filed testimony or testified on depreciation and valuation issues numerous regulatory bodies as listed in my Attachment F of this exhibit.

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#### II. ASSIGNMENT AND SUMMARY OF CONCLUSIONS

- 2 Q. What is your assignment in this proceeding?
- 3 A. The purpose of my testimony is to:
- Discuss the recent SCE Book Depreciation Accrual Rate Study at
   December 31, 2012, completed for SCE assets ("Depreciation Study");
   and support and justify the recommended depreciation rate changes for
- 7 SCE assets

- 8 Q. Are any assets not included in your depreciation proposal in this proceeding?
- 9 A. Yes. I have excluded from my testimony depreciation proposals for the San
- Onofre Nuclear Generating Station, Mohave Generating Station, and Four
- 11 Corners Generating Station. These have special circumstances around them and
- SCE is sponsoring testimony regarding the cost recovery periods for those assets.
- Additionally, SCE is addressing costs associated with the decommissioning of
- Mountainview units 1 and 2 as well as Solar 2.
- 15 Q. Please summarize your conclusions regarding depreciation rate changes for
- 16 SCE assets based on the results of the Depreciation Study.
- 17 A. The Depreciation Study and analysis performed under my supervision fully
- support SCE's proposed depreciation rates. The Depreciation Study shows SCE's
- proposed rates applied to year-end 2012 depreciable plant balances. The change
- in depreciation expense as compared to the depreciation rates approved in the
- 21 Company's 2012 GRC applied to December 31, 2012 investment is an increase of
- approximately 7.66 percent or \$106 million. The Depreciation Study follows the
- Commission's long-standing precedent for straight line depreciation in

8	Q.	How is the Depreciation Study used to determine SCE's depreciation expense
7		remaining life of the assets.
6		in order to recover SCE's total investment in property over the estimated
5		depreciation rates should be set at the levels supported in the Depreciation Study
4		adopt the life and net salvage parameters proposed in this study. SCE's
3		benefit. In order to ensure intergenerational equities, the Commission should
2		customers are charged for their appropriate share of the capital expended for their
1		accordance with the CPUC Standard Practice U-4 ("SP U-4"). In this way, all

## 8 Q. How is the Depreciation Study used to determine SCE's depreciation expense 9 for the Test Year?

SCE uses depreciation rates determined in the Depreciation Study to calculate the appropriate depreciation expense for the Test Year. The information presented in the Depreciation Study is based on 2012 year-end depreciable plant balances and all of the conclusions are based on those balances.

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#### III. DEPRECIATION ANALYSIS PHILOSOPHY

2	Q.	Please describe the depreciation analysis philosophy reflected in the current
3		Depreciation Study.

- The objective of any sound depreciation philosophy should be the matching of expense with revenue over the life of the asset. Revenue, in this context, represents the ability of an asset to generate value, or usefulness—in other words, the useful life. In general, the life of the asset is determined by several factors including the rate of physical deterioration, obsolescence, weather, maintenance, or (in some cases) the economic usefulness of an entire operating unit. The function of depreciation is to recognize the cost of an asset spread over its useful life. Book depreciation techniques should not accelerate or defer the recovery of an asset in comparison to its appropriate useful life in order to maintain intergenerational equity.
- 14 Q. What objective should the Commission strive to achieve in setting depreciation rates?
  - A. The objective of computing depreciation is to ensure that all customers using the assets pay their pro rata share for the investment, including the cost of retirement. This objective is achieved by allocating the cost or depreciable base of a group of assets over the service life of those assets, on a straight line basis, by charging a portion of the consumption of the assets to each accounting period.

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Q. Is this objective consistent with Commission rules and historic practice?

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- Yes. As evidenced by SP U-4 and the Commission's prior rate decisions, the
  Commission has a long standing practice of establishing depreciation rates using
  the straight line depreciation method based on the actual historic data of the
  utility. The straight line method of depreciation operates by collecting a pro rata
  share of the cost of the investment, including removal cost, from all customers
- Q. What is the best evidence that the Commission can rely on to ensure that thecost of certain assets are ratably recovered over the service life of the asset?

that use the asset over its useful life.

- 10 A. The best evidence is the actual experience of the specific group of assets being analyzed. This evidence is found in the Depreciation Study based on plant investment in service at December 31, 2012.
- Q. What happens when depreciation rates are not adjusted to reflect the actual life and retirement characteristics of the assets?
  - A. When depreciation rates are set at a level that does not reflect the actual life and retirement characteristics of a utility's assets, the cost of the asset will not be recovered on a pro rata basis from all customers that use the asset. For example, in instances where the net salvage rate for certain plant accounts is set at a level that is insufficient under current and projected conditions to recover the cost of the asset, SCE will not accrue a reasonable level of removal cost over the useful life of the plant asset. This, in turn, means that future customers will have to pay a disproportionate share of the removal costs to make up for the payment deferrals.

#### Q. Is the situation you just described at issue in this case?

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2 Α. Yes. Removal cost has been increasing over time, which calls for a higher 3 negative net salvage component (mitigated by longer lives) and a slight increase 4 in the depreciation rates to reflect this fact. SCE's depreciation reserve position 5 (where the actual depreciation reserve is lower than theoretically indicated) is evidence of the historical under recovery of costs through depreciation rates. 6 7 Consequently, these amounts, as well as all remaining investment, should be recovered on an equal basis from current and future customers within the 8 9 estimated remaining life of the assets.

## Q. What actions should be taken in order to remedy the changes in life and net salvage?

The Commission should approve SCE's proposed depreciation rates which accurately reflect service life and net salvage projections and experience for SCE's existing assets. The depreciation rates proposed in the Depreciation Study accurately reflect SCE's current experience and future expectations and also allow for the recovery of depreciation expense that has been under-accrued in the past. In addition, adoption of the proposed depreciation rates should ensure, on a going forward basis, that current SCE customers pay their pro-rata share of the investment over the remaining life of the investment. This ensures that future customers are not unduly burdened by having to pay a disproportionate share of any remaining investment balance for removal costs at the end of the asset's life.

- Q. With historical net salvage rates more negative than what you are recommending, why do you believe the proposed net salvage rates are reflective of future expectations?
- 4 Α. There are many factors and pressures that will continue to increase the actual 5 removal cost necessary to retire assets over time and resulting net salvage rates 6 will likely continue to increase in the near future. The accuracy of the industry-7 standard Compatible Unit estimating process ensures that the appropriate costs are captured as removal costs. However, some historical changes in accounting that 8 9 occurred in the 1990's and 2000's (such as more accurately allocating or charging 10 construction-related activities to capitalized asset costs and removal cost) had a more immediate effect on the removal costs than it did on the asset base that is 11 12 being retired in the net salvage calculations. The calculation of the net salvage 13 percentage uses the following formula:

Net Salvage Ratio = (Gross Salvage – Removal Cost) / Cost of retired Assets

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The net salvage percentage is calculated by dividing the net salvage spent by the asset cost being retired. The temporarily lower basis for the denominator (asset cost) in the net salvage percentage formula (caused by the assets recently retired generally not receiving the higher level of loading), would cause the percentage to be more negative than expected in the future when the asset cost basis (with the higher loading on later additions) catches up to the removal cost. All else equal, as SCE moves forward in time, it is anticipated that eventually the experienced net salvage rates may stabilize and perhaps moderate to some degree from the rates currently being experienced as it relates to these accounting changes. While

these changes are not quantified, the depreciation study net salvage recommendations are very conservative as compared to the historical indications, in part, in order to reflect this difference. It should be noted that there are other factors (such as inflation, additional governmental and environmental requirements, etc.) that may move in the other direction and continue to move the net salvage factors more negative over time.

#### Q. Have you reviewed SCE's removal cost allocation practices?

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Yes. I have analyzed the process that SCE uses to allocate costs between construction and removal. For most types of projects using internal or contract labor, SCE uses a sophisticated set of allocation percentages based on the type of project and configuration of assets to determine the capital cost and removal cost for a project. The levels of work effort for construction and removal activities are separately defined and the portion of total work effort related to removal activities is the basis for the allocation of labor costs to removal. For other types of projects, the field will directly charge time spent on removal activities to a removal work order. The methodology and detailed nature of SCE's process ensures the appropriate allocation of cost.

Will the theoretically higher current cost of emergency-related replacements or overtime work affect the projection of future removal percentages?

No. Over the past few years, the percentage of labor related to normal and "premium" labor has been very constant. It is simply speculation that as the assets get more mature, and therefore have higher levels of planned replacements, that the retirements related to emergency work will decrease as a percentage of

total retirements. In reality, with the significant replacement programs currently
in place, the facts that the level of premium labor hours is fairly constant in light
of those programs and that the realized net salvage percentages are increasing
would tend to anecdotally negate that conclusion. There is as strong a rationale
that the exact opposite could occur. Some emergency work will be due to non-
age related causes such as cars hitting poles. For these types of events, the level
of replacement programs, the condition-related inspection programs and the age
of the assets would not logically be coincident with whether emergency work was
performed. In addition, as the assets get older, it is also logical to assume that
more of the assets will fail and require emergency work due to age, not less.
Related to the concept of less overtime being required when there is more
"scheduled" replacement work, logic would also dictate the possibility of just the
opposite – the more work that is scheduled with a finite number of workers, the
fewer normal hours available to do work other than the "scheduled" work. Under
that paradigm, more overtime would be necessary, not less.

#### IV. SCE BOOK DEPRECIATION STUDY

#### 2 A. Summary of the SCE Study

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#### 3 Q. Have you prepared a Depreciation Study for SCE?

- 4 A. Yes. I undertook a comprehensive analysis of annual depreciation for SCE that is
  5 based on SCE's depreciable plant in service as of December 31, 2012. The
  6 Depreciation Study analyzed the property characteristics of SCE's production
  7 plant, other production plant, transmission plant, distribution plant, and general
  8 plant and proposes depreciation rates for these assets. The study report is in this
  9 exhibit, following the testimony.
- 10 Q. What depreciation rates are you recommending in this proceeding?
- 11 Α. My recommended depreciation rates for SCE are provided in Appendix A of this 12 exhibit. Based on updated service life and net salvage rates for SCE's depreciable plant in-service as of December 31, 2012, I derived the appropriate depreciation 13 14 rates for production plant, other production plant, transmission plant, distribution 15 plant and general plant. As discussed previously, I am not proposing depreciation 16 rates for the San Onofre Nuclear Generating Station, Mohave Generating Station, 17 or the Four Corners Generating Station. The Company has elected to address 18 those assets given the unique circumstances.
- 19 Q. When did the last change in SCE's depreciation rates occur?
- 20 A. The last change in SCE's depreciation rates became effective as a result of the 21 2012 GRC.
- Q. Are you recommending changes from the lives and net salvage approved in the 2012 GRC?

- 1 A. Yes. I am recommending extending lives in many of the accounts and moving to
  2 a more negative net salvage to reflect the higher level or removal cost being
  3 experienced by SCE.
- 4 Q. What has changed since the Company's last comprehensive depreciation5 study?

In general, the depreciation study indicates an increase in lives in a number of accounts. Within the Transmission and Distribution function, seven accounts are experiencing longer lives, one account is experiencing a shorter life and the lives for the remaining accounts remain the same as approved in the 2012 GRC with a few minor dispersion curve changes. Net salvage for the majority of SCE's asset accounts are reflecting an increasingly negative percentage with five accounts remaining the same and one account net salvage moving less negative. The removal costs for transmission and distribution plant continues to rise. Including three more years of experience in the life and net salvage analysis allows a better understanding of the trends exhibited over time in the historical experience. In addition, with all else being equal, inflation alone will move the net salvage factors more negative simply from extending lives (as done in the Company's recommendations). More detailed analysis is provided in later sections and in the Depreciation Study report.

20 B. Overview of Depreciation Study Method

Q. What definition of depreciation did you use in preparing your Depreciation Study and testimony?

The term "depreciation," as I use it, is a system of accounting that distributes the cost of assets, less net salvage (if any), over the estimated useful life of the assets in a systematic and rational manner. It is a process of allocation, not valuation. Depreciation expense is systematically allocated to accounting periods over the life of the assets. The amount allocated to any one accounting period does not necessarily represent the loss or decrease in value that will occur during that particular period. Thus, depreciation is considered an expense or cost, rather than a loss or decrease in value. SCE accrues depreciation based on the original cost of all property included in each depreciable plant account. On retirement, the full cost of depreciable property, less any net salvage amount, is charged to the depreciation reserve.

#### Q. Please describe your Depreciation Study approach.

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I conducted the Depreciation Study in four phases. The four phases are: Data Collection, Analysis, Evaluation, and Calculation. I began each of the studies by collecting the historical data to be used in the analysis. After the data had been assembled, I performed analyses to determine the life and net salvage percentage for the different property groups being studied. As part of this process, I conferred with field personnel, engineers, and managers responsible for the installation, operation, and removal of the assets to gain their input into the operation, maintenance, and salvage of the assets. The information obtained from field personnel, engineers, and managerial personnel, combined with the study results, is then evaluated to determine how the results of the historical asset activity analysis, in conjunction with SCE's expected future plans, should be

1 applied. Using all of these resources, I then calculated the depreciation rate for each function.

#### Q. What property is included in the Depreciation Study?

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There are five distinct classes of property in this study: Production, Other Production, Transmission, Distribution, and General Property. The Production plant functional group consists of all structures, boiler plant equipment, turbogenerator equipment, equipment, accessory electrical and other miscellaneous assets used to generate electricity at SCE's power plants. The Other Production function consists of similar assets used at SCE's combustion turbine and solar facilities. The Transmission plant functional group consists of structures, substations, and transmission lines used in the transmission of energy to the distribution system. The Distribution plant functional group consists of structures, substations, transformers, meters, services, distribution lines, guard lights and street lighting used in the distribution and end use of energy on the distribution system. The General plant functional group contains facilities associated with the overall operation of the business such as land and water rights, office equipment and computers rather than with a specific transmission, or distribution classification.

#### Q. What depreciation methodology did you use?

The Broad Group ("BG"), straight-line, remaining-life depreciation system, was employed to calculate annual and accrued depreciation in the studies for all plant except small dollar item assets found in FERC Accounts 391-398. The BG methodology is the same method used in prior studies and has been approved by

- this Commission in prior dockets both for SCE and other companies within
- 2 California.

#### 3 C. Production and Other Production Plant

- 4 1. Life of Assets
- 5 Q. Please describe the methodology you used to determine life for production
- 6 and other production plant.
- 7 Α. For Production and Other Production plant, most components are expected to 8 have a retirement date concurrent with the planned retirement date of the 9 generating unit. The terminal retirement date refers to the year that each facility 10 The terminal retirement date along with the interim will cease operations. 11 retirement characteristics of the individual assets that will retire prior to the 12 facility ceasing operation, describe the pattern of retirement of the assets that 13 comprise a generating unit. The estimated terminal retirement dates for the 14 various generating units were determined based on consultation with SCE 15 management, financial, and engineering staff and are shown in Appendix D. 16 Interim retirement rates were determined using historical analysis of the past 10 17 years of retirements along with professional judgment.
  - Q. What is an interim retirement rate?

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An interim retirement rate uses Company history for each account and functional group projects how many of the assets or units within a facility that are currently in-service will retire each year prior to the final retirement of the whole facility, using historical analysis and judgment. The life span procedure assumes all assets are depreciated (straight-line) for the same number of periods and retire at the

same time (the terminal retirement date). Adding interim retirement rates to the procedure reflects the fact that some of the assets at a power plant will not survive to the end of the life of the facility, but will be retired earlier than the terminal life of the facility and should be depreciated (straight-line) over a shorter time frame to match their projected lives.

In this study, we analyzed each account separately to estimate an interim retirement rate for FERC Accounts 331-336. No assets in Accounts 311-316 were included in study. Assets in the Other Production (FERC Accounts 341-346) function have very limited retirements, so no interim retirement curve is incorporated for those units.

- Q. Is this the typical approach that Alliance Consulting Group uses in a production depreciation rate computation?
  - A. No. Typically, Alliance uses an Iowa curve modeled to project interim retirements. SCE has used the interim retirement rate methodology in its GRC cases stemming back to the early 1980's. An interim retirement rate provides similar results although the interim retirement rate method will not as effectively reflect the changing pattern of retirements over the life of the assets as will the interim retirement curve method. Since the interim retirement rate methodology was approved by the CPUC in prior proceedings, it is used in this study.
- Q. Why is it critical to include interim retirements in the depreciation rate computation?
- A. Interim retirements model how plant assets are actually retired prior to a terminal retirement of an entire facility. Excluding interim retirements means that in the

- 1 future all production investment will remain in service for depreciation purposes,
- 2 until the facility retires, even though some of those assets will be functionally
- 3 retired.

#### 4 2. Net Salvage of Production and Other Production Assets

- 5 Q. What is the significance of net salvage rates for SCE Plant assets?
- 6 A. In general, net salvage values are the amount received for retired property
- 7 (salvage) less any costs incurred to sell or remove the property (removal). When
- 8 salvage exceeds removal (positive net salvage), the net salvage reduces the
- 9 amount to be depreciated over time. When removal exceeds salvage (negative net
- salvage), the negative net salvage increases the amount to be depreciated. In this
- Depreciation Study, the net salvage percentages were calculated for each property
- 12 account.
- 13 Q. What are the currently approved net salvage values for Production and
- 14 Other Production assets?
- 15 A. The currently approved net salvage rates for Production, Nuclear, Hydro and
- Other Production are shown in Appendix C..
- 17 **3. Depreciation Rate for Production-related Assets**
- 18 Q. Please describe the results of the Depreciation Study for Production Plant.
- 19 A. The results of the analysis conducted in the Depreciation Study, based on the
- service life of production assets and the revised net salvage rates, resulted in a
- 21 decrease to SCE's depreciation rates for production plant. SCE's present
- depreciation rates were compared to the Depreciation Study recommendations in

1	Appendix B.	The rate	es proposed	for	Production	assets	would	be a	decrease	of
2	approximately	11.1 pe	cent from S	SCE'	s present de	preciat	ion rate	es.		

- Q. Please describe the major changes that resulted in the decrease in Steam
   Production Plant depreciation rates.
- 5 A. The major reasons for the decrease in depreciation rates are from changes in the
  6 decommissioning estimates due to base year updates and slightly higher inflation
  7 analyses, new investment added to plant since the last GRC, and the life extension
  8 for Palo Verde.
- Q. Please describe the results of the Depreciation Study for Nuclear Production
   plant.
- 11 A. The results of the analysis conducted in the Depreciation Study, based on the 12 service life and the revised net salvage rates, resulted in a decrease to SCE's 13 depreciation rates for Nuclear Production plant based solely on the results for the SCE's present depreciation rates were compared to the 14 Palo Verde assets. 15 Depreciation Study recommendations in Appendix B. The rates proposed for Nuclear Production assets would be a decrease of approximately 62.1 percent 16 17 from SCE's present depreciation rates. This is driven primarily by the 20 year life 18 extension for Palo Verde.
- Q. Please describe the results of the Depreciation Study for Hydro Productionplant.
- A. The results of the analysis conducted in the Depreciation Study, based on the service life and the revised net salvage rates, resulted in an increase to SCE's depreciation rates for Hydro Production plant. SCE's present depreciation rates

were compared to the Depreciation Study recommendations in Appendix B. The rates proposed for Hydro Production assets would be an increase of approximately 24.4 percent from SCE's present depreciation rates. This is driven primarily by slight changes in interim retirement rates and new investment added since the last GRC.

## Q. Please describe the results of the Depreciation Study for Other Production plant.

The results of the analysis conducted in the Depreciation Study, based on the service life and the revised net salvage rates, resulted in a decrease to SCE's depreciation rates for Other Production plant. SCE's present depreciation rates were compared to the Depreciation Study recommendations in Appendix B proposed for Other Production assets would be a decrease of approximately 2.6 percent from SCE's present depreciation rates. This is driven primarily by the change in depreciation rate attributable to the retirement of Mountain View Units 1 and 2, additional investment added since the last GRC, and updates in the decommissioning amounts.

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#### D. Transmission, Distribution, and General Property

1. Life of Transmission, Distribution, and General Assets

#### Q. What is the significance of an asset's useful life in your Depreciation Study?

A. An asset's useful life is used to determine the remaining life over which the remaining cost (original cost plus or minus net salvage, minus accumulated depreciation) can be allocated to normalize the asset's cost and spread it ratably

over future periods and provide intergenerational equity between generations of customers.

#### Q. How did you determine the average service lives for each account?

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- The establishment of appropriate average service lives for each account within a functional group was determined by using the Simulated Plant Record ("SPR") method. Graphs and tables supporting the SPR analysis and the chosen Iowa Curves (which represent the percentage of property remaining in service at various age intervals) used to determine the average service lives for analyzed accounts are found in the SCE Depreciation Study Report and the workpapers. As detailed in the study, I relied on SCE subject matter experts and my experience from nearly thirty years of conducting depreciation studies to incorporate any differences in the expected future life characteristics of the assets into the selection of lives. The objective of life selection is to estimate the future life characteristics of assets, not simply measure the historical life characteristics. More information can be found in the life analysis section of the SCE Depreciation Study.
- Q. Does your Depreciation Study reflect any changes in the useful lives of the Transmission, Distribution, and General function assets from the lives embedded in the current depreciation rates?
- 20 A. Yes. As shown in Appendix C, seven accounts have increases in life. The 21 greatest change is an increase of six years in FERC Account 356 – Overhead 22 Conductors and Devices. One account shows a decrease in life of five years for

- FERC Account 355 Transmission Poles and Fixtures. The lives for the other
- 2 accounts remained unchanged from the approved lives from the 2012 GRC.
- 3 2. Net Salvage Rates Transmission, Distribution, and General
- 4 Q. How did you determine the net salvage rates that you used in your study for
- 5 Transmission, Distribution, and General property?
- 6 A. I examined the experience realized by SCE by observing the average net salvage
- 7 rates for various bands (or combinations) of years. Using averages (such as the 5-
- 8 year average and 10-year average band) allows the smoothing of timing
- 9 differences between when retirements, removal cost and salvage are booked and
- smoothes the natural variations between years. By looking at successive average
- bands, or "rolling bands," an analyst can see trends in the data that would signal
- the future net salvage in the account. This examination, in combination with the
- feedback of SCE personnel related to any changes in operations or maintenance
- that would affect the future net salvage of SCE, allowed for the selection of the
- best estimate of future net salvage for each account.
- 16 Q. Is this a reasonable method for determining net salvage rates?
- 17 A. Yes. This methodology is commonly employed throughout the industry and is the
- method recommended in authoritative texts.
- 19 Q. Does your Depreciation Study reflect any change in the net salvage values of
- 20 the Transmission and Distribution property from the existing net salvage
- 21 rates embedded in SCE's current depreciation rates?
- 22 A. Yes. The net salvage values for both Transmission and Distribution property
- continue to experience increasing cost of removal. The recommended net salvage

values used in the calculation of the Transmission and Distribution depreciation rates, along with the current net salvage values for comparison, are listed in Appendix C. Additionally, the Depreciation Study Report contains a detailed net salvage analysis for Transmission and Distribution property, by account.

#### 3. Depreciation Rates for Transmission, Distribution, and General Property

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#### Q. Please describe the results of the Depreciation Study for Transmission plant.

The results of the analysis conducted in the Depreciation Study, based on the service life of transmission plant and the revised net salvage rates, resulted in an increase to SCE's depreciation rates for transmission plant. SCE's present depreciation rates as authorized by the Commission were compared to the Depreciation Study recommendations in Appendix B. The rates proposed for Transmission assets would be an increase of approximately a 0.25 percentage point difference in depreciation rates as compared to SCE's present depreciation rates.

#### Q. Please describe the results of the Depreciation Study for Distribution plant.

The results of the analysis conducted in the Depreciation Study, based on the service life of distribution plant and the revised net salvage rates, resulted in an increase to SCE's depreciation rates for distribution plant. SCE's present depreciation rates as authorized by the Commission were compared to the proposed Depreciation Study recommendations in Appendix B. The rates proposed for Distribution assets would be an increase of approximately a 0.44 percentage point difference in depreciation rates as compared to 7 SCE's present depreciation rates.

- 1 O. Please describe the results of the Depreciation Study for FERC Accounts 2 389-390 (land rights, and structures and improvements).
- 3 A. The results of the analysis conducted in the Depreciation Study, based on the 4 service life of FERC Accounts 389-390 and the revised net salvage rates, resulted 5 in an increase to SCE's depreciation rate for FERC Account 390 and no change 6 for FERC Account 389. SCE's present depreciation rates as authorized by the Commission Depreciation were compared to the proposed Study recommendations in Appendix B. The rate proposed for FERC Accounts 390 8 9 would be an increase of approximately a 0.94 percentage point difference in 10 depreciation rate as compared to SCE's present depreciation rate. Account 389 is only for our easement property which has historically received a 60 year average 11 12 service life with no impact to the study. The proposed changes to account 390 are 13 due to a slight reduction in life and a more negative net salvage rate.

- 14 Q. Please describe the major changes that resulted in the changes in 15 depreciation rates for electric Transmission and Distribution property.
- 16 Changes in service life, gross salvage, gross removal costs, curve selection, and A. 17 reserve position are all factors that affect the calculation of the depreciation 18 The proposed changes in the Depreciation Study analysis for accrual. 19 Transmission and Distribution assets suggest adjustments that both increase and 20 decrease the total accrual. However, two factors influenced the accrual 21 calculation notably and consistently in opposite direction: the increases in life 22 have the impact of decreasing depreciation rates while the movement toward 23 more negative net salvage has the tendency to increase depreciation expense.

A.

#### E. Vintage Year Depreciation of General Plant Assets

3 Q. Please describe the Vintage Group methodology.

For most general plant assets and amortized accounts, SCE is requesting to continue to use a vintage year accounting method approved by the FERC in Accounting Release Number 15 (AR-15), *Vintage Year Accounting For General Plant Accounts*, dated January 1, 1997. AR-15 allowed utilities to use a simplified method of accounting for general plant assets, excluding structures and improvements (referred to as "general plant"). The AR-15 release allowed high volume, low cost assets to be amortized over the associated useful life, eliminated the need to track individual assets, and allows a retirement to be booked at the end of the depreciable life. This method is often referred to as "amortization of general plant." No changes in the life or net salvage parameters are proposed. The proposed lives are shown in the table below. Any changes in the accrual amounts are a result differences between theoretical and book of reserve amounts for each account that are amortized between GRC periods.

#### **General and Intangible Forecast Service Lives**

Account No.	Account Description	2012–2014 Authorized (Years)	2015-2017 Proposed (Years)
General Plant			
391.1	Office Furniture	20	20
391.2	Personal Computers	5	5
391.3	Mainframe Computers	5	5
391.4	DDSMS-Power Management System	Composite <sup>1</sup>	Composite.
391.5	Office Equipment	5	5
391.6	Duplicating Equipment	5	5
391.7	PC Software	5	5
393	Stores Equipment	20	20
394	Tools & Work Equipment	10	10
395	Laboratory Equipment	15	15
397	Telecommunication Equipment	Composite <sup>2</sup>	Composite
398	Misc Power Plant Equipment	20	20
<u>Intangibles</u>			
302.020	Hydro Relicensing	Various	Various
303.640	Radio Frequency	40	40
302.050	Miscellaneous Intangibles	20	20
303.105	Capitalized Software – 5 year	5	5
303.707	Capitalized Software – 7 year	7	7
303.210	Capitalized Software – 10 year	10	10
303.315	Capitalized Software – 15 year	15	15
<u>Easements</u>			
350	Transmission Easements	60	60
360	Distribution Easements	60	60
389	General Easements	60	60

<sup>&</sup>lt;sup>1</sup> Account 391.4 is depreciated at the subaccount level. The proposed life for each subaccount is shown in Appendix C-3 and remains unchanged from the 2012 GRC. On a composite basis, based on investment weighting in the account the life of 391.4 was 14.5 years in the 2012 GRC and is 12.3 years in this proceeding.

<sup>&</sup>lt;sup>2</sup> Account 397 is depreciated at the subaccount level. The proposed life for each subaccount is shown in Appendix C-3 and remains unchanged from the 2012 GRC. On a composite basis, based on investment weighting in the account the life of 397 was 16.8 years in the 2012 GRC and is 7.7 years in this proceeding.

- 1 V. CONCLUSION
- 2 Q. Was this exhibit prepared by you or under your direct supervision and
- 3 control?
- 4 A. Yes. I prepared this exhibit.
- 5 Q. Does this conclude your pre-filed direct testimony?
- 6 A. Yes.

## **AFFIDAVIT** STATE OF TEXAS COUNTY OF COLLIN DANE A. WATSON, first being sworn on his oath, states: I am the witness identified in the preceding testimony. I have read the testimony and the accompanying attachments and am familiar with their contents. Based upon my personal knowledge, the facts stated in the testimony are true. In addition, in my judgment and based upon my professional experience, the opinions and conclusions stated in the testimony are true, valid, and accurate. DANE. A. WATSON Subscribed and sworn to before me this \_\_\_\_\_ day of \_\_\_\_\_, 2012 by DANE A. WATSON.

Notary Public, State of \_\_\_\_\_\_ My Commission Expires: \_\_\_\_\_

## APPENDIX A Depreciation Rate Calculations

Southern California Edison Annual Accrual Rate Determination Straight Line Remaining Life Method For Estimated Year 2015

% GROSS PLANT * (8)	0.54%	2.69%	2.24% 2.36% 2.38% 4.22% 2.48% 4.73% <b>2.70%</b>		4.09%
ANNUAL ACCRUAL (7) 4,167,633 3,606,308 1,238,132 459,413 174,942	9,583,424 20,765 54,685 75,451 9,658,875	89,019	3,528,353 12,115,692 3,548,706 7,544,174 306,887 564,957 27,608,770 27,608,770	,	89,901 64,609 590,505 311,644 269,924 18,230 343,704
REM. LIFE (6) 33.5 33.5 33.5 33.5 33.5 33.5	33.5 33.5 33.5 33.5	36.0	39.6 34.8 36.4 30.6 37.6 31.3	18.7	18.7 18.7 18.7 18.7 18.7 18.7 18.7
DEPRECIABLE BALANCE January 1, 2013 (5) (5) 139,792,079.2 120,963,960.6 41,529,828.3 15,409,774.9 5,867,969.0	321,450,315.5 696,518.5 1,834,266.9 2,530,785.3 323,981,100.8	2,614,317.9	114,966,613.4 303,124,454.0 99,187,730.7 184,256,349.1 6,877,143.5 10,143,105.2 718,555,395.9 721,169,713.8	,	1,684,901.9 1,210,889.3 11,067,109.2 5,840,773.1 5,058,864.5 341,660.2 6,441,620.2 31,645,818.3
DEPRECIATION     RESERVE     January 1, 2013     (4)     (4)     403,903,139     585,962,562     213,337,770     166,374,080     92,089,056     2143,906	1,463,779,903 7,076,070 16,940,502 24,016,572 1,487,796,475	696,533	54,218,981 229,115,035 58,487,821 31,010,561 6,406,037 4,737,805 383,976,239 384,672,773	•	532,305 103,558 9,345,057 3,736,838 2,157,649 162,484 163,481
EST. FUTURE NET SALVAGE  % AMOUNT  (2) (3)  0%		•	(11,566,481) (19,216,823) (19,216,823) (8,351,827) (36,331,402) (893,788) (2,934,247) (79,294,569) (79,294,569)	,	(6,605,101) (6,605,101)
EST. FU. (2) (2) (3) (6) (6) (6) (6) (6) (6) (6) (6) (6) (6	% %0	%0	-7% -6% -20% -7%	%0	%%%% 00000
GROSS PLANT January 1, 2013 (1) 543,695,218 706,926,523 254,867,598 181,783,854 97,957,025	1,785,230,219 7,772,588 18,774,769 26,547,357 1,811,777,576	3,310,851	157,619,113 513,022,666 149,323,725 178,935,508 12,389,392 11,946,663 1,023,237,066 1,026,547,917	•	2,217,206 1,314,447 20,412,167 9,577,611 7,216,513 504,144
NUCLEAR PRODUCTION PALO VERDE 320.2 Easements 321 Structures & Improvements 322 Reactor Plant Equipment 323 Turbogenerator Units 324 Accessory Electric Equipment 325 Misc. Power Plant Equipment	Design Basis Documentation Deferred Debits Total PVNGS Plant Total PVNGS Plant	HYDRO ELECTRIC PRODUCTION 330.2 Easements	Structures and Improvements Reservoirs, Dams and Waterways Water Wheels, Turbines & Generators Accessory Electric Equipment Misc. Power Plant Equipment Roads, Railroads & Bridges Total Hydro Electric Production Total Hydro Electric	OTHER PRODUCTION PEBBLY BEACH 340 Land and Land Rights	Structures and Improvements Fuel Holders, Prdcrs & Accssrs Prime Movers Generators Accessory Electric Equipment Misc. Power Plant Equipment Decommissioning Total Other Production
NUCLEA 320.2 321 322 323 324 324	182	<b>HYDRO 6</b> 330.2	33.1 33.2 33.5 33.6 33.6	<b>OTHER P</b> 340	341 342 343 344 345 346 346

Southern California Edison Annual Accrual Rate Determination Straight Line Remaining Life Method For Estimated Year 2015

% GROSS PLANT * (8)	4.07%	3.21%	6.11%
ANNUAL ACCRUAL (7) 22,728 492,995 73,661 8,564,043 672 2,361,696 129,220 F25,450	12,147,736	1,550,122 246,257 14,427,388 2,555,229 2,904,805 147,197 628,864 22,459,873 93,028 1,339,696 1,432,724	592,503 15,759,132 345,676 4,020,440 20,717,751
REM. LIFE (6) 20.6 20.6 20.6 20.6 20.6 20.6	20.6	23.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0	18.6 18.6 18.6 18.6
DEPRECIABLE BALANCE January 1, 2013 (5) 468,945.0 10,171,767.0 1,519,810.9 176,698,296.9 176,698,296.9 176,698,296.9	250,639,137.5	35,651,755.7 5,663,748.6 331,820,279.7 58,768,519.2 66,808,524.9 3,385,422.8 14,463,448.0 516,561,698.8 2,139,575.2 30,812,090.9 32,951,666.1	11,043,571.1 293,732,051.1 6,443,004.3 74,936,359.3 386,154,985.8
DEPRECIATION RESERVE January 1, 2013 (4) 58,003 1,242,435 422,192 44,050,547 1,223 12,587,458 357,834	59,923,329	9,745,631 1,739,965 103,280,598 18,114,506 18,298,338 346,107 1,853,327 153,378,472 657,042 11,041,110	844,339 26,252,825 551,917 6,967,275 34,616,356
EST. FUTURE NET SALVAGE	(12,103,028)	(16,316,775) (16,316,775)	(81,903,634) _ (81,903,634) _
EST. FUT  (2)  (3)  0%  0%  0%  0%  0%	2	%%%%% %0000000000000000000000000000000	%0 %0
GROSS PLANT January 1, 2013 (1) 526,948 11,414,202 1,942,003 220,748,844 15,080 61,315,340 3,023,969	298,459,438	45,397,387 7,403,713 435,100,878 76,883,025 85,106,863 3,731,530 653,623,396 2,796,617 41,853,200 44,649,817	11,887,910 319,984,876 6,994,921  338,867,708
OTHER PRODUCTION PEAKERS  340 Land and Land Rights 341 Structures and Improvements 342 Fuel Holders, Prdcrs & Accssrs 343 Prime Movers 344 Generators 345 Accessory Electric Equipment 346 Misc. Power Plant Equipment	STEAM PRODUCTION MOUNTAINVIEW	Structures and Improvements Boiler Plant Equipment Prime Movers Turbogenerator Units Accessory Electric Equipment Misc. Power Plant Equipment Mountainview Decommissioning 3&4 Total Mountainview Production Organization Misc. Intangibles Mountainview Intangibles	OTHER PRODUCTION SOLAR PV  341 Structures and Improvements  343 Prime Movers  345 Accessory Electric Equipment  34x Solar PV Decommissioning  Solar Production
OTHER PF 340 341 342 343 344 345 346	STEAM PF	341 342 343 344 345 346 301 303	341 343 345 345 34x

Southern California Edison Annual Accrual Rate Determination Straight Line Remaining Life Method For Estimated Year 2015

AL % GROSS JAL PLANT * (8)	2,466,955 1.67%	9,537,351 2.53% 121,119,195 3.04% 130,656,546 <b>3.00%</b>	24,456,254 3.17% 26,418,216 4.38% 25,893,776 3.67% 839,077 1.73% 5,512,368 2.65% 653,680 1.52% 83,773,371 3.52% 16,896,872 3.15%	937,493 1.67%	13,288,609 3.04% 57,736,269 3.28% 71,024,878 <b>3.23%</b>	129,295,912     7.81%       61,635,841     5.15%       34,014,707     2.45%       17,805,722     3.90%       18,757,608     3.93%       67,467,357     5.76%       47,142,307     5.30%       25,859,600     3.43%       555,979,054     4.53%       727,941,424     4.35%	40,911,181 56.84%
M. ANNUAL FE ACCRUAL (7)			24, 25, 25, 25, 25, 25, 25, 25, 25, 25, 25				
REM. LIFE (6)	0.09	43.8	45.9 33.8 39.6 29.2 44.5	0.09	29.1	36.8 35.2 44.7 34.3 24.3 29.0 18.2 30.5	0.9
DEPRECIABLE BALANCE January 1, 2013 (5)	135,162,017.1	417,689,219.5 4,065,033,429.4 4,482,722,648.8	1,123,101,717.7 942,029,740.8 874,345,037.1 33,242,193.9 161,147,519.6 29,057,717.6 3,162,923,926.6 7,780,808,592.5	50,030,080.6	386,556,540.1 2,007,767,607.2 2,394,324,147.4	4,755,026,646.2 2,170,117,084.7 1,521,080,797.9 5,893,385,036.5 2,941,938,541.6 1,953,564,529.6 859,886,726.3 787,575,497.9 20,882,574,860.9	245,467,085.2
DEPRECIATION RESERVE January 1, 2013 (4)	12,855,282	90,828,851 514,217,874 605,046,726	421,305,615 174,800,929 537,696,385 15,274,840 78,244,952 13,980,865 1,241,303,586 1,859,205,595	6,219,477	159,481,896 281,581,641 441,063,537	623,811,488 520,102,755 424,307,681 2,030,293,634 684,576,066 683,575,166 73,310,362 267,633,255 5,307,610,408 5,754,893,422	(173,489,817)
EST. FUTURE NET SALVAGE  % AMOUNT  (2) (3)		(131,838,018) (597,293,648) (729,131,667)	(772,203,666) (513,138,416) (706,020,711) (31,225,105) (2,022,587,898) (2,751,719,565)	ı	(109,207,687) (528,311,365) (637,519,052)	(3,723,811,016) (1,494,566,578) (555,825,280) (3,521,634,965) (604,419,101) (1,465,077,609) (44,437,957) (301,488,215) (11,711,260,720)	•
EST. FUT % (2)	%0	-35%	-100% -85% -100% 0% -15% 0%	%0	-25%	-225% -125% -40% -80% -20% -125% -5%	%0
GROSS PLANT January 1, 2013 (1)	148,017,300	376,680,053 3,981,957,655 4,358,637,708	772,203,666 603,692,254 706,020,711 48,517,033 208,167,367 43,038,583 2,381,639,615 6,888,294,622	56,249,558	436,830,749 1,761,037,883 2,197,868,632	1,655,027,118 1,195,653,262 1,389,563,200 4,402,043,706 3,022,095,507 1,172,062,087 88,759,132 753,720,538 14,478,924,549	71,977,268
Five to MODE.	IRAN SMISSION FLANT 350.2 Easements	Structures and Improvements Station Equipment Total Transmission Substations	Towers and Fixtures Poles and Fixtures Overhead Conductors & Devices Underground Conduit Underground Conductors & Devices Roads and Trails Total Transmissions Lines Total Transmission Plant	DISTRIBUTION PLANT 360.2 Easements	Structures and Improvements Station Equipment Total Distribution Substations	Poles, Towers and Fixtures Overhead Conductors & Devices Underground Conductors & Devices Line Transformers Services Meters Street Lighting & Signal Systems Total Distribution Lines Total Distribution Plant	Legacy Meters
S T T T T T T T T T T T T T T T T T T T	350.2	352 353	354 355 356 357 358 358	<b>DISTRIBUTI</b> 360.2	361	364 365 366 367 369 370 373	370 (LM)

Southern California Edison Annual Accrual Rate Determination Straight Line Remaining Life Method For Estimated Year 2015

% GROSS PLANT * (8)	1.67%	2.74% 4.62% 20.99% 12.90% 6.54% 9.77% 11.42%	3.96%	2.52% 2.50% 5.00%	20.00% 14.29% 10.00% 6.67%	2.74% 4.62% 5.00% 9.77% 2.57%	0.00%
ANNUAL ACCRUAL (7)	54,489	23,097,241 8,409,511 104,415,662 3,132,925 6,064,480 56,563,806 9,854,144 211,592,258	1,390,846,130	3,143,089 468,084 25,542	89,949,711 123,122,944 7,143,429 8,304,726 2,628,325 5,562,577 1,749,749 143,923 238,605,382	16,497	- 16,497
REM. LIFE (6)	0.09	27.8 13 3 6 6 7 7		34.6 22.3 16.0	3.4 7.0 7.0 7.1 7.1 7.3 8.8 8.6 7.3 7.9 7.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0	26.0 0.0 0.0	0.0
DEPRECIABLE BALANCE January 1, 2013 (5)	2,890,389.4	642,282,475.2 111,478,492.3 314,225,392.2 17,677,710.1 52,527,065.8 415,252,549.7 43,892,238.5 1,600,226,313.2	35,221,583,197.4	95,158,510.5 10,438,817.1 408,665.1	304,652,356.9 481,621,482.2 30,392,151.3 14,379,696.0 5,210,988.2 20,909,535.6 8,612,752.8 764,807.3 232,072,449.0	429,210.2	-429,210.2
DEPRECIATION RESERVE January 1, 2013 (4)	378,977	285,173,083 70,387,823 183,123,482 6,604,333 40,156,646 163,891,262 20,822,987 770,538,593	15,221,026,681	29,771,926 8,284,523 102,167	145,096,196 380,239,122 41,042,134 110,191,193 (5,210,988) (20,909,536) (8,612,753) (764,807) 676,568,645	233,236 26,443 6,668 6,638	29,540
EST. FUTURE NET SALVAGE % AMOUNT (2) (3)	1	(84,314,142) - - 21,571,742 (62,742,400)	(15,347,921,012)			(60,222)	- (60,222)
EST. FUT % (2)	%0	-10% 0% 0% 0% 0% 25%		%0 %0	%%%	-10% 0% 0% 0%	%0
GROSS PLANT January 1, 2013 (1)	3,269,367	843,141,417 181,866,315 497,348,874 24,282,044 92,683,712 579,143,812 86,286,967 2,308,022,507	35,094,688,866	124,930,436 18,723,340 510,832	449,748,553 861,860,605 71,434,285 124,570,889 1,507,614,331	602,224 26,443 6,668 6,638 641,973	29,540 671,513
GF Jan	<b>EKAL FLANI</b> 9.2 Easements	390 Structures and Improvements 391.x Furniture & Equipment 391.x Computers 391.4 Security Monitoring (DDSMS) 391.x Stores/Lab/Miscellaneous 397.x Telecommunications 398.x General Other Total General Plant	GRAND TOTAL	INTANGIBLES Hydro Relicensing Radio Frequency Other Intangibles	Cap Soft 5yr Cap Soft 7yr Cap Soft 10yr Cap Soft 6 yr) Cap Soft Cap Soft (5 yr) Cap Soft Cap Soft (7 yr) Cap Soft Cap Soft (10 yr) Cap Soft Cap Soft (15 yr) Acc. Dep. Adjustment Cap Soft (15 yr) Acc. Dep. Adjustment Cap Soft	GENERAL GENERAL GENERAL 390 Structures and Improvements 391 Office Furniture and Equipment 393 Stores Equipment 397 Communication Equipment Total General	GENERAL OTHER Tools, Shop & Garage Equipment GRAND TOTAL COMMON
Č	389.2	390 391.x 391.4 391.4 397.x 397.x		ATN		390 391 393 393 393	394

Southern California Edison Annual Accrual Rate Determination Straight Line Remaining Life Method For Estimated Year 2015

% GROSS PLANT * (8)	5.00% 20.00% 20.00% <b>4.62%</b>	20.00% 20.00% 20.00% <b>20.99%</b>	14.29% 10.00% 6.67% 5.00% 4.00%	5.00% 6.67% 5.00% <b>6.54%</b>	20.00% 14.29% 10.00% 6.67% 5.00% 6.06% 3.75%	14.29% 10.00% 10.00% 6.67%
ANNUAL ACCRUAL (7)	8,969,766 293,875 200,326 (1,054,455) 8,409,511	13,931,845 85,537,930 - 4,945,887 104,415,662	1,088,315 866,059 50,721 335,564 21,353 770,913	472,176 4,495,357 792,177 304,770 6,064,480	23,611,250 7,490,367 16,501,840 1,665,477 448,378 4,612,771 3,783,135 (1,549,411) 56,563,806	1,611,406 562,779 6,870,422 45,256 764,281
REM. LIFE (6)	<b>5.6</b> 13.3	<b>4.5</b> 3.0	<b>4.3</b> 6.0	3.88 7.8	16.5 26.7 <b>6.2</b> 7.3	<b>6.2</b> 6.6
DEPRECIABLE BALANCE January 1, 2013 (5)	115,814,849.9 682,262.2 844,036.5 (5,862,656.4) 111,478,492.3	33,819,929.9 258,179,017.9 	5,690,998.2 5,320,068.5 302,606.4 2,770,795.0 278,536.3 3,314,705.7 17,677,710.1	4,135,060.3 38,646,042.3 8,577,268.5 1,168,694.8 52,527,065.8	76,816,327.5 46,479,166.1 103,203,939.6 16,021,613.1 5,158,310.5 76,110,723.1 101,009,692.7 (9,547,223.0) 415,252,549.7	8,008,009.7 3,338,008.2 48,781,116.2 409,490.8 4,757,731.0 65,294,355.9
DEPRECIATION RESERVE January 1, 2013 (4)	63,580,463 787,110 157,593 5,862,656 70,387,823	35,839,294 169,510,633 - (22,226,444) 183,123,482	1,924,924 3,340,524 457,825 3,940,488 255,278 (3,314,706) 6,604,333	5,308,468 28,750,609 7,266,264 (1,168,695) 40,156,646	41,239,922 5,937,676 61,814,460 8,948,056 3,809,244 30,822,008 1,772,673 9,547,223 163,891,262	3,268,449 2,289,781 19,923,105 99,383 (4,757,731) 20,822,987
EST. FUTURE NET SALVAGE % AMOUNT (2) (3)						169,624
EST. FUT % (2)	%0 %0	%0 %0	%0 %0 %0	%0 %0	%0 %0 %0 %0 %0	0% 0% 0% 25%
GROSS PLANT January 1, 2013 (1)	179,395,313 1,469,373 1,001,629 181,866,315	69,659,224 427,689,651 - - 497,348,874	7,615,923 8,660,592 760,431 6,711,283 533,814 24,282,044	9,443,528 67,396,651 15,843,532 92,683,712	118,056,250 52,416,842 165,018,399 24,969,669 8,967,555 106,932,731 102,782,366	11,276,459 5,627,790 68,704,221 678,498 86,286,967
COMPOSITE DEPRECIATION RATES	Office Furniture Office Equipment Duplicating Equipment Acc. Dep. Adjustment Furniture & Equipment	Personal Computers Mainframe Computers PC Software Acc. Dep. Adjustment Computers	DDSMS - CPU & Processing DDSMS - Controllers, Receivers, Comm. DDSMS - Telemetering & System DDSMS - Miscellaneous DDSMS - Map Board Acc. Dep. Adjustment Security Monitoring (DDSMS)	Stores Equipment Laboratory Equipment Misc Power Plant Equipment Acc. Dep. Adjustment Stores/Lab/Miscellaneous	Data Network Systems Telecom System Equipment Netcomm Radio Assembly Microwave Equip. & Antenna Assembly Telecom Power Systems Fiber Optic Communication Cables Telecom Infrastructure Acc. Dep. Adjustment Telecommunications	Transportation Equip. Garage & Shop Equip. Tools & Work Equip Shop Power Oper Equip Acc. Dep. Adjustment General Other
COMPOSI	391.1 391.5 391.6	391.2 391.3 391.7	391.4 391.4 391.4 391.4	393 395 398	397.x 397.x 397.x 397.x 397.x 397.x 397.x	392 394.4 394.5 396

#### APPENDIX B

**Depreciation Expense Comparison** 

Southern California Edison Comparison of Depreciation Accrual Rates Straight Line Remaining Life Method For Estimated Year 2015

	GROSS PLANT Jan. 1, 2013 (1)	PRESENT ANNUAL ACCRUAL RATE/LIFE (YRS) (2)	PRESENT ANNUAL ACCRUAL AMOUNT (3)	PROPOSED ANNUAL ACCRUAL RATE/LIFE (YRS) (4)	PROPOSED ANNUAL ACCRUAL AMOUNT (5)	DIFFERENCE ANNUAL ACCRUAL AMOUNT (6)
NUCLEAR PRODUCTION PALO VERDE  Total PVNGS Production  Total PVNGS DBD & Debits  Total PVNGS Plant	1,786,975,446 <u>26,547,357</u> 1,813,522,803	(1)	25,405,411 193,190 25,598,601	(2)	9,619,153 <u>75,451</u> 9,694,603	(15,786,258) (117,739) (15,903,998)
HYDRO ELECTRIC PRODUCTION  330.2 Easements 331 Structures and Improvements 332 Reservoirs, Dams and Waterways 333 Water Wheels, Turbines & Generators 334 Accessory Electric Equipment 335 Misc. Power Plant Equipment 336 Roads, Railroads & Bridges  Total Hydro Electric Production	3,310,851 157,619,112 513,022,666 149,323,725 178,935,508 12,389,392 11,946,663 1,026,547,917	2.84% 1.63% 1.72% 3.94% 1.61% 2.48%	94,028 2,569,192 9,490,919 2,568,368 7,050,059 199,469 296,277 22,268,313	2.69% 2.24% 2.36% 2.38% 4.22% 4.73% <b>2.70%</b>	89,056 3,530,668 12,107,335 3,553,905 7,551,078 307,257 565,077 27,704,376	(4,972) 961,477 2,616,416 985,537 501,019 107,788 268,800 5,436,064
OTHER PRODUCTION PEBBLY BEACH Other Production - Pebbly Beach Pebbly Beach Decommissioning Total Pebbly Beach	41,242,089	(1)	1,371,015 0 1,371,015	(2)	1,371,015 <u>317,502</u> 1,688,517	0 317,502 317,502
OTHER PRODUCTION PEAKERS Other Prodcution - Peakers Peakers Decommissioning Total Peakers	298,459,438	(1)	12,705,460 0 12,705,460	(2)	11,946,442 <u>226,834</u> 12,173,275	(759,018) 226,834 (532,184)

Southern California Edison Comparison of Depreciation Accrual Rates Straight Line Remaining Life Method For Estimated Year 2015

	GROSS PLANT Jan. 1, 2013	PRESENT ANNUAL ACCRUAL RATE/LIFE (YRS)	PRESENT ANNUAL ACCRUAL AMOUNT	PROPOSED ANNUAL ACCRUAL RATE/LIFE (YRS)	PROPOSED ANNUAL ACCRUAL AMOUNT	DIFFERENCE ANNUAL ACCRUAL AMOUNT
	(1)	(2)	(3)	(4)	(5)	(9)
STEAM PRODUCTION MOUNTAINVIEW Mountainview Production	653,623,396	(1)	26,980,352	(2)	22,163,185	(4,817,167)
Mountainview Decommissioning		(1)		(2)	296,688	296,688
Mountainview Intangibles	44,649,817	(1)	1,432,724	(2)	1,432,724	OI
Total Mountainview	698,273,213		28,413,076		23,892,596	(4,520,480)
OTHER PRODUCTION SOLAR PV						
Solar Production	338,867,708	(1)	19,268,965	(2)	17,781,475	(1,487,490)
Solar Decomissioning		(1)		(2)	2,936,276	2,936,276
Total Solar PV	338,867,708		19,268,965		20,717,751	1,448,786
Total Other Production	1,376,842,447	4.49%	61,758,516	4.25%	58,472,140	(3,286,376)
5						
350.2 Easements	148,017,300	1.67%	2,471,889	1.67%	2,471,889	0
352 Structures and Improvements	376,680,053	2.38%	8,964,985	2.53%	9,530,005	565,020
353 Station Equipment	3,981,957,655	2.89%	115,078,576	3.04%	121,051,513	5,972,936
354 Towers and Fixtures	772,203,666	2.54%	19,613,973	3.17%	24,478,856	4,864,883
355 Poles and Fixtures	603,692,254	3.43%	20,706,644	4.38%	26,441,721	5,735,076
356 Overhead Conductors & Devices	706,020,711	3.57%	25,204,939	3.67%	25,910,960	706,021
357 Underground Conduit	48,517,033	1.70%	824,790	1.73%	839,345	14,555
358 Underground Conductors & Devices	208,167,367	2.81%	5,849,503	2.65%	5,516,435	(333,068)
359 Roads and Trails	43,038,583	1.69%	727,352	1.52%	654,186	(73,166)
Total Transmission Plant	6,888,294,622	2.90%	199,442,652	3.15%	216,894,910	17,452,259

Southern California Edison Comparison of Depreciation Accrual Rates Straight Line Remaining Life Method For Estimated Year 2015

	GROSS PLANT Jan. 1, 2013	PRESENT ANNUAL ACCRUAL RATE/LIFE (YRS)	PRESENT ANNUAL ACCRUAL AMOUNT	PROPOSED ANNUAL ACCRUAL RATE/LIFE (YRS)	PROPOSED ANNUAL ACCRUAL AMOUNT	DIFFERENCE ANNUAL ACCRUAL AMOUNT
	(1)	(2)	(3)	(4)	(5)	(9)
<u>DISTRIBUTION PLANT</u> 360.2 Easements	56,249,558	1.67%	898'686	1.67%	939,368	0
361 Structures and Improvements	436,830,749	3.20%	13,978,584	3.04%	13,279,655	(638,929)
362 Station Equipment	1,761,037,883	3.13%	55,120,486	3.28%	57,762,043	2,641,557
364 Poles, Towers and Fixtures	1,655,027,118	7.06%	116,844,915	7.81%	129,257,618	12,412,703
365 Overhead Conductors & Devices	1,195,653,262	4.61%	55,119,615	5.15%	61,576,143	6,456,528
366 Underground Conduit	1,389,563,200	2.16%	30,014,565	2.45%	34,044,298	4,029,733
367 Underground Conductors & Devices	4,402,043,706	3.35%	147,468,464	3.90%	171,679,705	24,211,240
368 Line Transformers	3,022,095,507	3.68%	111,213,115	3.93%	118,768,353	7,555,239
369 Services	1,172,062,087	4.76%	55,790,155	2.76%	67,510,776	11,720,621
370 Meters	888,759,132	5.35%	47,548,614	5.30%	47,104,234	(444,380)
373 Street Lighting & Signal Systems	753,720,538	2.73%	20,576,571	3.43%	25,852,614	5,276,044
Total Distribution Plant	16,733,042,739	3.91%	654,614,451	4.35%	727,774,807	73,160,356
CENEDAL DI ANT						
389.2 Easements	3,269,367	1.67%	54,598	1.67%	54,598	0
390 Structures and Improvements	843,141,417	1.80%	15,176,545	2.74%	23,097,241	7,920,696
391.x Furniture & Equipment	181,866,315	3.34%	6,074,335	4.62%	8,409,511	2,335,176
391.x Computers	497,348,874	19.35%	96,237,007	20.99%	104,415,662	8,178,655
391.4 Security Monitoring (DDSMS)	24,282,044	16.31%	3,960,401	12.90%	3,132,925	(827,477)
391.x Stores/Lab/Miscellaneous	92,683,712	8.13%	7,535,186	6.54%	6,064,480	(1,470,706)
397.x Telecommunications	579,143,812	7.57%	43,841,187	9.77%	56,563,806	12,722,619
39x General Other	86,286,967	15.22%	13,132,876	11.42%	9,854,144	(3,278,732)
Total General Plant	2,308,022,507	15.22%	186,012,136	8.84%	211,537,769	25,580,231

Comparison of Depreciation Accrual Rates Straight Line Remaining Life Method Southern California Edison For Estimated Year 2015

		PRESENT	PRESENT	PROPOSED	PROPOSED	DIFFERENCE
	GROSS PLANT	ANNUAL	ANNUAL	ANNUAL	ANNUAL	ANNUAL ACCRUAL
	Jan. 1, 2013	RATE/LIFE (YRS)	AMOUNT	RATE/LIFE (YRS)	AMOUNT	AMOUNT
	(1)	(2)	(3)	(4)	(5)	(9)
INTANGIBLES						
Hydro Relicensing	124,930,436	2.64%	3,295,263	2.52%	3,143,089	(152,173)
Radio Frequency	18,723,340	2.50%	468,084	2.50%	468,084	0
Other Intangibles	510,832	2.00%	25,542	2.00%	25,542	Ol
Total Intangible Excl Software	144,164,608	0.00%	3,788,888		3,636,715	(152,173)
Cap Soft 5yr	449,748,553	21.41%	96,285,380	20.58%	92,578,035	(3,707,345)
Cap Soft 7yr	861,860,605	14.71%	126,746,013	14.93%	128,685,521	1,939,508
Cap Soft 10yr	71,434,285	10.00%	7,143,429	12.45%	8,893,177	1,749,749
Cap Soft 15yr	124,570,889	%29.9	8,303,316	6.78%	8,448,649	145,332
Total Software	1,507,614,331	10.82%	238,478,138		238,605,382	127,244
CATALINA Plant	641,973	1.96%	12,583	2.57%	16,497	3,915
Total Intangibles and Software	1,652,420,912		242,279,609		242,258,594	(21,015)
Total SCE	31,798,693,947	4.38%	1,391,974,276	4.70%	1,494,337,199	102,417,521

Notes:

(1) Production present accrual determined from 2012 GRC remaining life and decommissioning amount (2) Production proposed accrual Determined from Proposed remaining life and decommissioning amount

#### APPENDIX C Depreciation Parameter Comparison

### SCE Proposed Versus Approved Lives and Net Salvage Production Facitlities 2015 GRC

2015 GRC Proposed

2012 GRC Approved

			Life	:	;			Life	:		
			Span	Remaining	Net			Span	Remaining		
PRODU	NUCLEAR PRODUCTION PALO VERDE	<u>Life</u>	Life	Life	Salvage	Decommissioning	Life	Life	Life	Salvage	Decommissioning
320.2	Easements	License		16.1	%0		License		33.5	%0	
321	Structures & Improvements	License		16.0	%0		License		33.5	%0	
322	Reactor Plant Equipment	License		15.8	%0		License		33.5	%0	
323	Turbogenerator Units	License		14.9	%0		License		33.5	%0	
324	Accessory Electric Equipment	License		16.1	%0		License		33.5	%0	
325	Misc. Power Plant Equipment	License		15.0	%0		License		33.5	%0	
	Decommissioning			15.7	%0		License		33.5	%0	
182	Design Basis Documentation	License		16.1	%0		License		33.5	%0	
182	Deferred Debits	License		16.1	%0		License		33.5	%0	
CTBIC	HVRDO ELECTRIC BRODILICTION										
Hvdro	330.2 Hydro - Lar Easements						License		36.0	%0	
5		License		36.3	0.00%					8	
331	Structures and Improvements						License		39.6	-1%	
332	Reservoirs, Dams and Waterways	License		40.8	-5.80%		License		34.8	-4%	
333	Water Wheels, Turbines & Generators	License		36.9	-2.80%		License		36.4	%9-	
334	Accessory Electric Equipment	License		37.7	-3.10%		License		30.6	-50%	
335	Misc. Power Plant Equipment	License		30.6	-22.00%		License		37.6	%/-	
	Roads, Railroads & Bridges	License		38.1	-7.10%		License		31.3	-55%	
	Decommissioning					(2,900,000)					(6,876,000)
DOUCT	OTHER PRODUCTION PEBBLY BEACH										
	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	9	Ļ	7	000		9.7	Ļ	7	òò	
	Land and Land Kights	Life Span	45	21.7	%0		Life Span	45	18./	%0	
	Structures and Improvements	Life Span	45	21.7	%0		Life Span	45	18.7	%0	
	Fuel Holders, Prdcrs & Accssrs	Life Span	45	21.7	%0		Life Span	45	18.7	%0	
	Prime Movers	Life Span	45	21.7	%0		Life Span	45	18.7	%0	
	Generators	Life Span	45	21.7	%0		Life Span	45	18.7	%0	
	Accessory Electric Equipment	Life Span	45	21.7	%0		Life Span	45	18.7	%0	
	Misc. Power Plant Equipment	Life Span	45	21.7	%0		Life Span	45	18.7	%0	
34x	Decommissioning	Life Span				(654,548)					(6,605,101)
DDUCT	OTHER PRODUCTION PEAKERS										
340	Land and Land Rights	Life Span	25	22.4	%0		Life Span	25	20.6		
341	Structures and Improvements	Life Span	25	22.4	%0		Life Span	25	20.6		
342	Fuel Holders, Prdcrs & Accssrs	Life Span	25	22.4	%0		Life Span	25	20.6		
343	Prime Movers	Life Span	25	22.4	%0		Life Span	25	20.6	%0	
344	Generators	Life Span	25	22.4	%0		Life Span	25	20.6		
345	Accessory Electric Equipment	Life Span	25	22.4	%0		Life Span	25	20.6		
346	Misc. Power Plant Equipment	Life Span				(7,422,862)	Life Span				(12,103,028)

# SCE Proposed Versus Approved Lives and Net Salvage Production Facitlities 2015 GRC

34x	Peakers Decommissioning			2012 GRC Approved				201	2015 GRC Proposed	pa	
STEAM PRODUCT	STEAM PRODUCTION – MOUNTAINVIEW										
341	Structures and Improvements	Life Span	30	26.0	%0		Life Span	30	23.0	%0	
342	Boiler Plant Equipment	Life Span	30	26.0	%0		Life Span	30	23.0	%0	
343	Prime Movers	Life Span	30	26.0	%0		Life Span	30	23.0	%0	
344	Turbogenerator Units	Life Span	30	26.0	%0		Life Span	30	23.0	%0	
345	Accessory Electric Equipment	Life Span	30	26.0	%0		Life Span	30	23.0	%0	
346	Misc. Power Plant Equipment	Life Span	30	26.0	%0		Life Span	30	23.0	%0	
34x	Mountainview Decommissioning 3&4	Life Span				(8,846,811)	Life Span				(16,316,775)
301	Organization	Life Span	30	26.0	%		Life Span	30	23.0	%	
1		::::::::::::::::::::::::::::::::::::::	,	9				)		)	
303	Misc. Intangibles	Life Span	30	26.0	%0		Life Span	30	23.0	%0	
OTHER PRODUCTION SOLAR PV	TION SOLAR PV										
341	Structures and Improvements	Life Span	20	17.2	%0		Life Span	20	18.6	%0	
343	Prime Movers	Life Span	20	17.2	%0		Life Span	20	18.6	%0	
345	Accessory Electric Equipment	Life Span	20	17.2	%0		Life Span	20	18.6	%0	
34x	Solar PV Decommissioning	Life Span				(27,174,842)	Life Span				(81,903,634)

### SCE Proposed Versus Approved Lives and Net Salvage Transmission, Distribution, and General 2015 GRC

	Previously Authori	orized	SCE Proposed	pa	2012 CDC Adomend	Po to	Duonaga 2015 Do	SaS	, and a second	8
FERC	Iowa	Net	Iowa	Net	Iowa	Net	Iowa	Net	Clidal	Net
Acct Description	Life Curve	Salvage	Life Curve	Salvage	Life Curve	Salvage	Life Curve	Salvage	Life	Salvage
Transmission										
350.2 Easements					09	%0	09	%0	0	%0
352 Structures & Improvements	55 S3	-40	55 S2	-30%	55 S2	-30%	55 S3	-35%	0	-5%
353 Station Equipment	40 R1	2%	40 R1	-10%	40 R1	-5%	41 R1	-15%	_	-10%
354 Towers & Fixtures	65 S3	-20%	60 R5	-85%	65 R5	-20%	65 R5	-100%	0	-30%
355 Poles & Fixtures	45 R1	-20%	45 R1	-85%	50 R1	-20%	45 R1	-85%	5-	-15%
356 Overhead Conductors & Devices	50 R4	-80%	50 R4	-85%	50 R4	%08-	56 R4	-100%	9	-20%
357 Underground Conduit	55 R3	%0	55 R3	%0	55 R3	%0	55 R3	%0	0	%0
358 Underground Conductors & Devices	35 R3	-30%	40 R2.5	-20%	40 R2.5	-20%	40 R2.5	-15%	0	2%
359 Roads and Trails	60 SQ	%0	60 SQ	%0	60 SQ	%0	60 SQ	%0	0	%0
Distribution										
360.2 Easements					09	%0	09	%0	0	%0
361 Structures & Improvements	40 S2	-20%	40 S2.5	-25%	40 S2.5	-25%	42 R2.5	-25%	2	%0
362 Station Equipment	45 R1	-10%	45 R1.5	-20%	45 R1.5	-20%	45 R1.5	-30%	0	-10%
364 Poles, Towers & Fixtures	45 R0.5	-190%	40 R1	-200%	45 R1	-190%	45 R0.5	-225%	0	-35%
365 Overhead Conductors & Devices	45 R0.5	-100%	40 R1	-110%	45 R0.5	-110%	45 R0.5	-125%	0	-15%
366 Underground Conduit	55 R3	-20%	55 R3	-20%	55 R3	-20%	59 R3	-40%	4	-20%
367 Underground Conductors & Devices	30 R2	%09-	30 R2	%09-	40 R1	%09-	42 R1	%08-	2	-20%
368 Line Transformers	30 S3	%0	30 R1.5	-10%	30 R1.5	%0	33 R1	-20%	3	-20%
369 Services	35 R2	-75%	40 R2	-100%	40 R2	-85%	42 R2	-125%	2	-40%
370 Meters - Legacy	19 yr RL	-10%	16 yr RL	-5%	6 yr RL	N/A	6 yr RL	N/A		
370 Meters - Smart Connect	20 R3	-10%	20 R3	-5%	20 R3	-5%	20 R3	-5%		
373 Street Lighting	32 10.5	-15%	40 L0.5	-30%	40 L0.5	-20%	40 L0.5	-40%	0	-20%
390 Structures and Improvements	40 R2.5	-5%	40 R2.5	-2%	40 R2.5	-5%	38 R3	-10%	-2	-5%

#### SCE Proposed Versus Approved Lives and Net Salvage General Amortized, Intangible, and Easements 2015 GRC

Plant Acct Su	ub Acct Description	2012 GRC Approved Life	2012 GRC Approved Net Salvage	2015 GRC Proposed Life	2015 GRC Proposed Net Salvage
201 1	Office Franciscus	20	0%	20	00/
<u>391.1</u> 391.2	Office Furniture Personal Computers	20 5	0%	5	0% 0%
391.3	Mainframe Computers	5	0%	5	0%
<u>391.4</u>	DDSMS-Power Management System	14.5	0%	12.3	0%
	391.4 Central Processing Unit	7	0%	7	0%
	391.401 CPU Memory Unit	7	0%	7	0%
	391.407 Line Printer	7	0%	7	0%
	391.408 Magnetic Tape Drive	7	0%	7	0%
	391.409 Bulk Storage Unit	7	0%	7	0%
	391.413 Display Controller	7	0%	7	0%
	391.415 Full Graphics CRT Workstation	7	0%	7	0%
	391.416 PC-Based Workstation	7	0%	7	0%
	391.417 Teletypewriter	7	0%	7	0%
	391.432 Interface/Application Processor	7	0% 0%	7	0% 0%
	391.438 Battery System 391.442 Cathode Ray Tube Terminal	7	0%	7	0%
	391.443 Optical Projection Unit	7	0%	7	0%
	391.42 Data Acq Concentrator/Controller	10	0%	10	0%
	391.422 Communication Controller	10	0%	10	0%
	391.423 Data Communication Unit	10	0%	10	0%
	391.428 Standard Time/Freq Clock Receiver	10	0%	10	0%
	391.429 Wall Strip Chart Recorder	10	0%	10	0%
	391.435 Dial-Up Remote Terminal Unit	10	0%	10	0%
	391.426 Telemetering Receiver/Transmitter	15	0%	15	0%
	391.436 Uninterruptible Power System	15	0%	15	0%
	391.405 Input/Output Unit	20	0%	20	0%
	391.406 Control Console	20	0%	20	0%
	391.421 Real Time Remote Terminal Unit	20	0%	20	0%
	391.43 Broadcast Control System	20	0%	20	0%
	391.419 Dynamic Map Board	25	0%	25	0%
<u>391.5</u>	Office Equipment	5	0%	5	0%
391.6	Duplicating Equipment	5	0%	5	0%
391.7	PC Software	5	0%	5	0%
393	Stores Equipment	20	0%	20	0%
394	Tools & Work Equipment	10	0%	10	0%
395	Laboratory Equipment	15	0%	15	0%
<u>397</u>	<u>Telecommunication Equipment</u>	16.8	0%	16.8	0%
	397.55 Data Network System	NA	NA	5	0%
	397.05 AC/Heating/Ventilation System	7	0%	NA	NA
	397.11 Radio Base Station Control System	7	0%	NA	NA
	397.13 Telephone System	7	0%	NA	NA
	397.135 Circuit Treatment	7	0%	NA	NA
	397.145 Transmission Equipment	7	0%	NA	NA
	397.152 Radio Transmission Equipment	7	0%	NA	NA
	397.153 Sync Equipment	7	0%	NA	NA
	397.155 Channel Equipment Assembly	7	0%	NA	NA
	397.16 Communications Alarm/Control System	7	0%	NA NA	NA NA
	397.163 Misc Communication Training Equipment	7	0% 0%	NA NA	NA NA
	397.2 Communication Equipment - Radio 397.5 Cellular Phones	7	0%	NA NA	NA NA
	397.51 Radio Base Station Control System (397.110)	7	0%	NA NA	NA NA
	397.515 Radio Base station Control System (397.110)	7	0%	NA NA	NA NA
	397.52 Radio, Portable Unit (397.540)	7	0%	NA	NA

#### SCE Proposed Versus Approved Lives and Net Salvage General Amortized, Intangible, and Easements 2015 GRC

A A Lat Cit A Lat Description	2012 GRC Approved	2012 GRC Approved	2015 GRC Proposed	2015 GRC Proposed
t Acct Sub Acct Description  397.525 Radio, Pager Unit (397.540)	Life 7	Net Salvage 0%	Life NA	Net Salvage
397.54 Mobile/Portable Unit	7	0%	NA NA	
397.545 Data Network Interconnect System	7	0%	NA NA	
397.55 Dynamic Network Multiplexer (DNM)	7	0%	NA	
397.56 Television System (TV)	7	0%	NA	
397.562 NetComm Control & Monitoring System	7	0%	NA	NA
397.862 NetComm Control/Monitor System (397.562)	7	0%	NA	NA
397.99 Spare Parts	7	0%	NA	NA
397.559 Videoconferencing System	NA	NA	7	0%
397.561 NetComm Radio Assembly	10	0%	NA	N.A
397.861 NetComm Radio Assembly (397.561)	10	0%	NA	NA
397.098 iDirect Remote SatComm Station (VSAT)	NA	NA	10	0%
397.11 Radio Base Station Control System	NA	NA	10	0%
397.13 Telephone System	NA	NA	10	0%
397.135 Circuit Treatment	NA	NA	10	0%
397.145 Transmission Equipment	NA	NA	10	0%
397.151 Lightwave Transmission Equipment	NA	NA	10	
397.153 Sync Equipment	NA	NA	10	
397.154 Microwave Transmission Equipment	NA	NA	10	
397.155 Channel Equipment Assembly	NA	NA	10	
397.16 Communications Alarm/Control System	NA	NA	10	
397.54 Mobile/Portable Unit	NA	NA	10	
397.561 NetComm Radio Assembly	NA	NA	10	
397.562 NetComm Control & Monitoring System 397.99 Spare Parts	NA	NA	10	0%
207 02F Comm Torre Brok Sustan	15	00/	NA	NI
397.025 Comm Term. Prot. System 397.136 Cable Protection	15 15	0% 0%	NA 15	
397.14 Antenna Assembly	15	0%	15	
397.151 Intercom System (IC)	15	0%	NA	
397.24 D.C. Power System	15	0%	NA NA	
397.245 Electrical Power Generation System	15	0%	NA	
397.255 Public Address System (PA)	15	0%	15	
397.3 Communication Equipment – Microwave	15	0%	NA	
397.701 Microwave Antenna Assembly	15	0%	NA	
397.705 Microwave Terminal Assembly	15	0%	NA	N/
397.715 Baseband Equipment Assembly	15	0%	NA	N
397.72 Channel Equipment Assembly	15	0%	NA	N/
397.836 Digital Cross Connect System (DSX)	15	0%	NA	N/
397.837 Dynamic Network Multiplexer (DNM)	15	0%	NA	N/
397.84 DC Power System	15	0%	NA	N.
397.24 D.C. Power System	15	0%	20	0%
397.245 Electrical Power Generation System	15	0%	20	09
397.802 Communication Cable, Overhead, Fiber Optic	25	0%	25	0%
397.806 Communication Cable, Underground, Fiber Optic	25	0%	25	0%
397 Communication Equipment Telephone	40	0%	NA	
397.065 Crossarm Communication (wood)	40	0%	NA	
397.07 Crossarm Communication (steel)	40	0%	NA	
397.1 Communication Equipment Telephone	40	0%	NA	
397.115 Jack Field Assembly PABX Trunk Circuit	40	0%	NA	
397.25 Crossarm Communication (wood)	40	0%	NA 40	
397.33 Pole, Wood - Edison Solely Owned	40	0%	40	
397.43 Switch, Disconnect 397.6 Pole, Wood - Joint Foreign Set	40	0%	40	
	40	0%	40	0'
397.79 Conductor, Open Wire Communication 397.801 Communication Cable, Overhead, Copper Jacketed	40 40	0% 0%	40 40	

#### SCE Proposed Versus Approved Lives and Net Salvage General Amortized, Intangible, and Easements 2015 GRC

		2012 GRC	2012 GRC	2015 GRC	2015 GRC
		Approved	Approved	Proposed	Proposed
Plant Acct Su	b Acct Description	Life	Net Salvage	Life	Net Salvage
	397.821 Communication Riser	40	0%	40	0%
	397.825 Antenna Support Structure	40	0%	40	0%
:	397.865 Communication Conduit System	40	0%	40	0%
<u>398</u>	Misc Power Plant Equipment	20	0%	20	0%
Intangibles					
302.02	Hydro Relicensing	Various	0%	Various	0%
303.64	Radio Frequency	40	0%	40	0%
302.05	Miscellaneous Intangibles	20	0%	20	0%
303.105	Capitalized Software – 5 year	5	0%	5	0%
303.707	Capitalized Software – 7 year	7	0%	7	0%
303.21	Capitalized Software – 10 year	10	0%	10	0%
303.315	Capitalized Software – 15 year	15	0%	15	0%
					0%
Easements					0%
350	Transmission Easements	60	0%	60	0%
360	Distribution Easements	60	0%	60	0%
389	General Easements	60	0%	60	0%

#### APPENDIX D Production Retirement Dates

# SOUTHERN CALIFORNIA EDISON COMPANY GENERATION REMAINING LIFE DETERMINATION

Remaining Life As Of 12/31/12

			Pet	Pebbly Beach Remaining Life Span:	ing Life Span:	TOTAL	i C	DIVING	WITH DEW	
			DALE OF FIRM	DAILFULLI		IOIAL	AGE	KIMING .	WID KEM	
	MW	H. Whitman	OPERATION	ATED	WEIGHIING	LIFE SPAN	(YRS)	LIFE SPAN	LIFE SPAN	WIDAGE
Unit 7 Diesel	1.00	80	1958	2003	4.4%	45	54.5	0.0	0.000	2.389
Unit 8 Diesel	1.50	29	1963	2008	5.5%	45	49.5	0.0	0.000	2.726
Unit10 Diesel	1.10	71	1966	2011	4.3%	45	46.5	0.0	0.000	1.990
Unit12 Diesel	1.60	140	1976	2021	12.3%	45	36.5	8.5	1.043	4.480
Unit 14 Diesel	1.40	261	1986	2031	20.0%	45	26.5	18.5	3.704	5.305
Unit 15 Diesel	2.80	349	1995	2040	53.5%	45	17.5	27.5	14.723	9.369
	9.40	ı		•	100.0%					26.258
			Mo	Mountainview Remaining Life Span:	ning Life Span:					
			DATE OF FIRM DATE FULLY	١.		TOTAL	AGE	RMNG	WTD REM	
UNIT	LOCN	DESCRIPTION	<u>OPERATION</u>	TED	WEIGHTING	LIFE SPAN	(YRS)	LIFE SPAN	LIFE SPAN	WTD AGE
3		Mountainview	12/31/05	12/31/35	20%	30	7.0	23.0	11.500	3.500
4		Mountainview	12/31/05	12/31/35	20%	30	7.0	23.0	11.500	3.500
			Poole	Doolear Canaration Damaining I Ha Snan	ining Life Sper					
			DATE OF FIRM DATE FULLY	DATE FULLY	0	TOTAL	AGE	RMNG	WTD REM	
UNIT	LOCN	DESCRIPTION	OPERATION	DEPRECIATED	WEIGHTING	LIFE SPAN	(YRS)	LIFE SPAN	LIFE SPAN	WTD AGE
1	3xxx	Peakers	08/01/07	07/31/32	20%	25	5.4	19.6	3.916	1.084
2	3xxx	Peakers	08/01/07	07/31/32	20%	25	5.4	19.6	3.916	1.084
3	3xxx	Peakers	08/01/07	07/31/32	20%	25	5.4	19.6	3.916	1.084
4	3xxx	Peakers	08/01/07	07/31/32	20%	25	5.4	19.6	3.916	1.084
5	3xxx	Peakers	11/01/12	11/01/37	20%	25	0.2	24.8	4.967	0.033
				I	100%	·	4.4	20.6	20.633	4.367
				PVNGS Remaining Life Span:	g Life Span:					
			DATE OF FIRM DATE FULLY	DATE FULLY				RMNG	WTD REM	
UNIT	LOCN	DESCRIPTION	OPERATION	DEPRECIATED	WEIGHTING			LIFE SPAN	LIFE SPAN	
1		PVNGS Unit 1		06/01/45	33.3333%			32.4	10.805	
3		PVNGS Unit 2		04/24/46	33.3333%			33.3	11.104	
3		PVNGS Unit 3		11/25/47	33.3333%		'	34.9	11.633	
					100%		ı	33.5	33.542	

# SOUTHERN CALIFORNIA EDISON COMPANY GENERATION REMAINING LIFE DETERMINATION

Remaining Life As Of 12/31/12

Solar PV Remaining Life Span:

			DATE OF FIRM DATE FULLY	ODATE FULLY	g Life Spain:	TOTAL	AGE	RMNG	WTD REM	
UNIT	MW (DC)	MW (DC) Escalation Factor	<b>OPERATION</b>	DEPRECIATED	WEIGHTING	LIFE SPAN	(YRS)	LIFE SPAN	LIFE SPAN	WTD AGE
SPVP002 - Chino	1.22	1.560	09/24/09	09/24/29	1.3%	20	3.3	16.7	0.220	0.043
SPVP003 - Rialto	1.22	1.643	07/19/10	07/19/30	1.4%	20	2.5	17.5	0.243	0.034
SPVP005 - Redlands	3.40	1.686	12/27/10	12/27/30	4.0%	20	2.0	18.0	0.713	0.080
SPVP006 - Ontario	2.55	1.643	01/10/11	01/10/31	2.9%	20	2.0	18.0	0.522	0.057
SPVP007 - Redlands	3.20	1.686	12/29/10	12/29/30	3.7%	20	2.0	18.0	0.672	0.075
SPVP008 - Ontario	2.85	1.643	12/30/10	12/30/30	3.2%	20	2.0	18.0	0.583	0.065
SPVP009 - Ontario	1.41	1.643	01/10/11	01/10/31	1.6%	20	2.0	18.0	0.289	0.032
SPVP010 - Fontana	2.25	1.731	05/18/11	05/18/31	2.7%	20	1.6	18.4	0.495	0.044
SPVP011 - Redlands	5.02	1.731	11/10/11	11/10/31	6.0%	20	1.1	18.9	1.133	690.0
SPVP012 - Ontario	0.77	1.643	12/29/10	12/29/30	0.9%	20	2.0	18.0	0.157	0.018
SPVP013 - Redlands	4.93	1.731	09/15/11	09/15/31	5.9%	20	1.3	18.7	1.104	0.076
SPVP015 - Fontana	4.69	1.731	12/19/11	12/19/31	5.6%	20	1.0	19.0	1.064	0.058
SPVP016 - Redlands	1.75	1.731	05/18/11	05/18/31	2.1%	20	1.6	18.4	0.385	0.034
SPVP017 - Fontana	4.50	1.731	12/14/11	12/14/31	5.4%	20	1.0	19.0	1.020	0.056
SPVP018 - Fontana	1.94	1.686	05/23/11	05/23/31	2.3%	20	1.6	18.4	0.416	0.036
SPVP022 - Redlands	3.09	1.643	11/15/10	11/15/30	3.5%	20	2.1	17.9	0.628	0.075
SPVP023 - Fontana	3.86	1.731	05/12/11	05/12/31	4.6%	20	1.6	18.4	0.848	0.076
SPVP026 - Rialto	8.60	1.731	08/26/11	08/26/31	10.3%	20	1.3	18.7	1.920	0.139
SPVP027 - Rialto	2.62	1.731	11/27/12	11/27/32	3.1%	20	0.1	19.9	0.624	0.003
SPVP028 - San Bernardi	4.86	1.731	12/20/11	12/20/31	5.8%	20	1.0	19.0	1.104	090.0
SPVP032 - Ontario	1.74	1.731	12/22/11	12/22/31	2.1%	20	1.0	19.0	0.394	0.021
SPVP033 - Ontario	1.27	1.731	12/12/11	12/12/31	1.5%	20	1.1	18.9	0.289	0.016
SPVP042 - Porterville	6.77	1.686	12/28/10	12/28/30	7.9%	20	2.0	18.0	1.421	0.159
SPVP044 - Perris	10.15	1.731	09/14/12	09/14/32	12.2%	20	0.3	19.7	2.394	0.036
•	84.65				100.0%		1.36	18.6	18.639	1.361

#### APPENDIX E

**Net Salvage Analysis** 

Fransaction		Gross	Cost of	ž	Net	2- yr Net	3-yr Net	4- yr Net	5- yr Net	6-yr Net	7-yr Net	8-yr Net	9- yr Net	10- yr Net
Year Description	Retirements	Salvage	Removal	Salvage	Salv. %	Salv. %	Salv. %	Salv. %	Salv. %	Salv. %	Salv. %	Salv. %	Salv. %	Salv. %
1986 35200 Structures and Improvements	101,362	3,058	38,678	(35,620)	-35.14%									
1987 35200 Structures and Improvements	63,769		74,165	(74,165)	-116.30%	-66.48%								
1988 35200 Structures and Improvements	18,789	52,940	20,209	32,730	174.20%	-50.19%	-41.90%							
1989 35200 Structures and Improvements	242,412	344	42,794	(42,450)	-17.51%	-3.72%	-25.81%	-28.03%						
1990 35200 Structures and Improvements	82,283	1,593	36,242	(34,649)	-42.11%	-23.74%	-12.92%	-29.11%	-30.31%					
1991 35200 Structures and Improvements	103,252		17,628	(17,628)	-17.07%	-28.18%	-22.14%	-13.88%	-26.67%	-28.07%				
1992 35200 Structures and Improvements	92,911		42,639	(42,639)	-45.89%	-30.72%	-34.09%	-26.37%	-19.39%	-29.63%	-30.42%			
1993 35200 Structures and Improvements	53,683	745	15,648	(14,903)	-27.76%	-39.25%	-30.09%	-33.07%	-26.50%	-20.15%	-29.48%	-30.24%		
1994 35200 Structures and Improvements	105,801	6,634	186,441	(179,807)	-169.95%	-122.09%	-94.04%	-71.69%	-66.14%	48.81%	-42.82%	-48.96%	47.34%	
1995 35200 Structures and Improvements	99,566		31,988	(31,988)	-32.13%	-103.13%	-87.51%	-76.52%	-63.04%	-59.84%	-46.68%	-41.48%	47.02%	-45.77%
1996 35200 Structures and Improvements	153,021	4,101	158,480	(154,380)	-100.89%	-73.78%	-102.17%	-92.48%	-83.91%	-72.56%	-68.93%	-55.57%	-51.04%	-55.13%
1997 35200 Structures and Improvements	417,567	12,245	51,512	(39,267)	-9.40%	-33.94%	-33.67%	-52.25%	-20.67%	-50.19%	-46.85%	-46.50%	41.30%	-38.34%
1998 35200 Structures and Improvements	344,817	17,395	165,285	(147,890)	-42.89%	-24.55%	-37.31%	-36.80%	49.37%	48.38%	-48.20%	-45.86%	45.64%	-41.62%
1999 35200 Structures and Improvements	881,002		321,089	(321,089)	-36.45%	-38.26%	-30.93%	-36.89%	-36.64%	43.68%	-43.27%	-43.38%	42.17%	-42.17%
2000 35200 Structures and Improvements	740,451		207,776	(207,776)	-28.06%	-32.62%	-34.42%	-30.04%	-34.31%	-34.23%	-39.46%	-39.24%	-39.45%	-38.68%
2001 35200 Structures and Improvements	397,842		298,034	(298,034)	-74.91%	-44.44%	-40.95%	41.23%	-36.45%	-39.81%	-39.56%	-43.96%	43.68%	-43.75%
2002 35200 Structures and Improvements	603,560		283,632	(283,632)	-46.99%	-58.09%	-45.32%	42.34%	42.40%	-38.33%	-41.04%	-40.80%	-44.45%	-44.21%
2003 35200 Structures and Improvements	473,459		182,057	(182,057)	-38.45%	43.24%	-51.78%	43.85%	41.75%	41.86%	-38.35%	-40.73%	40.53%	-43.77%
2004 35200 Structures and Improvements	346,364		204,458	(204,458)	-59.03%	47.15%	-47.08%	-53.16%	45.91%	43.48%	-43.43%	-40.05%	42.19%	-41.96%
2005 35200 Structures and Improvements	723,379		70,702	(70,702)	-9.77%	-25.72%	-29.63%	-34.51%	40.83%	-37.95%	-37.63%	-38.03%	-35.61%	-37.57%
2006 35200 Structures and Improvements	173,038	525	113,238	(112,714)	-65.14%	-20.46%	-31.21%	-33.21%	-36.79%	42.37%	-39.31%	-38.73%	-39.03%	-36.61%
2007 35200 Structures and Improvements	204,099		139,368	(139,368)	-68.28%	-66.84%	-29.33%	-36.44%	-36.94%	-39.34%	-44.18%	-40.92%	40.06%	-40.26%
2008 35200 Structures and Improvements	337,973		60,250	(60,250)	-17.83%	-36.82%	-43.68%	-26.63%	-32.92%	-34.08%	-36.80%	-41.45%	-38.97%	-38.52%
2009 35200 Structures and Improvements	851,385	128,044	366,446	(238,402)	-28.00%	-25.11%	-31.43%	-35.16%	-27.14%	-31.33%	-32.41%	-34.78%	-38.67%	-37.05%
2010 35200 Structures and Improvements	272,200	16,399	335,785	(319,387)	-117.34%	49.64%	-42.29%	45.47%	47.32%	-36.72%	-39.38%	-39.25%	40.42%	-43.55%
2011 35200 Structures and Improvements	1,102,062	53,940	920,006	(896,066)	-81.31%	-88.44%	-65.32%	-29.06%	-59.74%	-60.06%	-50.13%	-20.90%	49.59%	-49.28%
2012 35200 Structures and Improvements	222,572	45,986	176,911	(130,924)	-58.82%	-77.53%	-84.32%	-64.73%	-59.04%	-29.67%	-59.97%	-50.63%	-51.32%	-50.02%

		Gross	Cost of	Net	Net	Net 1	S te	Net Y	Net	Net 7	Net 7	Net of	Net	Net y
Year Description	Retirements	Salvage	Removal	Salvage	Salv. %									
1986 35300 Station Equipment	4,292,796	1,703,607	581,588	1,122,019	26.14%									
1987 35300 Station Equipment	3,430,023	602,842	252,698	350,144	10.21%	19.06%								
1988 35300 Station Equipment	6,080,460	622,523	555,342	67,181	1.10%	4.39%								
1989 35300 Station Equipment	5,862,100	1,640,348	422,455	1,217,893	20.78%	10.76%	10.64%	14.02%						
1990 35300 Station Equipment	12,871,565	3,523,728	2,165,261	1,358,468	10.55%	13.75%	10.65%	10.60%	12.65%					
1991 35300 Station Equipment	8,289,012	3,047,080	1,738,310	1,308,770	15.79%	12.60%	14.38%	11.94%	11.78%	13.29%				
1992 35300 Station Equipment	4,380,753	1,352,336	357,481	994,855	22.71%	18.18%	14.34%	15.54%	13.20%	12.95%	14.20%			
1993 35300 Station Equipment	9,681,589	2,489,972	1,329,643	1,160,329	11.98%	15.33%	15.50%	13.69%	14.70%	12.95%	12.76%	13.81%		
1994 35300 Station Equipment	5,701,867	1,535,904	620,773	915,130	16.05%	13.49%	15.53%	15.61%	14.02%	14.87%	13.28%	13.10%	14.02%	
1995 35300 Station Equipment	13,051,569	1,051,184	2,080,918	(1,029,734)	-7.89%	-0.61%	3.68%	6.22%	8.15%	8.72%	8.90%	%60.6	9.15%	10.14%
1996 35300 Station Equipment	15,146,997	901,656	2,730,651	(1,828,994)	-12.07%	-10.14%	-5.73%	-1.80%	0.44%	2.70%	4.16%	5.46%	5.14%	5.34%
1997 35300 Station Equipment	11,482,207	732,143	1,394,066	(661,923)	-5.76%	-9.35%	-8.87%	-5.74%	-2.62%	-0.76%	1.27%	2.75%	3.97%	3.78%
1998 35300 Station Equipment	9,125,216	1,423,626	1,717,859	(294,233)	-3.22%	-4.64%	-7.79%	-7.82%	-5.32%	-2.71%	-1.09%	0.73%	2.14%	3.29%
1999 35300 Station Equipment	12,385,259	523,166	1,824,644	(1,301,477)	-10.51%	-7.42%	-6.84%	-8.49%	-8.36%	-6.28%	-3.97%	-2.53%	-0.83%	0.61%
2000 35300 Station Equipment	20,943,193	1,608,417	2,088,640	(480,223)	-2.29%	-5.35%	4.89%	-5.08%	-6.61%	-6.81%	-5.33%	-3.61%	-2.48%	-1.10%
2001 35300 Station Equipment	13,260,097	1,855,738	3,225,494	(1,369,756)	-10.33%	-5.41%	-6.76%	-6.18%	-6.11%	-7.21%	-7.30%	-5.99%	-4.42%	-3.38%
2002 35300 Station Equipment	39,188,732	504,949	2,758,828	(2,253,879)	-5.75%	-6.91%	-5.59%	-6.30%	-6.01%	-5.98%	-6.74%	-6.85%	-5.92%	4.76%
2003 35300 Station Equipment	29,826,797	1,931,598	3,630,094	(1,698,496)	-5.69%	-5.73%	-6.47%	-5.62%	-6.14%	-5.93%	-5.92%	-6.53%	-6.64%	-5.88%
2004 35300 Station Equipment	29,636,047	257,614	3,508,361	(3,250,747)	-10.97%	-8.32%	-7.30%	-7.66%	-6.81%	-7.13%	%06.9-	-6.82%	-7.26%	-7.30%
2005 35300 Station Equipment	33,047,138	223,816	4,864,923	(4,641,107)	-14.04%	-12.59%	-10.37%	-8.99%	-9.12%	-8.25%	-8.41%	-8.16%	-8.02%	-8.31%
2006 35300 Station Equipment	20,064,572	342,084	5,049,115	(4,707,031)	-23.46%	-17.60%	-15.23%	-12.70%	-10.91%	-10.86%	%68.6-	-9.93%	-9.64%	-9.44%
2007 35300 Station Equipment	29,105,657	366,605	7,505,787	(7,139,181)	-24.53%	-24.09%	-20.05%	-17.65%	-15.13%	-13.10%	-12.91%	-11.88%	-11.80%	-11.47%
2008 35300 Station Equipment	19,697,781	332,667	5,626,460	(5,293,794)	-26.88%	-25.48%	-24.89%	-21.37%	-19.03%	-16.56%	-14.45%	-14.20%	-13.13%	-13.00%
2009 35300 Station Equipment	17,866,746	3,570,620	9,901,181	(6,330,561)	-35.43%	-30.95%	-28.14%	-27.06%	-23.47%	-20.99%	-18.44%	-16.17%	-15.83%	-14.71%
2010 35300 Station Equipment	34,101,038	2,530,657	11,419,631	(8,888,975)	-26.07%	-29.29%	-28.62%	-27.44%	-26.78%	-24.04%	-21.93%	-19.66%	-17.50%	-17.15%
2011 35300 Station Equipment	23,837,092	3,296,839	8,018,372	(4,721,532)	-19.81%	-23.49%	-26.31%	-26.42%	-25.98%	-25.63%	-23.48%	-21.69%	-19.68%	-17.70%
2012 35300 Station Equipment	66,749,956	3,517,952	12,223,765	(8,705,813)	-13.04%	-14.82%	-17.90%	-20.10%	-20.92%	-21.47%	-21.66%	-20.63%	-19.58%	-18.22%

1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		9	30,400	10	1	2- yr	3- yr	4 y	5- yr	6- yr	7-yr	8- yr	9- yr	10- yr
Vear	Retirements	Salvade	Removal	Salvade	Salv %	Salv %	Salv %	% Ales	Salv %					
36 35500 Poles	1,518,036	438,116	811,666	(373,550)	-24.61%									
1987 35500 Poles & Fixtures	1,124,400	366,125	789,370	(423,245)	-37.64%	-30.15%								
1988 35500 Poles & Fixtures	1,724,976	606,548	1,108,639	(502,091)	-29.11%	-32.48%	-29.74%							
1989 35500 Poles & Fixtures	1,034,058	557,280	755,714	(198,434)	-19.19%	-25.39%	-28.94%	-27.72%						
1990 35500 Poles & Fixtures	1,991,785	753,024	1,225,351	(472,327)	-23.71%	-22.17%	-24.69%	-27.17%	-26.64%					
1991 35500 Poles & Fixtures	1,718,015	558,202	1,084,725	(526,523)	-30.65%	-26.92%	-25.24%	-26.27%	-27.95%	-27.40%				
1992 35500 Poles & Fixtures	1,651,069	440,754	755,563	(314,808)	-19.07%	-24.97%	-24.50%	-23.65%	-24.81%	-26.37%	-26.12%			
1993 35500 Poles & Fixtures	1,266,212	558,183	1,143,323	(585,140)	-46.21%	-30.85%	-30.77%	-28.65%	-27.37%	-27.69%	-28.76%	-28.23%		
1994 35500 Poles & Fixtures	1,483,752	697,340	1,169,684	(472,344)	-31.83%	-38.45%	-31.18%	-31.03%	-29.23%	-28.10%	-28.26%	-29.14%	-28.63%	
1995 35500 Poles & Fixtures	1,477,493	345,475	841,966	(496,491)	-33.60%	-32.72%	-36.76%	-31.79%	-31.53%	-29.91%	-28.86%	-28.90%	-29.63%	-29.12%
1996 35500 Poles & Fixtures	1,036,883	541,338	1,130,194	(588,857)	-56.79%	43.17%	-38.96%	40.70%	-35.54%	-34.57%	-32.53%	-31.35%	-31.06%	-31.57%
1997 35500 Poles & Fixtures	1,398,739	494,759	1,254,825	(760,066)	-54.34%	-55.38%	-47.16%	42.95%	43.57%	-38.70%	-37.32%	-35.07%	-33.81%	-33.26%
1998 35500 Poles & Fixtures	1,421,698	1,001,435	1,529,915	(528,480)	-37.17%	45.69%	-48.67%	44.50%	41.74%	42.44%	-38.48%	-37.30%	-35.29%	-34.14%
1999 35500 Poles & Fixtures	1,846,035	1,052,060	2,530,115	(1,478,055)	-80.07%	-61.40%	-59.29%	-58.83%	-53.64%	49.91%	-49.44%	-45.11%	43.24%	-40.70%
2000 35500 Poles & Fixtures	2,609,213	420,142	3,209,785	(2,789,643)	-106.92%	-95.79%	-81.61%	-76.37%	-73.93%	-67.84%	-63.10%	-61.40%	-56.47%	-53.68%
2001 35500 Poles & Fixtures	2,113,517	767,645	2,474,819	(1,707,174)	-80.77%	-95.22%	%96:06-	-81.39%	-77.36%	-75.31%	-70.14%	-65.89%	-64.19%	-59.62%
2002 35500 Poles & Fixtures	3,710,467	772,808	3,429,557	(2,656,749)	-71.60%	-74.93%	-84.83%	-83.97%	-78.29%	-75.73%	-74.34%	-70.48%	-67.13%	-65.69%
2003 35500 Poles & Fixtures	3,729,142	705,007	7,324,518	(6,619,511)	-177.51%	-124.69%	-114.97%	-113.24%	-108.87%	-102.27%	-98.28%	-95.87%	-91.12%	-86.89%
2004 35500 Poles & Fixtures	2,452,036	607,711	3,110,453	(2,502,742)	-102.07%	-147.58%	-119.08%	-112.34%	-111.37%	-107.86%	-102.24%	-98.76%	-96.62%	-92.35%
2005 35500 Poles & Fixtures	4,558,437	786,988	5,554,081	(4,767,093)	-104.58%	-103.70%	-129.33%	-114.51%	-110.20%	-109.75%	-107.15%	-102.71%	-99.88%	-98.08%
2006 35500 Poles & Fixtures	5,808,638	1,342,264	6,820,595	(5,478,331)	-94.31%	-98.83%	-99.45%	-117.04%	-108.72%	-106.08%	-106.16%	-104.37%	-100.99%	-98.79%
2007 35500 Poles & Fixtures	3,348,922	859,445	5,852,507	(4,993,062)	-149.09%	-114.35%	-111.10%	-109.73%	-122.43%	-114.44%	-111.68%	-111.24%	-109.33%	-106.08%
2008 35500 Poles & Fixtures	4,173,710	738,114	2,822,436	(2,084,322)	-49.94%	-94.08%	-94.18%	-96.83%	-97.46%	-109.86%	-104.75%	-103.06%	-103.37%	-102.12%
2009 35500 Poles & Fixtures	3,037,919	502,948	4,427,029	(3,924,080)	-129.17%	-83.32%	-104.18%	-100.68%	-101.53%	-101.58%	-112.03%	-107.16%	-105.47%	-105.57%
2010 35500 Poles & Fixtures	3,474,106	189,780	3,441,806	(3,252,026)	-93.61%	-110.20%	-86.66%	-101.56%	-99.44%	-100.40%	-100.55%	-109.93%	-105.79%	-104.33%
2011 35500 Poles & Fixtures	5,248,922	290,185	6,565,472	(6,275,287)	-119.55%	-109.22%	-114.37%	-97.50%	-106.46%	-103.65%	-103.79%	-103.66%	-111.34%	-107.61%
2012 35500 Poles & Fixtures	4,857,840	194,204	6,944,627	(6,750,423)	-138.96%	-128.88%	-119.86%	-121.56%	-107.18%	-113.00%	-109.37%	-108.74%	-108.30%	-114.64%

Transaction		Gross	Costof	Ž	Net	2-yr Net	3-yr Net	4- yr Net	5- yr Net	6- yr Net	7-yr Net	8-yr Net	9- yr Net	10- yr Net
Year Description	Retirements	Salvage	Removal	Salvage	Salv. %	Salv. %	Salv. %	Salv. %	Salv. %	Salv. %	Salv. %	Salv. %	Salv. %	Salv. %
1986 35600 OH Conductors	1,156,273	445,752	827,712	(381,960)	-33.03%									
1987 35600 OH Conductors	480,753	232,954	676,792	(443,838)	-92.32%	-50.45%								
1988 35600 OH Conductors	694,490	315,449	750,677	(435,228)	-62.67%	-74.80%	-54.09%							
1989 35600 OH Conductors	4,342,982	344,427	870,884	(526,456)	-12.12%	-19.09%	-25.47%	-26.78%						
1990 35600 OH Conductors	2,173,441	1,033,421	1,331,108	(297,687)	-13.70%	-12.65%	-17.46%	-22.14%	-23.57%					
1991 35600 OH Conductors	641,741	325,505	637,729	(312,224)	-48.65%	-21.67%	-15.88%	-20.01%	-24.18%	-25.26%				
1992 35600 OH Conductors	936,876	410,443	676,423	(265,980)	-26.68%	-35.29%	-22.98%	-17.20%	-20.76%	-24.45%	-25.40%			
1993 35600 OH Conductors	457,836	350,839	1,069,643	(718,803)	-157.00%	-67.70%	-61.87%	-37.35%	-24.63%	-27.47%	-30.65%	-30.90%		
1994 35600 OH Conductors	439,237	529,308	1,145,470	(616,162)	-140.28%	-148.81%	-84.53%	-75.45%	-46.95%	-30.24%	-32.55%	-35.36%	-35.12%	
1995 35600 OH Conductors	419,941	136,492	525,991	(389,499)	-92.75%	-117.05%	-130.94%	-86.02%	-77.91%	-20.70%	-33.01%	-35.04%	-37.62%	-37.17%
1996 35600 OH Conductors	604,352	281,422	631,197	(349,775)	-57.88%	-72.17%	-92.61%	-107.96%	-80.19%	-74.51%	-51.45%	-34.50%	-36.32%	-38.71%
1997 35600 OH Conductors	592,852	139,451	338,370	(198,919)	-33.55%	-45.83%	-58.02%	-75.59%	-90.41%	-72.32%	~99.89-	-49.78%	-34.45%	-36.17%
1998 35600 OH Conductors	394,813	548,351	760,858	(212,507)	-53.82%	~41.66%	-47.81%	-57.19%	-72.08%	-85.45%	-70.45%	-67.37%	-50.02%	-35.14%
1999 35600 OH Conductors	432,389	442,459	1,266,986	(824,526)	-190.69%	-125.37%	-87.04%	-78.33%	-80.81%	-89.87%	~20.66-	-82.43%	-78.08%	-58.52%
2000 35600 OH Conductors	821,486	245,414	711,395	(465,980)	-56.72%	-102.92%	-91.16%	-75.93%	-72.09%	-74.75%	-82.52%	-90.71%	-78.34%	-75.06%
2001 35600 OH Conductors	586,501	578,017	887,130	(309,113)	-52.70%	-55.05%	-86.92%	-81.07%	-71.11%	-68.78%	-71.39%	-78.44%	-86.02%	-75.72%
2002 35600 OH Conductors	1,215,446	478,224	1,879,844	(1,401,620)	-115.32%	-94.94%	-82.97%	-98.21%	-93.13%	-84.40%	-80.95%	-81.93%	-86.58%	-91.99%
2003 35600 OH Conductors	1,111,268	289,417	1,950,305	(1,660,888)	-149.46%	-131.62%	-115.74%	-102.76%	-111.88%	-106.86%	-98.42%	-94.17%	-94.07%	-97.14%
2004 35600 OH Conductors	394,845	388,083	968,623	(580,539)	-147.03%	-148.82%	-133.86%	-119.47%	-106.99%	-114.92%	-110.06%	-101.88%	-97.56%	-97.25%
2005 35600 OH Conductors	1,337,484	369,297	2,974,665	(2,605,368)	-194.80%	-183.91%	-170.45%	-153.94%	-141.16%	-128.47%	-133.03%	-128.06%	-119.93%	-114.92%
2006 35600 OH Conductors	2,768,106	1,016,836	5,280,910	(4,264,074)	-154.04%	-167.32%	-165.54%	-162.35%	-153.98%	-145.97%	-137.07%	-139.74%	-136.00%	-129.71%
2007 35600 OH Conductors	822,315	689,466	1,114,424	(424,958)	-51.68%	-130.60%	-148.02%	-147.95%	-148.21%	-142.98%	-136.55%	-129.31%	-132.11%	-128.98%
2008 35600 OH Conductors	982,551	274,447	1,431,787	(1,157,340)	-117.79%	-87.67%	-127.85%	-143.00%	-143.25%	-144.18%	-140.12%	-134.55%	-128.19%	-130.77%
2009 35600 OH Conductors	949,402	176,434	2,070,169	(1,893,735)	-199.47%	-157.93%	-126.21%	-140.16%	-150.81%	-150.61%	-150.45%	-146.00%	-140.62%	-134.34%
2010 35600 OH Conductors	201,188	(16,153)	2,865,566.12	(2,881,719)	-1432.35%	-415.04%	-278.12%	-215.12%	-185.58%	-187.33%	-185.19%	-180.56%	-172.45%	-165.68%
2011 35600 OH Conductors	1,144,118	130,316	1,834,955	(1,704,640)	-148.99%	-340.92%	-282.39%	-233.04%	-196.66%	-179.49%	-181.98%	-180.38%	-176.84%	-169.99%
2012 35600 OH Conductors	1,291,319	50,210	1,712,074	(1,661,864)	-128.70%	-138.23%	-236.98%	-227.05%	-203.55%	-180.38%	-171.45%	-174.74%	-173.63%	-171.19%

Fransaction		Gross	Cost of	Net	Net	2-yr Net	3-yr Net	4- yr Net	5- yr Net	6-yr Net	7-yr Net	8-yr Net	9- yr Net	10- yr Net
Year Description	Retirements	Salvage	Removal	Salvage	Salv. %	Salv. %	Salv. %	Salv. %	Salv. %	Salv. %	Salv. %	Salv. %	Salv. %	Salv. %
1986 35700 UG Conduit	,			0	NA									
1987 35700 UG Conduit				0	NA	NA								
1988 35700 UG Conduit	,			0	AN	ΥN	ΑN							
1989 35700 UG Conduit	,			0	AN	Ϋ́	AN	AN						
1990 35700 UG Conduit	109,120		1,262	(1,262)	-1.16%	-1.16%	-1.16%	-1.16%	-1.16%					
1991 35700 UG Conduit				0	AN	-1.16%	-1.16%	-1.16%	-1.16%	-1.16%				
1992 35700 UG Conduit				0	NA	Ϋ́	-1.16%	-1.16%	-1.16%	-1.16%	-1.16%			
1993 35700 UG Conduit	7,431			0	0.00%	0.00%	%00.0	-1.08%	-1.08%	-1.08%	-1.08%	-1.08%		
1994 35700 UG Conduit	2,234			0	0.00%	0.00%	%00.0	0:00%	-1.06%	-1.06%	-1.06%	-1.06%	-1.06%	
1995 35700 UG Conduit	,			0	AN	0.00%	%00.0	0.00%	0.00%	-1.06%	-1.06%	-1.06%	-1.06%	-1.06%
1996 35700 UG Conduit	991			0	0.00%	0.00%	%00.0	0.00%	0.00%	0.00%	-1.05%	-1.05%	-1.05%	-1.05%
1997 35700 UG Conduit	1			0	AN	0.00%	%00.0	0.00%	0.00%	0.00%	0.00%	-1.05%	-1.05%	-1.05%
1998 35700 UG Conduit				0	Ϋ́	Ą	%00.0	0.00%	0.00%	0.00%	0.00%	0.00%	-1.05%	-1.05%
1999 35700 UG Conduit	651		,	0	0.00%	0.00%	%00.0	0.00%	0.00%	0.00%	0.00%	%00:0	%00.0	-1.05%
2000 35700 UG Conduit	•		•	0	A V	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	%00.0	%00.0
2001 35700 UG Conduit	12,640		,	0	%00.0	0.00%	%00.0	0.00%	0.00%	0.00%	0.00%	0.00%	%00:0	0.00%
2002 35700 UG Conduit	•		,	0	Ϋ́	0.00%	%00.0	0.00%	0.00%	0.00%	0.00%	0.00%	%00.0	0.00%
2003 35700 UG Conduit				0	Ϋ́	Ą	%00.0	0.00%	0.00%	0.00%	0.00%	0.00%	%00.0	0.00%
2004 35700 UG Conduit				0	Ϋ́	Ą	Ϋ́	0.00%	0.00%	0.00%	0.00%	0.00%	%00.0	0.00%
2005 35700 UG Conduit	9,887		,	0	0.00%	0.00%	%00.0	0.00%	0.00%	0.00%	0.00%	%00:0	%00.0	0.00%
2006 35700 UG Conduit	25,565	198	198	0	0.00%	0.00%	%00.0	0.00%	0.00%	0.00%	0.00%	0.00%	%00.0	%00.0
2007 35700 UG Conduit	1,870		,	0	%00.0	0.00%	%00.0	0.00%	0.00%	0.00%	0.00%	0.00%	%00.0	0.00%
2008 35700 UG Conduit	11,914		,	0	%00.0	0.00%	%00.0	0.00%	0.00%	0.00%	0.00%	0.00%	%00.0	0.00%
2009 35700 UG Conduit	83,810	12,605	(3,576)	16,181	19.31%	16.90%	16.58%	13.14%	12.16%	12.16%	12.16%	12.16%	11.11%	11.11%
2010 35700 UG Conduit		0	154,013	(154,013)	Ϋ́	-164.46%	-143.99%	-141.23%	-111.91%	-103.60%	-103.60%	-103.60%	-103.60%	-94.61%
2011 35700 UG Conduit	223,127	10,861	490	10,371	4.65%	-64.38%	-41.53%	-39.98%	-39.74%	-36.81%	-35.79%	-35.79%	-35.79%	-35.79%
2012 35700 UG Conduit			,	0	NA	4.65%	-64.38%	-41.53%	-39.98%	-39.74%	-36.81%	-35.79%	-35.79%	-35.79%

Description         Retifements         Salvage         Remineration           58800 UG Conductors         29,820         4,339         Remineration           58800 UG Conductors         86,121         7,316         7,316           58800 UG Conductors         86,121         7,316         7,316           58800 UG Conductors         90,159         43,683         71,448           58800 UG Conductors         124,419         71,448         71,448           58800 UG Conductors         127,378         115,743         82,600           58800 UG Conductors         138,949         -         -           58800 UG Conductors         138,949         -         -           58800 UG Conductors         138,949         -         -           58800 UG Conductors         317,378         116,743         -           58800 UG Conductors         276,906         103,101         -           58800 UG Conductors         549,407         90,904         -           58800 UG Conductors         549,407         7,093         -           58800 UG Conductors         807,380         106,551         -           58800 UG Conductors         807,380         106,551         -           58800 UG Conduc	ransaction		Gross	Cost of		Net	2-yr Net	3-yr Net	4- yr Net	5- yr Net	6-yr Net	7-yr Net	8-yr Net	9- yr Net	10- yr Net
33,521 4,339 4,339 0 29,820 1,074 12,324 (11,251) 86,121 7,316 65,011 (57,695) 65,610 20,899 40,063 (19,255) 1,34,19 71,448 67,052 4,396 774,378 115,743 269,330 (135,88) 1,21,238 38,260 46,227 (7,966) 1,98,49 7 115,743 269,330 (135,88) 1,19,45 2,7 (7,966) 1,19,45 2,7 (13,062 (44,617) 3,17,397 88,275 (12,715 (34,40) 2,26,906 106,597 (12,715 (34,40) 2,26,907 116,471 16,471 16,789 (106,397) 4,40,467 90,904 297,870 (206,766) 7,39,002 75,119 342,541 (267,422) 1,018,42 228,494 82,1919 (536,875) 2,20,736 110,665 140,920 (238,43) 870,788 130,992 (130,487) 2,26,306 128,494 82,1919 (536,875) 2,26,306 137,417		Retirements	Salvage	Removal		Salv. %	Salv. %	Salv. %	Salv. %	Salv. %	Salv. %	Salv. %	Salv. %	Salv. %	Salv. %
29,820         1,074         12,324         (11,251)           68,121         7,316         65,011         (57,685)           68,121         2,809         40,063         (19,565)           7         43,683         75,829         (19,565)           124,419         71,448         67,082         4,396           774,378         115,443         26,327         (15,669)           121,238         38,260         46,227         (7,966)           119,453         2,788         95,230         (15,671)           119,453         2,788         95,230         (16,442)           119,493         2,788         95,230         (16,442)           250,806         103,101         290,088         (16,897)           490,229         75,220         246,018         (170,797)           549,407         116,471         10,566         (170,157)           549,407         116,471         10,566         (170,157)           549,407         116,471         10,566         (170,157)           549,407         116,431         10,237         (16,14)           10,184,22         284,944         287,670         (20,766)           267,630	986 35800 UG Conductors	33,521	4,339	4,339		%00:0									
86,121         7,316         65,011         (57,695)           65,610         20,809         40,063         (19,265)           -         -         -         -         0           134,419         71,448         67,062         4,366           71,4378         115,743         289,330         (153,688)           121,238         3,826         46,227         (156,681)           119,453         2,788         96,230         (156,681)           119,453         2,788         96,230         (30,703)           119,453         2,788         96,230         (30,703)           317,397         88,275         122,715         (44,40)           226,906         103,101         290,088         (146,987)           496,229         75,220         246,018         (170,797)           549,407         116,471         167,688         (14,40)           267,637         7,093         192,237         (186,144)           807,80         10,654         224,641         (267,422)           1018,422         284,944         192,237         (145,414)           279,002         75,19         242,541         (267,422)           282,167	987 35800 UG Conductors	29,820	1,074	12,324		-37.73%	-17.76%								
65,610 20,809 40,063 (19,255) 90,159 43,663 75,829 (32,145) 134,419 71,448 67,052 4,396 1274,378 115,743 269,330 (153,588) 121,238 38,260 46,227 (7,966) 138,949 2,788 95,230 (32,42) 119,453 2,788 95,230 (32,42) 317,397 88,275 12,271 (34,40) 226,906 103,101 290,088 (168,987) 496,229 75,200 246,018 (170,797) 549,407 110,41 113,062 (36,41) 540,467 90,904 297,670 (206,766) 267,637 7,083 115,568 86,401 (70,844) 807,360 106,551 229,567 (125,16) 739,002 75,119 342,541 (267,422) 1,018,422 284,944 821,919 (536,975) 2,103,232 170,568 36,270 (238,643) 870,788 130,992 (134,897) 4,044,434 1196,782 264,199 (238,643) 870,788 130,992 (134,897)	988 35800 UG Conductors	86,121	7,316	65,011		%66:99-	-59.47%	-46.13%							
90,159 43,883 75,828 (22,145) 134,419 71,448 67,052 4,366 774,378 115,743 289,330 (155,88) 121,238 38,260 46,227 (7,966) 138,949 - 30,703 (30,703) 119,453 2,844 113,062 (45,17) 317,397 88,275 (32,440) 226,906 103,101 290,088 (166,987) 499,229 75,220 246,018 (170,797) 549,407 116,471 16,786 (51,215) 40,407 90,904 297,870 (206,786) 739,002 75,119 342,541 (267,422) 1,018,422 284,94 821,919 (536,975) 2,027,360 110,6551 229,677 (123,106) 739,002 75,119 342,541 (267,422) 1,018,422 284,94 821,919 (536,975) 2,027,433 110,085 150,992 (137,817)	989 35800 UG Conductors	65,610	20,809	40,063		-29.35%	-50.71%	-48.58%	41.01%						
90,159 43,883 75,829 (32,145) 1,9,419 71,48 67,052 4,396 7,743 78 115,443 269,330 (15,568) 1,138,949 - 2,78 95,220 (22,442) 143,991 58,444 113,062 (92,442) 317,397 88,275 (36,677) 226,906 103,101 290,088 (16,897) 549,407 116,471 15,765 (34,440) 267,637 17,937 16,749 309,938 15,568 86,401 (170,797) 309,029 15,568 86,401 (170,797) 309,039 15,568 86,401 (170,797) 309,039 15,568 86,401 (170,797) 309,039 15,568 86,401 (170,797) 309,039 15,568 86,401 (170,797) 309,039 15,568 86,401 (170,797) 309,030 106,551 29,567 (123,16) 21,018,422 284,94 821,919 (536,575) 2,023,23 170,666 409,209 (237,417) 303,032 170,666 409,209 (237,437) 303,032 170,666 369,209 327,477 16,032 170,040	990 35800 UG Conductors					ΑN	-29.35%	-50.71%	48.58%	41.01%					
134,419         71,448         67,052         4,396           77,478         115,743         269,330         (15,588)           120,238         3,260         46,227         (7,588)           138,949         -         30,703         (30,703)           119,453         2,788         96,230         (32,442)           317,397         88,725         122,715         (44,40)           226,906         103,101         290,088         (186,987)           486,229         75,220         246,018         (170,797)           549,477         116,471         167,886         (151,15)           440,467         90,904         297,670         (266,766)           267,537         7,083         192,237         (165,144)           807,360         10,6541         229,677         (125,146)           739,002         75,119         342,541         (267,422)           1,018,422         284,944         821,919         (58,975)           2,030,323         170,566         36,249         (236,637)           2,030,323         170,566         36,249         (237,447)           4,034,433         16,096         352,419         (237,437)	991 35800 UG Conductors	90,159	43,683	75,829		-35.65%	-35.65%	-33.00%	-45.10%	-44.29%	-39.43%				
174,378         115,743         269,330         (155,68)           123,38         38,260         46,227         (7,666)           138,949         -         30,703         (7,066)           193,991         58,444         113,062         (82,442)           276,906         103,101         290,088         (86,87)           286,229         75,220         246,018         (10,797)           549,407         116,741         167,886         (165,87)           440,467         90,904         297,670         (206,766)           267,637         7,093         192,237         (165,144)           807,80         10,656         29,567         (10,84)           1,018,422         284,944         821,919         (536,975)           2,103,232         10,666         29,667         (123,016)           739,002         75,119         342,641         (267,422)           2,103,232         170,666         36,276         (236,43)           870,786         130,962         358,270         (234,391)           4,043,434         196,085         150,992         (134,897)           4,044,437         16,095         (140,992         (140,423)	992 35800 UG Conductors	134,419	71,448	67,052		3.27%	-12.36%	-12.36%	-16.20%	-27.82%	-28.55%	-26.37%			
171,238 38,260 46,227 (7,966) 178,949 - 30,7703 1194,453 2,788 95,230 (30,703) 317,397 88,275 12,715 (44,41) 317,397 10,3101 290,088 (166,987) 440,467 10,904 297,870 (106,14) 309,838 15,556 86,401 (70,24) 807,360 1106,551 229,677 (155,14) 807,360 1106,551 229,677 (120,106) 739,002 75,119 342,541 (267,422) 1,018,422 284,948 821,919 (536,975) 2,003,738 110,962 358,270 (273,016) 2,003,738 110,962 358,270 (273,016) 2,003,738 110,962 (134,987) 4,043,434 1196,772 284,199 (238,975)	993 35800 UG Conductors	774,378	115,743	269,330		-19.83%	-16.42%	-18.15%	-18.15%	-18.84%	-22.45%	-22.83%	-22.20%		
138,949         -         30,703         (30,703)           119,453         2,788         95,220         (8,442)           149,489         58,444         113,062         (8,442)           276,806         103,101         290,088         (16,697)           280,229         75,220         246,018         (170,797)           549,407         116,471         167,868         (170,797)           267,637         17,093         192,237         (166,14)           267,637         7,093         192,237         (166,14)           308,338         15,568         86,401         (170,84)           807,360         106,551         229,567         (156,14)           1,018,422         284,944         229,567         (156,14)           2,103,230         17,056         409,209         (356,97)           2,103,237         17,056         409,209         (236,97)           2,203,437         16,095         16,095         (137,417)           4,044,434         196,782         150,992         (134,897)	994 35800 UG Conductors	121,238	38,260	46,227		-6.57%	-18.04%	-15.26%	-16.90%	-16.90%	-17.59%	-20.93%	-21.32%	-20.78%	
119.453         2,788         95,230         (92,442)           317.397         88,775         113,062         (94,441)           226,906         103,101         290,088         (146,987)           489,229         75,220         246,018         (170,797)           549,407         116,471         167,886         (151,515)           440,467         90,904         297,670         (206,766)           267,537         7,083         192,237         (185,144)           807,380         10,656         22,956         (125,144)           1,018,422         284,944         86,401         (70,844)           2,103,023         75,119         342,541         (267,422)           1,018,422         284,944         821,919         (536,975)           2,103,023         170,566         342,541         (267,422)           2,036         170,566         368,270         (238,43)           870,788         130,992         150,992         (134,897)           4,444,434         196,772         16,093         (137,417)	995 35800 UG Conductors	138,949		30,703		-22.10%	-14.86%	-18.58%	-16.07%	-17.47%	-17.47%	-18.06%	-21.05%	-21.39%	-20.91%
193,991     58,444     113,062     (34,617)       226,906     103,011     290,088     (186,440)       226,907     103,011     290,088     (186,887)       498,229     75,220     246,018     (170,797)       40,467     90,904     297,670     (206,766)       266,637     7,083     192,237     (185,144)       309,838     15,556     86,401     (70,844)       807,360     106,551     229,567     (123,016)       739,002     75,119     342,541     (267,422)       1,018,422     224,944     821,919     (536,975)       2,103,23     170,666     409,209     (223,687)       4,043,434     116,085     150,992     (234,897)       4,044,434     116,782     524,199     (234,897)       4,044,434     116,782     524,199     (237,417)	996 35800 UG Conductors	119,453	2,788	95,230		-77.39%	47.66%	-34.54%	-24.67%	-21.76%	-22.66%	-22.66%	-22.97%	-25.45%	-25.68%
317,397     88,275     122,715     (34,440)       226,506     103,101     290,088     (166,987)       498,229     75,220     246,018     (170,797)       549,407     116,471     167,868     (170,797)       440,467     90,904     297,870     (206,766)       267,637     7,033     192,237     (165,144)       807,360     106,551     229,667     (125,164)       739,002     75,119     342,541     (267,422)       1,018,422     224,944     821,919     (536,975)       2,039,23     170,566     409,209     (238,43)       870,788     130,962     358,270     (237,417)       4,034,34     116,782     254,199     (337,417)       4,034,34     116,782     254,199     (337,417)	997 35800 UG Conductors	193,991	58,444	113,062		-28.15%	46.92%	-39.29%	-32.38%	-25.17%	-22.59%	-23.34%	-23.34%	-23.58%	-25.75%
226,906         103,101         290,088         (186,987)           499,229         75,220         246,018         (170,797)           549,407         116,471         167,868         (151,515)           440,467         90,904         297,670         (206,766)           267,637         7,093         192,237         (165,144)           807,360         116,556         86,401         (70,844)           807,360         10,6551         229,567         (135,146)           739,002         75,119         342,541         (267,422)           1,018,422         284,944         821,131         (536,975)           2,103,232         170,666         409,208         (236,43)           870,788         130,962         358,270         (237,417)           4,042,434         116,782         252,419         (337,417)	998 35800 UG Conductors	317,397	88,275	122,715		-10.85%	-17.41%	-28.77%	-27.57%	-24.71%	-22.44%	-20.52%	-21.24%	-21.24%	-21.52%
498,229         75,220         246,018         (170,797)           549,407         116,471         16,786         (61,216)           440,467         90,904         297,670         (206,766)           267,637         7,093         192,237         (185,144)           309,838         15,566         86,401         (70,844)           807,360         10,651         229,567         (123,016)           739,002         75,119         342,541         (267,422)           2,103,822         284,944         821,919         (536,975)           2,103,823         170,566         409,208         (236,43)           870,788         130,962         358,270         (234,397)           4,044,344         196,782         524,199         (134,897)           4,044,344         196,782         524,199         (134,897)	999 35800 UG Conductors	226,906	103,101	290,088		-82.41%	40.68%	-37.39%	-42.96%	40.05%	-36.42%	-29.63%	-27.45%	-27.80%	-27.80%
549,407 116,471 167,686 (51,215) 40,467 90,904 297,670 (206,766) 267,637 7,093 192,237 (185,144) 309,838 15,556 86,401 (70,844) 807,360 106,551 229,567 (123,016) 739,002 75,119 342,541 (267,422) 1,018,422 289,44 821,919 (536,975) 2,103,23 170,566 409,209 (237,308) 870,788 130,992 (327,308) 2,22,167 16,095 150,992 (134,897)	:000 35800 UG Conductors	498,229	75,220	246,018		-34.28%	49.34%	-37.62%	-36.14%	-39.77%	-38.13%	-35.76%	-30.60%	-28.80%	-29.03%
440,467         90,904         297,870         (206,766)           267,637         7,033         192,237         (186,144)           309,838         15,556         86,401         (70,844)           807,360         106,551         229,567         (120,106)           739,002         75,119         342,541         (267,422)           1,018,422         224,344         821,919         (536,975)           2,103,233         170,566         409,209         (238,43)           870,788         130,992         358,270         (273,308)           4,042,434         116,782         524,199         (377,417)	:001 35800 UG Conductors	549,407	116,471	167,686		-9.32%	-21.19%	-32.09%	-27.86%	-27.89%	-30.99%	-30.39%	-29.05%	-26.62%	-25.32%
267 637         7 093         192237         (165,144)           309,838         15,556         86,401         (70,844)           807,360         106,551         229,567         (130,16)           739,002         75,119         342,541         (267,422)           1,018,422         284,944         821,919         (36,975)           2,103,233         170,666         409,209         (236,643)           870,788         130,992         358,270         (237,308)           4,042,434         196,782         528,192         (137,447)	:002 35800 UG Conductors	440,467	90,904	297,670		-46.94%	-26.06%	-28.81%	-35.90%	-31.99%	-31.66%	-33.99%	-33.32%	-32.08%	-29.27%
309,838 15,556 86,401 (70,844) 807,360 106,551 229,567 (123,016) 739,002 75,119 342,541 (267,422) 1,018,422 284,944 821,919 (268,422) 2,103,923 170,566 409,209 (288,613) 870,788 130,962 358,270 (227,308) 282,167 16,095 150,992 (134,897) 4,044,434 116,782 524,199 (327,417)	:003 35800 UG Conductors	267,637	7,093	192,237		-69.18%	-55.35%	-35.24%	-34.97%	40.40%	-36.32%	-35.68%	-37.59%	-36.81%	-35.53%
807,360 106,551 229,567 (123,016) 739,002 75,119 342,541 (267,422) 1,018,422 289,44 821,919 (596,422) 2,103,923 170,566 409,209 (238,643) 870,788 130,962 358,270 (227,308) 2,82,167 16,095 150,992 (134,897) 4,042,434 116,782 524,199 (327,417)	:004 35800 UG Conductors	309,838	15,556	86,401		-22.86%	44.33%	-45.46%	-32.79%	-33.15%	-38.03%	-34.72%	-34.27%	-36.03%	-35.40%
739,002 75,119 342,541 (267,422) 1,018,422 284,944 821,919 (586,975) 2,103,223 170,666 409,209 (238,643) 870,788 130,962 358,827 (273,989) 4,042,434 1196,782 524,199 (327,417)	:005 35800 UG Conductors	807,360	106,551	229,567		-15.24%	-17.35%	-27.37%	-32.09%	-26.82%	-28.12%	-32.09%	-30.12%	-30.01%	-31.53%
10.18,422 284,944 82,1919 (586,975) 2,103,923 170,566 409,209 (238,643) 870,788 130,962 358,270 (238,7308) 282,167 16,095 150,992 (134,897) 4,042,434 196,782 524,199 (337,417)	:006 35800 UG Conductors	739,002	75,119	342,541		-36.19%	-25.25%	-24.85%	-30.44%	-33.27%	-29.05%	-29.77%	-32.88%	-31.20%	-31.06%
2,103,923 170,566 409,209 (238,643) 870,788 130,962 358,270 (227,308) 282,167 16,095 150,992 (134,897) 4,042,434 196,782 524,199 (327,417)	:007 35800 UG Conductors	1,018,422	284,944	821,919		-52.73%	45.77%	-36.16%	-34.73%	-37.66%	-38.80%	-34.88%	-34.82%	-37.04%	-35.43%
870,788 130,962 356,270 (227,308) 282,167 16,095 150,992 (134,897) 4,042,434 196,782 524,199 (327,417)	008 35800 UG Conductors	2,103,923	170,566	409,209		-11.34%	-24.84%	-27.01%	-24.98%	-24.84%	-27.11%	-28.64%	-26.94%	-27.48%	-29.27%
282,167 16,095 150,992 (134,897) 4,042,434 196,782 524,199 (327,417)	:009 35800 UG Conductors	870,788	130,962	358,270		-26.10%	-15.66%	-25.12%	-26.85%	-25.15%	-25.03%	-26.96%	-28.31%	-26.84%	-27.33%
4,042,434 196,782 524,199 (327,417)	010 35800 UG Conductors	282,167	16,095	150,992		-47.81%	-31.42%	-18.45%	-26.61%	-28.02%	-26.25%	-26.08%	-27.88%	-29.11%	-27.64%
7074 407	:011 35800 UG Conductors	4,042,434	196,782	524,199		-8.10%	-10.69%	-13.27%	-12.72%	-17.62%	-19.13%	-18.81%	-18.94%	-20.22%	-21.31%
1,0/4,46/ 47,010 488,020 (441,010)	2012 35800 UG Conductors	1,074,467	47,010	488,020	(441,010)	-41.04%	-15.02%	-16.73%	-18.03%	-16.35%	-20.30%	-21.46%	-21.00%	-21.05%	-22.17%

Year         Description         Retirements           1986 35900 Roads & Trails         1,1986 35900 Roads & Trails         1,1987 35900 Roads & Trails           1989 35900 Roads & Trails         1990 35900 Roads & Trails         1991 3590 Roads & Trails           1992 35900 Roads & Trails         1993 35900 Roads & Trails           1993 35900 Roads & Trails         1993 35900 Roads & Trails	1116   116   116   1116   1116   1116   1116   1116   1116   1116   1116   1116	Salvage	Removal	Salvage 0 0 0 0 0 0 0 (5,728)	Sah. % 0.00%	Saiv. % 0.00% 0.00% NA -1188.35% NA NA NA	0.00% 0.00% 0.00% 0.00% 1.1188.35% -1188.35% 0.00%	0.00% 0.00% 0.00% 0.00%	Salv. %	Salv. %	Salv. %	Salv. %	Salv. %	Salv. %
1986 35900 Roads & Trails 1983 53900 Roads & Trails 1989 53900 Roads & Trails 1990 35900 Roads & Trails 1990 35900 Roads & Trails 1992 35900 Roads & Trails 1993 35900 Roads & Trails	1,116 670 18,136 - - - - - - - - - - - - - - - - - - -		5,728	(5,728)	0.00% 0.00% 0.00% NA NA NA NA NA NA NA NA NA NA NA	0.00% 0.00% 0.00% 0.00% NA -1188.35% -1188.35% NA NA	0.00% 0.00% 0.00% NA -1188.35% -1188.35% NA NA	0.00% 0.00% 0.00% 1188.35%	%00'0					·
1987 35900 Roads & Trails 1988 35900 Roads & Trails 1989 35900 Roads & Trails 1990 35900 Roads & Trails 1991 35900 Roads & Trails 1992 35900 Roads & Trails 1993 35900 Roads & Trails	670 18,136 		5,728	0 0 0 0 (5,728) 0	0.00% 0.00% NA NA NA NA NA NA NA NA NA NA NA NA NA	0.00% 0.00% 0.00% NA 1188.35% 1.188.35% NA NA	0.00% 0.00% 0.00% NA -1188.35% -1188.35% NA	0.00% 0.00% 0.00% -1188.35%	%00'0					
1986 35900 Roads & Trails 1989 35900 Roads & Trails 1990 35900 Roads & Trails 1991 35900 Roads & Trails 1993 35900 Roads & Trails 1993 35900 Roads & Trails	18,136 482 		5,728	0 0 0 0 (5,728) 0 0	0.00% NA NA NA NA NA NA NA NA NA	0.00% 0.00% NA -1188.35% -1188.35% NA NA	0.00% 0.00% 0.00% NA -1188.35% -1188.35% NA	0.00% 0.00% 0.00% -1188.35%	%00'0					
1989 35900 Roads & Trails 1990 35900 Roads & Trails 1991 35900 Roads & Trails 1992 35900 Roads & Trails 1993 35900 Roads & Trails	482 		5,728	0 0 0 (5,728) 0 0	NA NA NA -1188.35% NA NA NA	0.00% NA NA -1188.35% -1188.35% NA NA	0.00% 0.00% NA -1188.35% -1188.35% -118.35% NA	0.00% 0.00% 0.00% -1188.35%	0.00%					
1990 35900 Roads & Trails 1991 35900 Roads & Trails 1992 35900 Roads & Trails 1993 35900 Roads & Trails	482 		5,728	0 0 (5,728) 0 0	NA NA- 1188.35% NA NA NA	NA -1188.35% -1188.35% NA NA NA	0.00% NA -1188.35% -1188.35% -188.35% NA	0.00%	0.00%					
1991 35900 Roads & Trails 1992 35900 Roads & Trails 1993 35900 Roads & Trails	- 482 		5,728	0 (5,728) 0 0	NA -1188.35% NA NA NA	NA -1188.35% -1188.35% NA NA NA	NA -1188.35% -1188.35% -1188.35% NA	0.00%						
1992 35900 Roads & Trails 1993 35900 Roads & Trails	482 		5,728	(5,728) 0 0	-1188.35% NA NA NA	-1188.35% -1188.35% NA NA	-1188.35% -1188.35% -1188.35% NA	-1188.35%	0.00%	0.00%				
1993 35900 Roads & Trails				000	<b>₹</b> ₹ ₹ ₹	-1188.35% NA NA	-1188.35% -1188.35% NA	77000077	-30.77%	-29.70%	-28.07%			
				0 0	A A A	<b>₹</b> ₹ ₹	-1188.35% NA	-1188.35%	-1188.35%	-30.77%	-29.70%	-28.07%		
1994 35900 Roads & Trails				0	A Z Z	₹ ₹	Y S	-1188.35%	-1188.35%	-1188.35%	-30.77%	-29.70%	-28.07%	
1995 35900 Roads & Trails	- 22 565				Ϋ́	¥ Z	Š	-1188.35%	-1188.35%	-1188.35%	-1188.35%	-30.77%	-29.70%	-28.07%
1996 35900 Roads & Trails	22 565			0			ζ.	Ϋ́	-1188.35%	-1188.35%	-1188.35%	-1188.35%	-30.77%	-29.70%
1997 35900 Roads & Trails	200,11		2,250	(2,250)	%26.6-	-9.97%	%26-6-	-9.97%	-9.97%	-34.62%	-34.62%	-34.62%	-34.62%	-19.37%
1998 35900 Roads & Trails				0	Ϋ́	-9.97%	%26-6-	-9.97%	-9.97%	-9.97%	-34.62%	-34.62%	-34.62%	-34.62%
1999 35900 Roads & Trails				0	ΑN	Ą	%26-6-	-9.97%	-9.97%	-9.97%	%26-6-	-34.62%	-34.62%	-34.62%
2000 35900 Roads & Trails	,			0	ΑN	¥	NA	-9.97%	-9.97%	-9.97%	%26.6-	-9.97%	-34.62%	-34.62%
2001 35900 Roads & Trails				0	Ϋ́	Ž	NA	Ϋ́	-9.97%	-9.97%	%26.6-	-9.97%	-9.97%	-34.62%
2002 35900 Roads & Trails				0	Ϋ́	Ž	NA	Ϋ́	NA	-9.97%	%26.6-	-9.97%	-9.97%	-9.97%
2003 35900 Roads & Trails				0	Ϋ́	Ą	NA	Ϋ́	ΑN	¥	-9.97%	-9.97%	-9.97%	-9.97%
2004 35900 Roads & Trails				0	Ϋ́	ž	AN	Ϋ́	NA	¥	ΑN	-9.97%	-9.97%	-9.97%
2005 35900 Roads & Trails				0	ΑN	Ą	NA	ΑN	NA	¥	ΑN	AN	-9.97%	%26.6-
2006 35900 Roads & Trails	,			0	ΑN	¥	NA	ΑN	NA	¥	ΑΝ	Ϋ́	Ą	%26.6-
2007 35900 Roads & Trails				0	Ϋ́	Ž	NA	Ϋ́	NA	Ą	ΑΝ	Ϋ́	Ą	Ϋ́
2008 35900 Roads & Trails				0	Ϋ́	Ž	NA	Ϋ́	NA	Ą	ΑΝ	Ϋ́	Ą	Ϋ́
2009 35900 Roads & Trails				0	Ϋ́	Ą	NA	Ϋ́	ΑN	¥	AN	ΑN	Ą	Ϋ́
2010 35900 Roads & Trails				0	Ϋ́	Ą	NA	Ϋ́	ΑN	¥	AN	ΑN	Ą	Ϋ́
2011 35900 Roads & Trails				0	Ϋ́	AN	NA	Ϋ́	Ν	¥	AN	N A	Ą	Ϋ́
2012 35900 Roads & Trails	27,288		6,415	(6,415)	-23.51%	-23.51%	-23.51%	-23.51%	-23.51%	-23.51%	-23.51%	-23.51%	-23.51%	-23.51%

ransaction		Gross	Cost of	Ž	Net	2-yr Net	3-yr Net	4- yr Net	5- yr Net	6-yr Net	7-yr Net	8-yr Net	9- yr Net	10- yr Net
Year Description	Retirements	Salvage	Removal	Salvage	Salv. %	Salv. %	Salv. %	Salv. %	Salv. %	Salv. %	Salv. %	Salv. %	Salv. %	Salv. %
1986 36100 Structures & Improvements	85,396	104	8,123	(8,019)	-9.39%									
1987 36100 Structures & Improvements	46,022		6,913	(6,913)	-15.02%	-11.36%								
1988 36100 Structures & Improvements	223,726		39,495	(39,495)	-17.65%	-17.20%	-15.33%							
1989 36100 Structures & Improvements	128,887	4,544	24,492	(19,948)	-15.48%	-16.86%	-16.65%	-15.37%						
1990 36100 Structures & Improvements	602,079		118,653	(118,653)	-19.61%	-18.88%	-18.60%	-18.43%	-17.72%					
1991 36100 Structures & Improvements	1,198,851	က	515,912	(515,909)	-43.03%	-35.18%	-33.86%	-32.18%	-31.82%	-30.99%				
1992 36100 Structures & Improvements	714,298		391,496	(391,496)	-54.81%	47.43%	-40.75%	-39.51%	-37.81%	-37.45%	-36.65%			
1993 36100 Structures & Improvements	855,348	968'09	427,855	(366,959)	-42.90%	48.32%	-46.03%	41.29%	-40.34%	-38.98%	-38.69%	-38.04%		
1994 36100 Structures & Improvements	1,927,243	12,604	167,837	(155,233)	-8.05%	-18.77%	-26.13%	-30.44%	-29.21%	-28.88%	-28.44%	-28.33%	-28.05%	
1995 36100 Structures & Improvements	1,205,147		408,179	(408,179)	-33.87%	-17.99%	-23.33%	-28.11%	-31.14%	-30.07%	-29.79%	-29.39%	-29.30%	-29.05%
1996 36100 Structures & Improvements	494,838		74,113	(74,113)	-14.98%	-28.37%	-17.58%	-22.41%	-26.86%	-29.89%	-29.00%	-28.76%	-28.42%	-28.34%
1997 36100 Structures & Improvements	1,184,870	161,247	380,162	(218,915)	-18.48%	-17.45%	-24.31%	-17.80%	-21.59%	-25.30%	-28.11%	-27.48%	-27.29%	-27.04%
1998 36100 Structures & Improvements	2,655,541		538,212	(538,212)	-20.27%	-19.71%	-19.17%	-22.37%	-18.68%	-21.17%	-23.82%	-26.07%	-25.71%	-25.59%
1999 36100 Structures & Improvements	2,946,745		307,552	(307,552)	-10.44%	-15.10%	-15.69%	-15.64%	-18.23%	-16.34%	-18.36%	-20.53%	-22.58%	-22.45%
2000 36100 Structures & Improvements	2,247,942	,	462,164	(462,164)	-20.56%	-14.82%	-16.66%	-16.90%	-16.80%	-18.72%	-17.09%	-18.73%	-20.54%	-22.28%
2001 36100 Structures & Improvements	750,929		473,464	(473,464)	-63.05%	-31.20%	-20.91%	-20.71%	-20.44%	-20.18%	-21.61%	-19.67%	-21.06%	-22.67%
2002 36100 Structures & Improvements	1,864,896		518,867	(518,867)	-27.82%	-37.94%	-29.90%	-22.56%	-21.98%	-21.62%	-21.35%	-22.48%	-20.66%	-21.84%
2003 36100 Structures & Improvements	3,472,039	25,715	962,798	(937,083)	-26.99%	-27.28%	-31.69%	-28.69%	-23.92%	-23.23%	-22.85%	-22.60%	-23.41%	-21.83%
2004 36100 Structures & Improvements	8,216,838	13,645	1,005,907	(992,263)	-12.08%	-16.51%	-18.06%	-20.42%	-20.44%	-18.93%	-19.09%	-19.06%	-18.98%	-19.69%
2005 36100 Structures & Improvements	1,680,974	20,723	574,059	(553,335)	-32.92%	-15.62%	-18.57%	-19.70%	-21.74%	-21.59%	-20.04%	-20.07%	-19.99%	-19.89%
2006 36100 Structures & Improvements	1,520,778	48,713	525,047	(476,334)	-31.32%	-32.16%	-17.71%	-19.87%	-20.76%	-22.57%	-22.34%	-20.80%	-20.74%	-20.64%
2007 36100 Structures & Improvements	2,137,042	51,518	971,730	(920,212)	-43.06%	-38.18%	-36.52%	-21.70%	-22.78%	-23.28%	-24.80%	-24.36%	-22.71%	-22.48%
2008 36100 Structures & Improvements	2,598,748		971,989	(971,989)	-37.40%	-39.96%	-37.86%	-36.81%	-24.23%	-24.72%	-24.99%	-26.27%	-25.75%	-24.10%
2009 36100 Structures & Improvements	1,465,400	220,388	1,153,155	(932,767)	-63.65%	46.87%	-45.56%	42.75%	40.99%	-27.51%	-27.42%	-27.46%	-28.58%	-27.89%
2010 36100 Structures & Improvements	6,375,349	363,650	1,160,646	(796,995)	-12.50%	-22.06%	-25.88%	-28.80%	-29.07%	-29.48%	-23.52%	-23.96%	-24.21%	-25.17%
2011 36100 Structures & Improvements	6,349,672	309,096	2,750,713	(2,441,617)	-38.45%	-25.45%	-29.40%	-30.64%	-32.04%	-31.98%	-32.06%	-26.65%	-26.68%	-26.74%
2012 36100 Structures & Improvements	1,946,615	163,163	385,453	(222,290)	-11.42%	-32.11%	-23.59%	-27.23%	-28.64%	-30.12%	-30.20%	-30.39%	-25.73%	-25.85%

Fransaction		Gross	Cost of	ţ	ţ	2- yr Net	3-yr	4- yr	5- yr	6- yr Net	7-yr Net	8-yr Net	9- yr	10- yr
Year Description	Retirements	Salvage	Removal	Salvage	Salv. %	Salv. %	Salv. %	Salv. %	Salv. %	Salv. %	Salv. %	Salv. %	Salv. %	Salv. %
1986 36200 Station Equipment	2,936,715	1,053,941	430,130	623,810	21.24%									
1987 36200 Station Equipment	2,252,088	982,578	375,325	607,254	26.96%	23.73%								
1988 36200 Station Equipment	813,859	192,558	227,362	(34,804)	4.28%	18.67%	19.93%							
1989 36200 Station Equipment	2,606,426	1,015,368	612,748	402,620	15.45%	10.75%	17.19%	18.57%						
1990 36200 Station Equipment	2,638,932	598,252	1,068,592	(470,340)	-17.82%	-1.29%	-1.69%	6.07%	10.03%					
1991 36200 Station Equipment	3,676,008	826,110	727,447	98,663	2.68%	-5.89%	0.35%	-0.04%	5.03%	8.22%				
1992 36200 Station Equipment	1,976,095	354,082	453,241	(99,159)	-5.02%	-0.01%	-5.68%	-0.63%	-0.88%	3.61%	%29.9			
1993 36200 Station Equipment	2,134,017	252,856	846,435	(593,579)	-27.82%	-16.85%	-7.63%	-10.21%	-5.08%	-5.03%	-0.56%	2.81%		
1994 36200 Station Equipment	4,078,250	644,012	1,246,729	(602,717)	-14.78%	-19.26%	-15.82%	-10.09%	-11.49%	-7.39%	-7.25%	-3.43%	-0.30%	
1995 36200 Station Equipment	6,377,093	1,167,702	1,431,332	(263,630)	4.13%	-8.29%	-11.60%	-10.70%	-8.01%	-9.25%	-6.51%	-6.43%	-3.60%	-1.13%
1996 36200 Station Equipment	6,337,891	694,712	1,727,381	(1,032,669)	-16.29%	-10.20%	-11.31%	-13.17%	-12.40%	-10.14%	-10.89%	-8.59%	-8.47%	-6.05%
1997 36200 Station Equipment	4,088,764	329,587	964,096	(634,508)	-15.52%	-15.99%	-11.49%	-12.13%	-13.59%	-12.91%	-10.91%	-11.49%	-9.42%	-9.30%
1998 36200 Station Equipment	5,038,573	305,201	1,196,125	(890,924)	-17.68%	-16.71%	-16.54%	-12.92%	-13.21%	-14.32%	-13.71%	-11.92%	-12.35%	-10.49%
1999 36200 Station Equipment	8,666,099	301,660	1,937,130	(1,635,471)	-18.87%	-18.43%	-17.76%	-17.38%	-14.61%	-14.63%	-15.40%	-14.87%	-13.34%	-13.61%
2000 36200 Station Equipment	8,350,700	826,215	1,684,686	(858,471)	-10.28%	-14.66%	-15.35%	-15.37%	-15.55%	-13.68%	-13.78%	-14.45%	-14.05%	-12.84%
2001 36200 Station Equipment	10,878,952	88,797	1,629,150	(1,540,353)	-14.16%	-12.47%	-14.46%	-14.95%	-15.02%	-15.20%	-13.78%	-13.86%	-14.39%	-14.07%
2002 36200 Station Equipment	7,913,059	200,115	1,991,770	(1,791,655)	-22.64%	-17.73%	-15.44%	-16.27%	-16.44%	-16.36%	-16.35%	-15.00%	-14.99%	-15.41%
2003 36200 Station Equipment	11,851,157	716,639	3,065,033	(2,348,394)	-19.82%	-20.95%	-18.54%	-16.77%	-17.15%	-17.20%	-17.08%	-17.00%	-15.82%	-15.76%
2004 36200 Station Equipment	9,659,572	190,967	2,681,590	(2,490,623)	-25.78%	-22.50%	-22.54%	-20.27%	-18.56%	-18.61%	-18.53%	-18.35%	-18.17%	-17.04%
2005 36200 Station Equipment	10,096,497	728,515	3,204,123	(2,475,609)	-24.52%	-25.14%	-23.14%	-23.04%	-21.12%	-19.58%	-19.49%	-19.37%	-19.16%	-18.94%
2006 36200 Station Equipment	7,340,728	292,757	3,307,771	(3,015,014)	-41.07%	-31.49%	-29.45%	-26.52%	-25.87%	-23.66%	-21.97%	-21.61%	-21.36%	-21.08%
2007 36200 Station Equipment	8,894,802	256,805	4,354,474	(4,097,669)	-46.07%	43.81%	-36.41%	-33.56%	-30.16%	-29.09%	-26.65%	-24.83%	-24.21%	-23.84%
2008 36200 Station Equipment	7,962,590	43,555	3,407,823	(3,364,268)	-42.25%	-44.27%	-43.30%	-37.77%	-35.13%	-31.88%	-30.73%	-28.32%	-26.50%	-25.78%
2009 36200 Station Equipment	5,499,955	833,334	5,169,068	(4,335,735)	-78.83%	-57.20%	-52.77%	49.88%	43.44%	-39.99%	-36.09%	-34.56%	-31.79%	-29.76%
2010 36200 Station Equipment	8,430,001	355,237	6,903,970	(6,548,733)	-77.68%	-78.14%	-65.08%	-59.59%	-56.03%	49.43%	-45.48%	-41.12%	-39.24%	-36.16%
2011 36200 Station Equipment	9,468,083	460,898	5,980,498	(5,519,599)	-58.30%	-67.43%	-70.11%	-63.04%	-59.29%	-56.48%	-50.88%	-47.28%	43.17%	-41.31%
2012 36200 Station Equipment	10,518,014	377,680	4,802,176	(4,424,496)	-42.07%	49.76%	-58.04%	-61.41%	-57.77%	-55.72%	-53.87%	-49.52%	46.58%	-43.04%

Fransaction		Gross	Cost of	Net	Net	2-yr Net	3- yr Net	4- yr Net	5- yr Net	6- yr Net	7-yr Net	8-yr Net	9- yr Net	10- yr Net
Year Description	Retirements	Salvage	Removal	Salvage	Salv. %	Salv. %	Salv. %	Salv. %	Salv. %	Salv. %	Salv. %	Salv. %	Salv. %	Salv. %
1986 36400 Poles & Fixtures	3,617,888	1,195,587	5,460,729	(4,265,142)	-117.89%									
1987 36400 Poles & Fixtures	4,483,625	1,184,575	6,788,552	(5,603,976)	-124.99%	-121.82%								
1988 36400 Poles & Fixtures	4,511,767	1,176,062	5,800,754	(4,624,692)	-102.50%	-113.71%	-114.91%							
1989 36400 Poles & Fixtures	4,980,189	1,701,470	7,393,141	(5,691,671)	-114.29%	-108.69%	-113.92%	-114.73%						
1990 36400 Poles & Fixtures	4,488,831	1,510,859	5,837,412	(4,326,553)	-96.38%	-105.80%	-104.74%	-109.65%	-111.00%					
1991 36400 Poles & Fixtures	5,170,171	1,531,005	7,196,967	(5,665,962)	-109.59%	-103.45%	-107.14%	-106.05%	-109.64%	-110.73%				
1992 36400 Poles & Fixtures	4,651,525	1,350,378	6,463,080	(5,112,702)	-109.91%	-109.74%	-105.55%	-107.81%	-106.80%	-109.68%	-110.62%			
1993 36400 Poles & Fixtures	4,272,313	1,190,943	5,888,423	(4,697,479)	-109.95%	-109.93%	-109.81%	-106.56%	-108.20%	-107.28%	-109.72%	-110.54%		
1994 36400 Poles & Fixtures	4,311,957	1,135,999	6,190,338	(5,054,340)	-117.22%	-113.60%	-112.31%	-111.54%	-108.57%	-109.59%	-108.60%	-110.60%	-111.25%	
1995 36400 Poles & Fixtures	4,669,593	1,460,647	8,534,156	(7,073,509)	-151.48%	-135.03%	-126.95%	-122.52%	-119.62%	-115.84%	-115.60%	-114.01%	-115.19%	-115.41%
1996 36400 Poles & Fixtures	3,372,602	1,178,897	5,530,479	(4,351,582)	-129.03%	-142.06%	-133.39%	-127.37%	-123.55%	-120.82%	-117.28%	-116.86%	-115.26%	-116.23%
1997 36400 Poles & Fixtures	4,381,683	1,169,956	10,257,205	(9,087,249)	-207.39%	-173.31%	-165.10%	-152.77%	-144.06%	-137.87%	-133.13%	-128.46%	-126.71%	-124.27%
1998 36400 Poles & Fixtures	4,633,390	1,557,269	14,198,076	(12,640,807)	-272.82%	-241.02%	-210.53%	-194.36%	-178.80%	-167.33%	-158.51%	-151.38%	-145.20%	-141.77%
1999 36400 Poles & Fixtures	5,693,972	1,785,609	12,463,611	(10,678,002)	-187.53%	-225.80%	-220.31%	-203.29%	-192.65%	-180.63%	-171.00%	-163.10%	-156.38%	-150.48%
2000 36400 Poles & Fixtures	7,522,163	1,747,873	24,132,404	(22,384,531)	-297.58%	-250.17%	-256.05%	-246.46%	-230.99%	-218.73%	-206.07%	-195.50%	-186.35%	-178.20%
2001 36400 Poles & Fixtures	5,365,442	2,081,646	18,989,668	(16,908,022)	-315.13%	-304.89%	-268.93%	-269.70%	-259.81%	-245.57%	-233.24%	-220.72%	-210.02%	-200.49%
2002 36400 Poles & Fixtures	6,092,762	2,206,522	18,730,233	(16,523,711)	-271.20%	-291.77%	-294.07%	-269.49%	-270.01%	-261.87%	-249.78%	-238.78%	-227.40%	-217.42%
2003 36400 Poles & Fixtures	9,211,050	3,705,966	34,701,982	(30,996,016)	-336.51%	-310.51%	-311.71%	-307.94%	-287.71%	-285.92%	-277.90%	-267.05%	-256.45%	-245.59%
2004 36400 Poles & Fixtures	14,367,311	7,004,168	41,635,274	(34,631,106)	-241.04%	-278.34%	-276.87%	-282.73%	-285.35%	-273.81%	-273.72%	-268.65%	-260.88%	-253.06%
2005 36400 Poles & Fixtures	13,348,519	4,698,571	56,759,663	(52,061,092)	-390.01%	-312.79%	-318.71%	-311.98%	-312.33%	-310.34%	-298.99%	-297.16%	-291.59%	-284.18%
2006 36400 Poles & Fixtures	14,606,903	5,332,098	57,732,154	(52,400,056)	-358.73%	-373.67%	-328.65%	-330.05%	-323.83%	-323.09%	-320.37%	-310.44%	-308.29%	-303.10%
2007 36400 Poles & Fixtures	13,499,183	5,915,367	65,949,884	(60,034,516)	-444.73%	-400.04%	-396.81%	-356.72%	-353.86%	-346.78%	-344.56%	-340.35%	-330.65%	-327.81%
2008 36400 Poles & Fixtures	4,973,552	2,619,074	15,630,992	(13,011,918)	-261.62%	-395.43%	-379.23%	-382.33%	-348.94%	-347.30%	-341.21%	-339.49%	-335.95%	-327.02%
2009 36400 Poles & Fixtures	4,562,119	2,119,605	28,257,513	(26,137,908)	-572.93%	-410.56%	430.58%	-402.70%	-399.38%	-364.57%	-361.11%	-354.32%	-351.87%	-347.51%
2010 36400 Poles & Fixtures	6,046,422	1,025,149	39,746,238	(38,721,089)	-640.40%	-611.38%	499.75%	-474.21%	-435.60%	-424.93%	-387.93%	-382.05%	-374.27%	-370.82%
2011 36400 Poles & Fixtures	7,226,617	1,644,727	47,021,385	(45,376,657)	-627.91%	-633.60%	-618.08%	-540.35%	-504.80%	-462.90%	-447.76%	-409.99%	-402.28%	-393.78%
2012 36400 Poles & Fixtures	7,872,541	3,454,097	45,429,955	(41,975,858)	-533.19%	-578.53%	-596.22%	-592.09%	-538.52%	-509.86%	472.31%	-457.08%	-421.20%	-413.05%

ransaction		Gross	Cost of	Net	Net	2-yr Net	3-yr Net	4- yr Net	5- yr Net	6- yr Net	7-yr Net	8-yr Net	9- yr Net	10- yr Net
Year Description	Retirements	Salvage	Removal	Salvage	Salv. %	Salv. %	Salv. %	Salv. %	Salv. %	Salv. %	Salv. %	Salv. %	Salv. %	Salv. %
1986 36500 Overhead Conductor	4,391,457	1,700,891	7,596,745	(5,895,854)	-134.26%									
1987 36500 Overhead Conductor	4,805,159	2,252,160	8,972,671	(6,720,512)	-139.86%	-137.18%								
1988 36500 Overhead Conductor	4,428,282	2,116,153	7,421,474	(5,305,321)	-119.81%	-130.24%	-131.54%							
1989 36500 Overhead Conductor	5,544,702	3,533,348	9,166,963	(5,633,615)	-101.60%	-109.69%	-119.50%	-122.88%						
1990 36500 Overhead Conductor	4,848,583	2,219,819	6,726,065	(4,506,246)	-92.94%	-97.56%	-104.21%	-112.94%	-116.83%					
1991 36500 Overhead Conductor	5,835,486	2,633,231	8,051,102	(5,417,871)	-92.84%	-92.89%	-95.87%	-101.00%	-108.33%	-112.15%				
1992 36500 Overhead Conductor	6,042,269	2,011,753	8,006,240	(5,994,487)	-99.21%	-96.08%	-95.17%	-96.77%	-100.59%	-106.58%	-109.97%			
1993 36500 Overhead Conductor	4,212,814	1,545,958	5,717,403	(4,171,445)	-99.02%	-99.13%	-96.85%	-95.94%	-97.13%	-100.38%	-105.69%	-108.82%		
1994 36500 Overhead Conductor	4,776,241	1,260,883	5,617,313	(4,356,429)	-91.21%	-94.87%	-96.61%	-95.56%	-95.07%	-96.23%	-99.15%	-103.98%	-106.94%	
1995 36500 Overhead Conductor	5,127,051	1,634,968	7,484,697	(5,849,729)	-114.10%	-103.06%	-101.85%	-101.06%	-99.22%	-98.23%	-98.74%	-101.03%	-105.12%	-107.68%
1996 36500 Overhead Conductor	3,397,644	1,086,232	4,239,171	(3,152,939)	-92.80%	-105.61%	-100.44%	-100.10%	-99.87%	-98.47%	-97.69%	-98.24%	-100.40%	-104.26%
1997 36500 Overhead Conductor	4,222,743	1,002,911	5,393,048	(4,390,137)	-103.96%	-98.99%	-105.06%	-101.29%	-100.85%	-100.49%	-99.16%	-98.38%	-98.79%	-100.71%
1998 36500 Overhead Conductor	3,253,038	1,207,796	5,481,157	(4,273,361)	-131.37%	-115.89%	-108.67%	-110.41%	-106.00%	-104.82%	-103.73%	-102.00%	-100.95%	-101.03%
1999 36500 Overhead Conductor	4,188,851	1,087,776	6,317,546	(5,229,770)	-124.85%	-127.70%	-119.11%	-113.17%	-113.41%	-109.16%	-107.70%	-106.24%	-104.34%	-103.13%
2000 36500 Overhead Conductor	7,183,370	1,476,125	9,143,762	(7,667,637)	-106.74%	-113.41%	-117.40%	-114.39%	-111.10%	-111.66%	-108.62%	-107.51%	-106.32%	-104.69%
2001 36500 Overhead Conductor	5,958,384	1,235,136	6,219,739	(4,984,603)	-83.66%	-96.28%	-103.18%	-107.64%	-107.01%	-105.30%	-106.65%	-104.72%	-104.15%	-103.53%
2002 36500 Overhead Conductor	6,831,264	1,094,382	6,704,583	(5,610,201)	-82.13%	-82.84%	-91.44%	-97.23%	-101.28%	-101.64%	-100.78%	-102.48%	-101.28%	-101.09%
2003 36500 Overhead Conductor	9,270,966	1,225,719	10,886,406	(2,660,687)	-104.20%	-94.84%	-91.82%	-95.48%	-99.16%	-102.02%	-102.22%	-101.50%	-102.80%	-101.78%
2004 36500 Overhead Conductor	10,262,432	927,758	14,793,605	(13,865,847)	-135.11%	-120.44%	-110.51%	-105.56%	-105.78%	-107.61%	-109.25%	-108.82%	-107.82%	-108.36%
2005 36500 Overhead Conductor	10,522,955	1,749,874	18,113,340	(16,363,466)	-155.50%	-145.44%	-132.72%	-123.35%	-117.83%	-116.24%	-116.90%	-117.72%	-116.78%	-115.53%
2006 36500 Overhead Conductor	12,412,527	2,418,062	25,331,453	(22,913,392)	-184.60%	-171.25%	-160.08%	-147.88%	-138.77%	-132.83%	-129.83%	-129.51%	-129.60%	-128.14%
2007 36500 Overhead Conductor	15,717,807	2,418,799	28,492,641	(26,073,843)	-165.89%	-174.14%	-169.07%	-161.94%	-152.74%	-145.33%	-140.15%	-137.08%	-136.46%	-136.26%
2008 36500 Overhead Conductor	6,592,145	163,871	10,733,597	(10,569,726)	-160.34%	-164.25%	-171.52%	-167.80%	-161.75%	-153.52%	-146.71%	-141.86%	-138.89%	-138.23%
2009 36500 Overhead Conductor	4,901,901	892,530	18,121,904	(17,229,374)	-351.48%	-241.86%	-197.98%	-193.79%	-185.75%	-177.15%	-167.44%	-159.83%	-154.32%	-150.51%
2010 36500 Overhead Conductor	6,211,615	396,640	23,973,525	(23,576,885)	-379.56%	-367.18%	-290.17%	-231.72%	-218.96%	-207.11%	-196.02%	-184.81%	-176.33%	-170.10%
2011 36500 Overhead Conductor	9,295,850	508,896	27,918,514	(27,409,618)	-294.86%	-328.79%	-334.24%	-291.78%	-245.46%	-231.76%	-219.54%	-208.12%	-196.81%	-188.30%
2012 36500 Overhead Conductor	8,915,074	372,623	21,247,676	(20,875,053)	-234.15%	-265.14%	-294.24%	-303.81%	-277.48%	-243.51%	-232.09%	-221.28%	-210.86%	-200.35%

Transaction		Gross	Cost of		Net	2- yr Net	3-yr Net	4- yr Net	5- yr Net	6-yr Net	7-yr Net	8-yr Net	9- yr Net	10- yr Net
Year Description	Retirements	Salvage	Removal	Salvage	Salv. %	Salv. %	Salv. %	Salv. %	Salv. %	Salv. %	Salv. %	Salv. %	Salv. %	Salv. %
1986 36600 Underground Conduit	477,798	74,356	155,193	l	-16.92%									
1987 36600 Underground Conduit	386,243	63,399	169,239		-27.40%	-21.61%								
1988 36600 Underground Conduit	526,244	59,299	172,618		-21.53%	-24.02%	-21.58%							
1989 36600 Underground Conduit	786,278	97,375	224,896		-16.22%	-18.35%	-20.41%	-19.64%						
1990 36600 Underground Conduit	835,966	50,176	216,356		-19.88%	-18.10%	-18.94%	-20.23%	-19.71%					
1991 36600 Underground Conduit	1,224,840	107,632	373,554		-21.71%	-20.97%	-19.66%	-19.95%	-20.71%	-20.29%				
1992 36600 Underground Conduit	821,659	80,297	255,652	(175,356)	-21.34%	-21.56%	-21.07%	-20.03%	-20.22%	-20.83%	-20.46%			
1993 36600 Underground Conduit	706,046	67,031	312,470		-34.76%	-27.54%	-24.95%	-23.77%	-22.41%	-22.32%	-22.69%	-22.21%		
1994 36600 Underground Conduit	601,488	51,511	236,687		-30.79%	-32.93%	-28.46%	-26.00%	-24.78%	-23.42%	-23.24%	-23.52%	-23.02%	
1995 36600 Underground Conduit	667,942	57,772	218,882		-24.12%	-27.28%	-29.95%	-27.42%	-25.68%	-24.69%	-23.51%	-23.34%	-23.58%	-23.12%
1996 36600 Underground Conduit	652,948	39,859	163,811		-18.98%	-21.58%	-24.46%	-27.23%	-25.83%	-24.75%	-24.01%	-23.04%	-22.92%	-23.16%
1997 36600 Underground Conduit	549,038	52,395	166,386		-20.76%	-19.80%	-21.34%	-23.64%	-26.11%	-25.13%	-24.33%	-23.72%	-22.85%	-22.76%
1998 36600 Underground Conduit	865,463	81,759	273,985		-22.21%	-21.65%	-20.81%	-21.62%	-23.27%	-25.28%	-24.61%	-24.03%	-23.53%	-22.78%
1999 36600 Underground Conduit	846,117	70,935	325,892		-30.13%	-26.13%	-24.82%	-23.52%	-23.63%	-24.66%	-26.12%	-25.43%	-24.77%	-24.25%
2000 36600 Underground Conduit	1,078,716	67,480	652,421		-54.23%	43.63%	-36.99%	-34.32%	-31.81%	-30.71%	-30.72%	-31.20%	-30.00%	-28.74%
2001 36600 Underground Conduit	1,216,166	82,798	535,105		-37.19%	45.20%	-41.14%	-37.05%	-35.09%	-33.07%	-32.05%	-31.93%	-32.21%	-31.10%
2002 36600 Underground Conduit	1,061,800	66,494	491,375		-40.02%	-38.51%	-43.56%	40.86%	-37.67%	-36.02%	-34.25%	-33.27%	-33.07%	-33.22%
2003 36600 Underground Conduit	1,328,930	65,102	941,392		-65.94%	-54.43%	-48.61%	49.91%	46.88%	43.54%	-41.74%	-39.79%	-38.52%	-38.00%
2004 36600 Underground Conduit	1,595,234	92,005	1,053,816		-60.10%	-62.76%	-56.70%	-52.14%	-52.50%	49.84%	-46.85%	-45.17%	43.31%	-42.01%
2005 36600 Underground Conduit	1,810,550	141,870	1,542,409		-77.35%	-69.27%	-68.34%	-63.15%	-58.65%	-58.06%	-55.42%	-52.48%	-50.80%	-48.91%
2006 36600 Underground Conduit	1,801,730	203,885	1,606,462		-77.85%	-77.60%	-72.24%	-20.96%	-66.64%	-62.57%	-61.66%	-59.18%	-56.42%	-54.81%
2007 36600 Underground Conduit	2,452,729	262,160	2,749,824		-101.42%	-91.44%	-87.23%	-81.58%	-79.27%	-75.12%	-71.03%	-69.56%	-67.03%	-64.27%
2008 36600 Underground Conduit	724,984	111,401	206,006		-54.43%	-90.70%	-86.05%	-83.73%	-79.24%	-77.42%	-73.73%	-70.03%	-68.72%	-66.38%
2009 36600 Underground Conduit	1,313,670	205,605	2,948,062		-208.76%	-153.88%	-125.23%	-111.67%	-104.00%	-96.78%	-93.06%	-88.40%	-83.72%	-81.51%
2010 36600 Underground Conduit	3,440,480	199,519	3,459,771		-94.76%	-126.26%	-116.76%	-112.02%	-105.69%	-101.25%	-96.25%	-93.47%	-89.81%	-85.99%
2011 36600 Underground Conduit	6,131,041	319,914	5,635,971		-86.71%	-89.60%	-103.98%	-100.89%	-100.98%	-98.35%	-96.20%	-93.22%	-91.46%	-88.93%
2012 36600 Underground Conduit	2,639,501	122,408	6,190,035	(6,067,626)	-229.88%	-129.79%	-119.92%	-128.55%	-124.78%	-121.35%	-117.12%	-113.57%	-109.68%	-107.18%

Tancaction			92025	Cost of	ţ	ţ	2-yr Net	3-yr	4- yr	5- yr	6- yr Net	7-yr Net	8-yr	9- yr	10- yr
Year	Description	Retirements	Salvage	Removal	Salvage	Salv. %	Salv. %	Salv. %	Salv. %	Salv. %	Salv. %	Salv. %	Salv. %	Salv. %	Salv. %
1986 36700 Unde	1986 36700 Underground Conductor & Devices	8,353,253	1,719,043	4,042,861	(2,323,819)	-27.82%									
1987 36700 Unde	987 36700 Underground Conductor & Devices	7,671,944	1,382,798	4,095,294	(2,712,496)	-35.36%	-31.43%								
1988 36700 Unde	1988 36700 Underground Conductor & Devices	8,043,247	1,562,947	4,481,773	(2,918,826)	-36.29%	-35.83%	-33.05%							
1989 36700 Unde	1989 36700 Underground Conductor & Devices	11,931,417	2,702,833	6,746,061	(4,043,228)	-33.89%	-34.85%	-34.99%	-33.33%						
1990 36700 Unde	1990 36700 Underground Conductor & Devices	10,841,864	1,990,108	6,367,078	(4,376,970)	-40.37%	-36.97%	-36.80%	-36.51%	-34.96%					
1991 36700 Unde	1991 36700 Underground Conductor & Devices	16,410,745	1,896,252	9,348,699	(7,452,447)	-45.41%	43.41%	-40.51%	-39.79%	-39.17%	-37.67%				
1992 36700 Unde	1992 36700 Underground Conductor & Devices	13,924,675	1,792,664	8,946,516	(7,153,852)	-51.38%	48.15%	-46.10%	43.36%	42.43%	41.64%	-40.14%			
1993 36700 Unde	1993 36700 Underground Conductor & Devices	14,621,950	1,356,409	8,067,483	(6,711,074)	-45.90%	48.57%	-47.42%	-46.05%	43.91%	-43.10%	-42.39%	-41.06%		
1994 36700 Unde	1994 36700 Underground Conductor & Devices	9,819,775	1,073,519	6,792,171	(5,718,652)	-58.24%	-50.85%	-51.04%	49.36%	47.87%	-45.72%	-44.83%	-44.05%	42.72%	
1995 36700 Unde	1995 36700 Underground Conductor & Devices	8,459,982	1,211,632	6,325,046	(5,113,413)	-60.44%	-59.26%	-53.32%	-52.74%	-50.84%	49.31%	-47.17%	-46.24%	45.42%	-44.08%
1996 36700 Unde	1996 36700 Underground Conductor & Devices	7,737,082	977,580	4,909,532	(3,931,952)	-50.82%	-55.85%	-56.75%	-52.84%	-52.47%	-50.84%	-49.45%	-47.47%	46.59%	-45.80%
1997 36700 Unde	1997 36700 Underground Conductor & Devices	8,260,828	1,086,017	6,727,805	(5,641,788)	-68.30%	-59.84%	-60.05%	-59.53%	-55.45%	-54.55%	-52.66%	-51.18%	49.16%	-48.22%
1998 36700 Unde	1998 36700 Underground Conductor & Devices	10,398,031	2,135,479	8,220,264	(6,084,785)	-58.52%	-62.85%	-59.32%	-59.59%	-29.30%	-55.99%	-55.11%	-53.34%	-51.94%	-50.02%
1999 36700 Unde	1999 36700 Underground Conductor & Devices	11,105,827	1,772,347	8,303,121	(6,530,774)	-58.80%	-58.67%	-61.34%	-59.17%	-59.40%	-59.20%	-56.44%	-55.60%	-53.94%	-52.62%
2000 36700 Unde	2000 36700 Underground Conductor & Devices	14,262,977	2,143,180	13,813,984	(11,670,804)	-81.83%	-71.75%	%06'.29-	-67.98%	-65.41%	-64.71%	-63.81%	-60.71%	-59.39%	-57.40%
2001 36700 Unde	2001 36700 Underground Conductor & Devices	14,126,754	1,538,316	11,084,569	(9,546,253)	-67.58%	-74.73%	-70.26%	-67.81%	-67.88%	-65.88%	-65.26%	-64.44%	-61.69%	-60.42%
2002 36700 Unde	2002 36700 Underground Conductor & Devices	16,425,628	1,643,500	13,162,140	(11,518,640)	-70.13%	-68.95%	-73.05%	-70.22%	-68.38%	-68.37%	-66.72%	-66.14%	-65.37%	-62.90%
2003 36700 Unde	2003 36700 Underground Conductor & Devices	17,138,153	1,646,483	17,189,343	(15,542,860)	%69'06-	-80.63%	-76.76%	-77.93%	-75.02%	-72.96%	-72.54%	-70.85%	-70.04%	-69.05%
2004 36700 Unde	2004 36700 Underground Conductor & Devices	18,149,193	1,463,298	20,036,841	(18,573,543)	-102.34%	-96.68%	-88.25%	-83.81%	-83.46%	-80.46%	-78.21%	-77.47%	-75.71%	-74.69%
2005 36700 Unde	2005 36700 Underground Conductor & Devices	23,222,723	2,797,077	29,642,742	(26,845,665)	-115.60%	-109.78%	-104.19%	-96.72%	-92.10%	-90.68%	-87.59%	-85.17%	-84.12%	-82.29%
2006 36700 Unde	2006 36700 Underground Conductor & Devices	26,122,079	4,249,036	34,473,221	(30,224,184)	-115.70%	-115.66%	-112.07%	-107.74%	-101.63%	-97.45%	-95.73%	-92.81%	-90.45%	-89.30%
2007 36700 Unde	2007 36700 Underground Conductor & Devices	36,832,343	5,535,153	57,634,906	(52,099,754)	-141.45%	-130.77%	-126.68%	-122.45%	-117.97%	-112.27%	-108.11%	-105.86%	-102.91%	-100.45%
2008 36700 Unde	2008 36700 Underground Conductor & Devices	13,951,291	794,902	21,621,165	(20,826,263)	-149.28%	-143.60%	-134.13%	-129.83%	-125.61%	-121.19%	-115.67%	-111.57%	-109.22%	-106.29%
2009 36700 Unde	2009 36700 Underground Conductor & Devices	24,098,756	4,546,964	46,615,251	(42,068,287)	-174.57%	-165.29%	-153.57%	-143.77%	-138.51%	-133.90%	-129.26%	-123.73%	-119.56%	-116.93%
2010 36700 Unde	2010 36700 Underground Conductor & Devices	25,031,561	1,458,432	48,037,989	(46,579,557)	-186.08%	-180.43%	-173.54%	-161.71%	-152.18%	-146.49%	-141.70%	-136.96%	-131.50%	-127.30%
2011 36700 Unde	2011 36700 Underground Conductor & Devices	36,347,392	1,902,412	61,400,315	(59,497,903)	-163.69%	-172.82%	-173.32%	-169.94%	-162.24%	-154.75%	-149.86%	-145.62%	-141.36%	-136.43%
2012 36700 Unde	2012 36700 Underground Conductor & Devices	38.580.724	1.783.506	56,798,850	(55.015.344)	-142.60%	-152.83%	-161.16%	-163.76%	-162,30%	-157.91%	-152.42%	-148.61%	-145.14%	-141.55%

Transaction		Gross	Cost of	Z	Net	2- yr Net	3-yr Net	4- yr Net	5- yr Net	6- yr Net	7-yr Net	8-yr Net	9- yr Net	10- yr Net
Year Description	Retirements	Salvage	Removal	Salvage	Salv. %	Salv. %	Salv. %	Salv. %	Salv. %	Salv. %	Salv. %	Salv. %	Salv. %	Salv. %
1986 36800 Line Transformers	12,499,465	2,305,557	1,764,311	541,246	4.33%									
1987 36800 Line Transformers	14,879,106	2,192,213	1,939,736	252,476	1.70%	2.90%								
1988 36800 Line Transformers	13,216,812	2,229,808	2,108,611	121,197	0.92%	1.33%	2.25%							
1989 36800 Line Transformers	14,025,974	4,841,238	2,243,322	2,597,916	18.52%	9.98%	7.05%	6.43%						
1990 36800 Line Transformers	14,472,571	3,063,840	2,104,798	959,041	6.63%	12.48%	8.82%	6.95%	6.47%					
1991 36800 Line Transformers	17,861,861	4,211,200	2,463,809	1,747,391	82.6	8.37%	11.44%	9.11%	7.63%	7.15%				
1992 36800 Line Transformers	17,628,562	3,636,468	2,692,677	943,791	5.35%	7.58%	7.31%	9.76%	8.25%	7.19%	6.85%			
1993 36800 Line Transformers	15,208,707	2,796,692	2,472,786	323,906	2.13%	3.86%	2.95%	6.10%	8.30%	7.24%	6.47%	6.25%		
1994 36800 Line Transformers	16,705,282	2,453,067	1,777,363	675,704	4.04%	3.13%	3.92%	5.48%	2.68%	7.56%	6.75%	6.15%	5.98%	
1995 36800 Line Transformers	11,459,804	3,014,305	2,472,556	541,748	4.73%	4.32%	3.55%	4.07%	5.37%	2.56%	7.26%	6.56%	6.03%	5.88%
1996 36800 Line Transformers	11,898,859	1,841,898	1,836,336	5,562	0.05%	2.34%	3.05%	2.80%	3.42%	4.67%	4.94%	6.54%	2.98%	5.54%
1997 36800 Line Transformers	13,893,242	949,396	2,496,024	(1,546,628)	-11.13%	-5.97%	-2.68%	-0.60%	0.00%	1.09%	2.57%	3.06%	4.69%	4.35%
1998 36800 Line Transformers	17,779,042	1,969,363	3,047,810	(1,078,446)	-6.07%	-8.29%	-6.01%	-3.78%	-1.95%	-1.24%	-0.13%	1.32%	1.88%	3.43%
1999 36800 Line Transformers	16,622,447	1,338,244	3,079,403	(1,741,158)	-10.47%	-8.20%	-9.04%	-7.24%	-5.33%	-3.56%	-2.72%	-1.55%	%60.0-	0.54%
2000 36800 Line Transformers	19,135,687	2,039,218	4,202,538	(2,163,321)	-11.31%	-10.92%	-9.31%	-9.68%	-8.22%	-6.59%	4.94%	-4.06%	-2.88%	-1.45%
2001 36800 Line Transformers	19,136,571	2,066,116	3,661,584	(1,595,468)	-8.34%	-9.82%	-10.02%	-9.05%	-9.39%	-8.25%	-6.89%	-5.45%	-4.64%	-3.53%
2002 36800 Line Transformers	21,558,681	1,994,259	4,182,063	(2,187,804)	-10.15%	-9.30%	-9.94%	-10.06%	-9.30%	-9.54%	-8.59%	-7.43%	-6.13%	-5.36%
2003 36800 Line Transformers	27,447,202	2,109,990	6,817,584	(4,707,594)	-17.15%	-14.07%	-12.46%	-12.21%	-11.93%	-11.07%	-11.08%	-10.18%	-9.11%	-7.86%
2004 36800 Line Transformers	29,563,287	2,369,283	6,845,696	(4,476,412)	-15.14%	-16.11%	-14.47%	-13.27%	-12.95%	-12.64%	-11.87%	-11.81%	-11.01%	-10.05%
2005 36800 Line Transformers	33,595,329	4,200,341	7,950,227	(3,749,886)	-11.16%	-13.02%	-14.27%	-13.48%	-12.73%	-12.55%	-12.34%	-11.74%	-11.70%	-11.03%
2006 36800 Line Transformers	32,795,319	5,761,654	7,379,127	(1,617,473)	4.93%	-8.08%	-10.26%	-11.79%	-11.55%	-11.17%	-11.19%	-11.13%	-10.71%	-10.74%
2007 36800 Line Transformers	82,633,959	18,289,630	28,192,597	(9,902,967)	-11.98%	-9.98%	-10.25%	-11.06%	-11.87%	-11.71%	-11.44%	-11.43%	-11.38%	-11.06%
2008 36800 Line Transformers	8,440,110	10,097,105	2,472,010	7,625,095	90.34%	-2.50%	-3.14%	-4.86%	-6.48%	-7.85%	-8.06%	-8.08%	-8.30%	-8.43%
2009 36800 Line Transformers	5,400,614	6,058,266	14,551,185	(8,492,919)	-157.26%	-6.27%	-11.16%	-9.58%	-9.91%	-10.71%	-11.52%	-11.39%	-11.17%	-11.18%
2010 36800 Line Transformers	30,396,645	7,132,423	24,930,319	(17,797,896)	-58.55%	-73.44%	-42.19%	-22.52%	-18.91%	-17.56%	-17.24%	-17.23%	-16.67%	-16.12%
2011 36800 Line Transformers	72,956,890	7,748,567	30,290,693	(22,542,125)	-30.90%	-39.03%	-44.90%	-35.16%	-25.58%	-22.67%	-21.21%	-20.61%	-20.31%	-19.68%
2012 36800 Line Transformers	40,788,745	6,271,110	40,040,700	(33,769,590)	-82.79%	49.51%	-51.41%	-55.24%	47.46%	-35.28%	-31.64%	-29.40%	-28.14%	-27.32%

Redriguing         Salvage	ransaction		Gross	Cost of	Net	Net	2-yr Net	3-yr Net	4- yr Net	5- yr Net	6-yr Net	7-yr Net	8-yr Net	9- yr Net	10- yr Net
4,001,244         5,76,041         3,237,589         (2,681,548)         -67,02%         -74,67%           3,325,891         7,36,232         2,727,294         -63,65%         -74,67%         -71,27%           3,325,891         7,36,232         2,727,294         -63,65%         -71,27%         -71,27%           4,266,70         1,211,148         3,749,877         (2,536,79)         -63,65%         -71,27%         -71,27%           5,666,47         7,60,344         5,64,014         4,000,594         (3,456,581)         -43,26%         -61,59%         -76,40%         -63,03%           7,605,344         5,64,014         4,000,594         (3,456,581)         -43,22%         -61,59%         -63,03%         -61,59%         -64,00%         -63,03%         -61,59%         -68,03%         -61,59%         -66,04%         -71,77%         -66,03%         -61,59%         -68,03%         -61,59%         -66,03%         -61,59%         -66,03%         -61,59%         -68,03%         -61,59%         -68,03%         -61,59%         -66,04%         -71,77%         -66,03%         -71,27%         -66,03%         -71,27%         -66,03%         -71,27%         -71,27%         -71,27%         -71,27%         -71,27%         -71,27%         -71,27%         -71,27%<	Description	Retirements	Salvage	Removal	Salvage	Salv. %	Salv. %	Salv. %	Salv. %	Salv. %	Salv. %	Salv. %	Salv. %	Salv. %	Salv. %
3,335, 881         736,027         3,53,322         (2,787,294)         -83,86%         74,67%         -76,11%           4,386, 70         1,21,148         3,346,827         (2,626,337)         -92,28%         -61,59%         -76,11%           4,286, 70         1,211,148         3,369,780         (3,587,704)         -59,28%         -61,59%         -66,00%         -69,58%           4,986,70         7,867,704         -63,39%         -61,59%         -66,00%         -69,58%         -67,93%         -67,39%         -67,39%         -67,39%         -67,39%         -67,39%         -67,93%         -67,39%         -67,39%         -68,28%         -71,27%         -68,29%         -67,90%         -67,39%         -67,39%         -67,39%         -67,39%         -67,39%         -67,39%         -67,39%         -68,28%         -71,27%         -68,29%         -67,39%         -68,29%         -67,39%         -68,28%         -71,27%         -68,29%         -67,39%         -68,28%         -71,27%         -68,29%         -67,39%         -68,29%         -67,39%         -68,28%         -71,27%         -68,29%         -67,39%         -68,29%         -67,39%         -68,29%         -71,27%         -68,29%         -71,27%         -68,29%         -71,27%         -71,00%         -71,00%	00 Services	4,001,244	576,041	3,257,589	(2,681,548)	-67.02%									
4,286,760         1,211,148         3,386,571         (2,626,337)         -79,28%         -61,18%         -76,11%           4,286,760         1,211,148         3,748,827         (2,538,79)         -63,24%         -61,59%         -71,27%           5,686,760         767,138         4,398,750         (3,587,704)         -73,17%         -61,59%         -66,40%         -67,93%           7,665,344         564,014         4,005,594         (3,465,81)         -44,22%         -65,61%         -64,23%         -67,96%         -66,40%         -67,93%           2,900,788         4,965,320         (3,465,81)         -44,22%         -65,61%         -64,23%         -64,05%         -66,40%         -60,40%         -64,05%         -66,40%         -60,40%         -64,05%         -66,40%         -60,40%         -64,05%         -66,40%         -60,40%         -64,05%         -66,40%         -60,40%         -64,05%         -66,40%         -60,40%         -64,05%         -66,40%         -60,40%         -64,05%         -66,40%         -60,00%         -64,20%         -66,40%         -60,40%         -64,05%         -66,40%         -60,40%         -64,05%         -66,40%         -60,90%         -64,20%         -66,40%         -60,90%         -64,20%         -66,40%         -60,90	00 Services	3,335,891	736,027	3,533,322	(2,797,294)	-83.85%	-74.67%								
4,286,750         1,211,148         3,749,827         (2,536,79)         -69,24%         -67,98%         -77,28%         -71,27%           5,686,467         778,138         4,389,919         (3,602,811)         -63,33%         -61,95%         -66,00%         -69,88%           4,903,509         782,046         4,389,919         (3,465,811)         -63,33%         -61,95%         -66,40%         -69,88%           7,695,344         564,014         4,020,594         (3,465,811)         -43,22%         -61,93%         -66,40%         -67,93%           2,980,738         4,642,75         (3,673,508)         (3,118,224)         -97,1%         -60,30%         -68,40%         -68,40%           1,370,783         508,445         1,904,296         (1,182,4)         -97,1%         -60,30%         -68,40%         -68,40%           1,407,387         1,360,816         1,904,296         (1,580,876)         -112,33%         -109,66%         -98,23%         -68,40%         -68,40%           1,361,474         2,884,47         1,904,296         (1,580,876)         -112,33%         -109,66%         -106,88%         -109,70%         -106,88%         -100,98%         -102,28%         -120,22%         -106,88%         -106,88%         -106,88%         -102,28% </td <td>00 Services</td> <td>3,312,528</td> <td>739,233</td> <td>3,365,571</td> <td>(2,626,337)</td> <td>-79.28%</td> <td>-81.58%</td> <td>-76.11%</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>	00 Services	3,312,528	739,233	3,365,571	(2,626,337)	-79.28%	-81.58%	-76.11%							
5.686.467         767,138         4,389,919         (3.602,781)         -63.36%         -61.59%         -66.00%         -69.58%           4,903.509         782,046         5,386,704         -73.17%         -67.90%         -66.00%         -69.58%           7,896,344         564,014         4,020,594         (3.687,704)         -73.17%         -67.90%         -66.20%         -67.93%           7,896,738         448,275         (3.16,224)         -97.21%         -67.90%         -68.49%         -61.05%           1,370,783         508,445         1,971,323         (1,402,3%         -96.78%         -96.84%         -68.49%         -70.42%           1,341,200         489,471         2.88,477         (1,580,870)         -103.78%         -109.68%         -162.28%         -162.28%           1,341,200         489,451         3,045,489         (2,779,048)         -103.78%         -166.28%         -162.28%           1,341,200         489,451         3,054,489         (2,779,048)         -163.78%         -163.28%         -160.08%         -162.28%           1,341,200         489,451         3,045,489         (2,883,75)         -142.89%         -168.48%         -168.28%         -168.28%         -168.28%         -168.28%         -168.28%	00 Services	4,285,750	1,211,148	3,749,827	(2,538,679)	-59.24%	-67.98%	-72.82%	-71.27%						
4,900,509         782,046         4,389,750         (3,581,704)         -73,17%         -67,90%         -65,40%         -67,93%           2,980,784         564,014         4,000,594         (3,485,81)         -44,22%         -56,91%         -88,23%         -68,42%           2,980,784         564,014         4,000,594         (3,485,81)         -44,92%         -60,30%         -68,43%         -70,42%         -68,43%         -70,42%         -68,43%         -70,42%         -68,43%         -70,42%         -68,43%         -70,42%         -68,43%         -70,42%         -70,42%         -70,42%         -70,42%         -70,42%         -70,42%         -70,42%         -70,42%         -70,42%         -70,42%         -70,42%         -70,42%         -70,42%         -70,42%         -70,42%         -70,42%         -70,42%	00 Services	5,686,467	767,138	4,369,919	(3,602,781)	-63.36%	-61.59%	%00:99-	-69.58%	%60:69-					
7,696,344         564,014         4,020,594         (3,465,681)         -49,2%         -55,91%         -58,23%         -58,42%           2,980,7784         565,302         3,673,586         (3,118,24)         -97,1%         -60,30%         -64,22%         -64,05%           2,980,7783         508,445         1,971,323         (1,462,877)         -106,72%         -95,78%         -96,38%         -70,42%           1,370,783         508,445         1,971,323         (1,462,877)         -106,72%         -95,78%         -96,38%         -70,42%           1,351,474         2,884,47         3,123,417         (2,834,97)         -106,67%         -96,38%         -70,42%           1,351,474         2,884,47         3,723,417         (2,834,97)         -106,67%         -160,66%         -175,48%         -162,52%         -162,25%         -162,25%           1,306,409         437,110         3,075,486         (2,833,75)         -142,88%         -175,23%         -176,48%         -162,25%         -162,25%         -162,25%         -162,25%         -162,25%         -162,25%         -162,25%         -162,25%         -162,25%         -162,25%         -162,25%         -162,25%         -162,25%         -162,25%         -162,25%         -162,25%         -162,25%         -	00 Services	4,903,509	782,046	4,369,750	(3,587,704)	-73.17%	-67.90%	-65.40%	-67.93%	-70.40%	-69.87%				
3,207,764         555,302         3,673,526         (3,116,224)         -97.21%         -60.30%         -64.29%         -64.05%           1,30,783         448,275         3,153,131         (2,704,856)         -90.14%         -94.10%         -66.29%         -68.49%           1,30,784         33,418         1,971,323         (1,462,877)         -106.72%         -95.78%         -96.38%         -68.49%           1,351,474         288,447         3,123,417         (2,834,970)         -209.77%         -100.06%         -120.72%         -96.38%         -96.38%         -96.88%         -120.72%           1,351,474         288,447         3,123,417         (2,834,970)         -208.77%         -100.06%         -142.36%         -120.72%           1,351,200         437,110         3,075,486         (2,633,37)         -164.28%         -165.28% <t< td=""><td>00 Services</td><td>7,695,344</td><td>564,014</td><td>4,020,594</td><td>(3,456,581)</td><td>-44.92%</td><td>-55.91%</td><td>-58.23%</td><td>-58.42%</td><td>-61.09%</td><td>-63.69%</td><td>-64.09%</td><td></td><td></td><td></td></t<>	00 Services	7,695,344	564,014	4,020,594	(3,456,581)	-44.92%	-55.91%	-58.23%	-58.42%	-61.09%	-63.69%	-64.09%			
2,980,738         448,275         3,153,131         (2,704,856)         -90,74%         -94,10%         -66,84%         -68,49%           1,370,783         508,445         1,971,323         (1,462,877)         -106,72%         -95,78%         -96,88%         -70,42%           1,407,387         23,418         1,904,296         (1,580,870)         -110,33%         -109,68%         -96,88%         -10,72%           1,341,200         489,451         3,768,499         (2,779,048)         -207,21%         -208,49%         -175,48%         -165,25%           1,341,200         489,451         3,754,88         (2,883,75)         -142,38%         -168,74%         -175,48%         -156,25%           1,580,409         437,110         3,075,488         (2,883,75)         -142,89%         -168,14%         -175,23%         -165,25%           2,162,17         1,66,436         3,743,775         (3,686,439)         -136,43%         -164,27%         -175,23%         -165,28%         -164,27%         -175,23%         -165,28%         -164,27%         -175,23%         -165,28%         -164,27%         -175,23%         -165,28%         -164,27%         -175,23%         -165,28%         -164,27%         -175,23%         -165,28%         -164,28%         -164,28%	00 Services	3,207,764	555,302	3,673,526	(3,118,224)	-97.21%	-60.30%	-64.29%	-64.05%	-63.25%	-65.07%	%00'.29-	-67.01%		
1,370,783         508,445         1,971,223         (1,462,877)         -106,72%         -95,76%         -96,38%         -70,42%           1,407,387         3,32418         1,904,296         (1,580,879)         -102,33%         -109,56%         -98,92%         -70,42%           1,351,474         2,884,47         3,123,417         (2,833,77)         200,77%         -160,66%         -120,72%           1,351,474         2,884,47         3,123,417         (3,853,37)         200,77%         -160,66%         -175,48%         -150,27%           1,850,409         437,110         3,075,486         (2,533,75)         -142,58%         -168,74%         -175,23%         -160,58%         -175,23%         -160,57%         -175,23%         -160,57%         -175,23%         -160,52%         -160,25%         -160,25%         -150,25%         -150,25%         -150,28%         -160,25% <td>00 Services</td> <td>2,980,738</td> <td>448,275</td> <td>3,153,131</td> <td>(2,704,856)</td> <td>-90.74%</td> <td>-94.10%</td> <td>-66.84%</td> <td>-68.49%</td> <td>-67.30%</td> <td>-66.10%</td> <td>-67.46%</td> <td>%00.69-</td> <td>-68.80%</td> <td></td>	00 Services	2,980,738	448,275	3,153,131	(2,704,856)	-90.74%	-94.10%	-66.84%	-68.49%	-67.30%	-66.10%	-67.46%	%00.69-	-68.80%	
1,407,387         32,3418         1,904,296         (1,560,87)         -112,33%         -109,55%         -99,82%         -86,89%           1,381,444         2,844,7         3,123,417         (2,834,97)         -200,77%         -160,66%         -142,35%         -190,55%         -120,72%           1,341,200         489,447         3,723,419         (2,834,97)         -208,49%         -175,49%         -160,66%         -142,35%         -160,25%         -162,25%           1,360,409         437,110         3,075,486         (2,833,75)         -142,69%         -163,17%         -161,65%         -165,25%         -162,2	00 Services	1,370,783	508,445	1,971,323	(1,462,877)	-106.72%	-95.78%	-96.38%	-70.42%	-71.09%	-69.39%	-67.94%	~20.69-	-70.41%	-70.08%
1,351,474         288,447         3,123,417         (2,83,470)         2.09.77%         -160.06%         -142.35%         -120.72%           1,341,200         489,451         3,288,499         (2,779,048)         207.21%         -208.49%         -175.48%         -158.25%         -165.25%         -165.25%         -165.25%         -165.25%         -165.25%         -165.25%         -165.25%         -175.23%         -182.00%         -175.23%         -182.00%         -175.25%         -165.25%         -165.25%         -165.25%         -165.26%         -165.25%         -165.26%         -165.25%         -165.26%         -165.25%         -165.25%         -175.23%         -175.23%         -175.23%         -175.28%         -165.26%         -165.26%         -165.26%         -165.26%         -165.26%         -165.26%         -165.26%         -165.26%         -165.28%         -175.23%         -175.23%         -175.28%         -165.28%         -175.28%         -165.28%         -165.28%         -165.28%         -165.28%         -175.28%         -165.28%         -165.28%         -165.28%         -165.28%         -165.28%         -165.28%         -165.28%         -165.28%         -165.28%         -165.28%         -165.28%         -165.28%         -165.28%         -165.28%         -165.28%         -165.28%	00 Services	1,407,387	323,418	1,904,296	(1,580,878)	-112.33%	-109.56%	-99.82%	-98.89%	-73.96%	-73.78%	-71.61%	-69.92%	-70.81%	-71.95%
1,341,200         489,451         3,288,499         (2,779,048)         -207,21%         -208,49%         -175,48%         -165,25%           1,680,409         437,110         3,075,485         (2,583,75)         -142,88%         -168,74%         -175,48%         -165,25%           1,706,463         2,451,77         3,410,520         (3,165,363)         -168,49%         -175,23%         -182,70%           2,162,17         1,661,36         3,743,775         (3,686,356)         -166,53%         -174,56%         -162,28%         -161,27%         -175,23%           2,162,17         1,661,36         3,743,775         (3,686,35)         -166,53%         -174,56%         -162,28%         -150,41%         -175,23%         -175,23%         -155,28%         -150,41%         -175,23%         -155,68%         -156,41%         -175,23%         -155,68%         -156,41%         -175,23%         -155,68%         -156,58%         -156,41%         -175,23%         -155,68%         -156,14%         -175,23%         -155,68%         -156,14%         -175,23%         -155,68%         -156,14%         -175,14%         -175,23%         -155,68%         -156,14%         -175,14%         -175,23%         -155,68%         -156,14%         -155,68%         -156,14%         -156,58%         -156	100 Services	1,351,474	288,447	3,123,417	(2,834,970)	-209.77%	-160.06%	-142.35%	-120.72%	-113.41%	-84.15%	-81.80%	-78.13%	-75.67%	-76.00%
1,850,409         437,110         3,075,485         (2,638,375)         -142,58%         -168,74%         -181,55%         -165,25%           1,706,483         2,45,57         3,40,520         (3,165,83)         -186,49%         -168,17%         -175,22%         -182,70%           2,162,177         1,56,136         3,743,772         (3,165,83)         -166,83%         -168,17%         -175,22%         -182,70%           3,686,149         192,775         5,223,177         (3,003,82)         -130,01%         -142,89%         -161,18%         -152,28%         -150,47%           5,568,541         2,6113         91,44,766         (3,916,82)         -160,16%         -173,18%         -155,28%         -150,14%           6,154,325         3,40,61         11,575,309         (1,141,288)         -20,63%         -179,17%         -165,58%           6,131,825         479,820         15,917,17         (15,696,87)         -20,13%         -216,23%         -210,57%           6,131,825         479,820         15,917,17         (15,696,87)         -20,13%         -220,64%         -221,33%         -210,57%           6,034,66         1,189,966         61,7337         566,729         50,319%         -20,144         -221,69%         -210,57%      <	00 Services	1,341,200	489,451	3,268,499	(2,779,048)	-207.21%	-208.49%	-175.48%	-158.25%	-134.44%	-124.20%	-92.68%	-88.73%	-83.91%	-80.82%
1,706,463         245,157         3,410,520         (3,165,363)         -185,49%         -163,17%         -175,23%         -182,70%           2,162,177         166,136         3,743,772         (3,587,636)         -165,93%         -174,56%         -164,21%         -175,23%         -173,28%           3,886,199         192,775         5,223,157         (3,000,382)         -130,01%         -142,89%         -165,23%         -176,23%         -150,41%           4,512,204         210,627         9,383,512         (9,142,885)         -202,63%         -173,17%         -165,53%         -165,53%         -165,53%         -165,53%         -170,41%         -165,53%         -165,53%         -165,53%         -165,53%         -165,53%         -165,53%         -165,53%         -165,53%         -165,53%         -165,53%         -165,53%         -165,53%         -165,53%         -165,53%         -170,44%         -165,53%         -165,53%         -165,53%         -165,53%         -170,44%         -165,53%         -170,44%         -165,53%         -170,44%         -165,53%         -170,44%         -165,53%         -170,44%         -165,53%         -165,53%         -170,44%         -165,53%         -170,44%         -170,44%         -170,44%         -170,44%         -170,44%         -170,44%	00 Services	1,850,409	437,110	3,075,485	(2,638,375)	-142.58%	-169.74%	-181.65%	-165.25%	-154.29%	-135.91%	-126.72%	-97.03%	-92.55%	-87.33%
2,162,177         156,136         3,743,772         (3,587,636)         -166,53%         -174,56%         -164,21%         -172,38%           3,869,199         192,775         5,223,157         (5,030,382)         -130,10%         -142,89%         -152,22%         -150,41%           4,512,204         2,26,113         9,144,796         (8,916,682)         -160,16%         -147,80%         -165,28%         -155,58%           6,154,435         394,061         11,575,309         (11,181,248)         -181,68%         -190,54%         -180,12%         -170,48%           6,131,825         479,820         15,688,736         (15,408,91)         -251,33%         -221,23%         -210,23%         -170,48%           6,08,040         177,135         1,086,82         202,73%         -221,43%         -222,34%         -221,33%         -210,54%           6,08,040         677,937         568,72         (510,856)         421,76%         -201,84%         -222,34%         -222,34%         -210,54%           1,395,563         88,194         7,100,471         (7,012,76)         -503,19%         -465,69%         -406,10%         -284,83%           4,00,77         6,00,70         6,00,70         6,00,70         6,00,70         7,00,00         441,10% <td>00 Services</td> <td>1,706,463</td> <td>245,157</td> <td>3,410,520</td> <td>(3,165,363)</td> <td>-185.49%</td> <td>-163.17%</td> <td>-175.23%</td> <td>-182.70%</td> <td>-169.76%</td> <td>-160.19%</td> <td>-142.95%</td> <td>-133.31%</td> <td>-103.62%</td> <td>-98.25%</td>	00 Services	1,706,463	245,157	3,410,520	(3,165,363)	-185.49%	-163.17%	-175.23%	-182.70%	-169.76%	-160.19%	-142.95%	-133.31%	-103.62%	-98.25%
3,869,199         192,775         5,223,157         (5,030,382)         -130,01%         -142,89%         -152,28%         -150,41%           5,568,541         2,221,13         9,144,796         (8,918,882)         -160,16%         -147,80%         -151,18%         -155,88%           4,512,204         2,10,627         9,383,512         (3,14,248)         -160,16%         -17,18%         -165,58%         -155,88%           6,134,825         394,061         11,157,530         (11,481,248)         -18,688         -190,154%         -170,48%         -190,54%         -170,48%           6,131,825         479,820         15,888,736         (15,406,915)         -251,23%         -216,42%         -212,72%         -190,63%           6,000,040         15,135         1,098,827         (15,685,870)         -201,33%         -226,43%         -210,57%           1,189,966         617,337         563,729         (504,885)         47,168         -66,59%         -466,69%         406,10%         -228,483           1,393,563         98,194         7,100,471         (7,012,76)         -503,19%         -466,99%         -406,10%         -264,83%           1,005,377         1,005,377         1,005,378         1,005,978         -606,10%         -201,44%	00 Services	2,162,177	156,136	3,743,772	(3,587,636)	-165.93%	-174.56%	-164.21%	-172.38%	-178.39%	-168.92%	-161.30%	-146.46%	-137.37%	-108.99%
5,568,541         226,113         9,144,796         (8,916,882)         -160,16%         -173,18%         -155,18%         -155,58%           4,512,204         210,273         9,333,519         (1,142,285)         -202,63%         -179,17%         -165,53%         -165,58%           6,131,825         349,061         11,575,309         (1,141,286)         -100,54%         -170,48%         -155,88%           6,131,825         479,820         15,917,175         (15,696,57)         -251,23%         -216,27%         -170,48%           7,629,073         221,505         15,917,175         (15,696,57)         -251,33%         -221,33%         -210,57%         -105,4%           1,189,966         617,337         563,722         (5,015,855)         471,69         406,10%         -260,4%         -222,94%         -210,57%           1,383,563         88,194         7,100,471         (7,012,76)         503,19%         -465,69%         406,10%         -264,83%           4,005,77         4,005,77         4,005,77         4,005,77         4,005,77         4,005,78%         -201,007	00 Services	3,869,199	192,775	5,223,157	(5,030,382)	-130.01%	-142.89%	-152.28%	-150.41%	-157.38%	-163.15%	-157.92%	-153.26%	-142.93%	-136.03%
4,512,204 210,627 9,383,512 (3,142,885) 2.02.63% -179.17% -165.53% -165.59%	00 Services	5,568,541	226,113	9,144,796	(8,918,682)	-160.16%	-147.80%	-151.18%	-155.58%	-153.99%	-158.32%	-162.21%	-158.57%	-155.12%	-146.99%
6,154,435 394,061 11,575,309 (11,181,248) -181,68% -190,54% -170,48% -170,4	00 Services	4,512,204	210,627	9,353,512	(9,142,885)	-202.63%	-179.17%	-165.53%	-165.59%	-167.49%	-165.15%	-167.83%	-170.37%	-166.93%	-163.65%
6,131,825 479,820 15,888,736 (15,406,915) 2-551,23% 2-26,42% 2-12,72% 1-199,63% 7 (28,9073 221,505 15,917,175 (15,895,670) 2-05,73% 2-26,04% 2-12,23% 2-10,54% 2-10,54% 1,989,966 617,937 5,696,72% (5,018,65) 421,76% 3-03,84% 2-29,86% 2-29,86% 17,100,471 (7,012,76) 5-03,19% 4-65,69% 4-06,10% 2-26,483% 1,393,563 10,327 10,320 81,75,757 (18,655,64) 4-14,61% 4-86,69% 4-66,10% 2-26,483% 1,01% 1,000,757 10,000,700,700,700,700,700,700,700,700,7	00 Services	6,154,435	394,061	11,575,309	(11,181,248)	-181.68%	-190.54%	-180.12%	-170.48%	-170.03%	-171.13%	-169.09%	-170.97%	-172.81%	-169.97%
7,629,073 221,505 15,917,475 (15,696,670) 2.05,73% 2.26,04% 2-712,33% 2.10,54% 608,040 157,135 1,108,986 17,397 5,696,722 (5,018,55) 4.776% 2.39,363 88,194 7,100,471 (7,012,76) 5.03,19% 465,69% 406,10% 2.84,83% 403,10% 400,10% 2.30,10% 400,10% 2.30,10% 400,10% 2.3	00 Services	6,131,825	479,820	15,888,736	(15,408,915)	-251.29%	-216.42%	-212.72%	-199.63%	-189.36%	-187.58%	-187.46%	-184.86%	-185.76%	-186.70%
606,040 157,135 1,086,892 (929,757) -152.91% -201.84% -222.94% -210.57% 1,189,966 617,937 5,636,792 (5,018,855) 421.76% -330.84% -229,60% -238.15% 1,393,633 88,194 7,100,471 (7,012,276) -503.19% -466.69% -406.10% -268.83% 1,393,237 103,920 8,787,575 (8,683,654) 474,61% -486,99% -499,33% -431.01% 1,000,637	100 Services	7,629,073	221,505	15,917,175	(15,695,670)	-205.73%	-226.04%	-212.33%	-210.54%	-201.18%	-193.05%	-191.42%	-191.16%	-188.89%	-189.49%
1,189,966 617,937 5,636,792 (5,018,855) 421.76% -330.84% -228,60% -238.15% 1,393,663 88,194 7,100,471 (7,012,76) -503.19% -466.89% -406.10% -264.83% 1,393,200 8,787,575 (8,683,864) 4,74,61% -486.99% -498.39% -431.01% 1,000,471 (7,012,76) 1,000,410,10% 1,	100 Services	608,040	157,135	1,086,892	(929,757)	-152.91%	-201.84%	-222.94%	-210.57%	-209.14%	-200.23%	-192.34%	-190.79%	-190.55%	-188.34%
1,393,563 88,194 7,100,471 (7,012,276) -503.19% -465,69% -406,10% -264,83% 7,100,471 (7,012,276) -503.19% -465,69% -406,10% -264,83% 7,100,471 (7,012,276) -406,98% -406,10% -264,83% 7,100,471 (7,012,276) -406,9% -4	00 Services	1,189,966	617,937	5,636,792	(5,018,855)	-421.76%	-330.84%	-229.60%	-238.15%	-222.14%	-218.78%	-208.52%	-200.00%	-198.05%	-197.51%
1,823,327 103,920 8,757,575 (8,653,654) 474,61% -486,99% 469,39% -431,01%	00 Services	1,393,563	88,194	7,100,471	(7,012,276)	-503.19%	-465.69%	406.10%	-264.83%	-259.94%	-239.09%	-233.13%	-220.89%	-211.40%	-208.89%
1 000 EZE 02 04 10 0E9 70 205 0000 420 040 7E9 740 7E9 740 7E9 000	00 Services	1,823,327	103,920	8,757,575	(8,653,654)	474.61%	-486.99%	-469.38%	-431.01%	-295.08%	-280.78%	-256.32%	-248.09%	-234.10%	-223.74%
0,00,001- 0,17,24- 0,17,24- 0,10,000,00 0,000,000 0,000,000 0,000,00	2012 36900 Services	1,929,575	83,049	8,419,058	(8,336,009)	432.01%	-452.71%	-466.38%	-458.00%	-431.29%	-313.21%	-294.88%	-268.94%	-259.40%	-244.44%

ion	:	Gross	Cost of	Net	Net	2- yr Net	3- yr Net	4- yr Net	5- yr Net	6-yr Net	7-yr Net	8-yr Net	9- yr Net	10- yr Net
Year Description	Retirements	Salvage	Removal	Salvage	Salv. %	Salv. %	Salv. %	Salv. %	Salv. %	Salv. %	Salv. %	Salv. %	Salv. %	Salv. %
2007 37000 Smart Meters				0	ΑN									
2008 37000 Smart Meters				0	AN	AN								
2009 37000 Smart Meters				0	A N	A N	AN							
2010 37000 Smart Meters				0	A N	A N	AN	Ϋ́						
2011 37000 Smart Meters	28,910	,	28,215	(28,215)	-97.60%	-97.60%	-97.60%	-97.60%	-97.60%					
2012 37000 Smart Meters	213,147	•	•	0	%00:0	-11.66%	-11.66%	-11.66%	-11.66%	-11.66%				
1986 37000 Meters	1,826,295	348,039	541,769	(193,731)	-10.61%									
1987 37000 Meters	1,754,380	(66,517)	676,923	(743,439)	-42.38%	-26.17%								
1988 37000 Meters	2,843,378	156,611	958,774	(802,163)	-28.21%	-33.62%	-27.08%							
1989 37000 Meters	6,802,522	287,599	1,465,400	(1,177,800)	-17.31%	-20.53%	-23.89%	-22.06%						
1990 37000 Meters	7,115,351	93,635	1,413,437	(1,319,802)	-18.55%	-17.95%	-19.69%	-21.84%	-20.83%					
1991 37000 Meters	3,316,919	85,671	1,113,039	(1,027,368)	-30.97%	-22.50%	-20.45%	-21.55%	-23.22%	-22.25%				
1992 37000 Meters	3,770,752	151,560	1,590,301	(1,438,741)	-38.16%	-34.79%	-26.66%	-23.63%	-24.18%	-25.42%	-24.44%			
1993 37000 Meters	4,135,652	99,643	2,727,996	(2,628,353)	-63.55%	-51.44%	-45.39%	-34.98%	-30.20%	-30.00%	-30.73%	-29.56%		
1994 37000 Meters	4,236,759	91,478	2,215,996	(2,124,519)	-50.14%	-26.77%	-50.99%	46.69%	-37.82%	-33.07%	-32.65%	-33.15%	-32.00%	
1995 37000 Meters	4,960,770	134,616	1,610,009	(1,475,393)	-29.74%	-39.14%	-46.71%	-44.83%	42.58%	-36.37%	-32.59%	-32.26%	-32.71%	-31.72%
1996 37000 Meters	3,958,490	58,492	1,533,674	(1,475,183)	-37.27%	-33.08%	-38.58%	-44.55%	43.41%	41.71%	-36.48%	-33.08%	-32.74%	-33.13%
1997 37000 Meters	5,521,915	86,202	1,424,125	(1,337,923)	-24.23%	-29.67%	-29.70%	-34.33%	-39.63%	-39.42%	-38.48%	-34.65%	-31.96%	-31.73%
1998 37000 Meters	4,442,084	138,025	1,817,530	(1,679,505)	-37.81%	-30.28%	-32.27%	-31.60%	-35.00%	-39.33%	-39.19%	-38.40%	-34.99%	-32.50%
1999 37000 Meters	3,590,973	92,058	927,834	(835,776)	-23.27%	-31.31%	-28.43%	-30.42%	-30.27%	-33.43%	-37.46%	-37.54%	-36.97%	-34.06%
2000 37000 Meters	5,766,671	304,558	718,502	(413,944)	-7.18%	-13.36%	-21.23%	-22.08%	-24.67%	-25.56%	-28.77%	-32.69%	-33.20%	-33.04%
2001 37000 Meters	5,467,254	148,074	751,681	(603,607)	-11.04%	-9.06%	-12.50%	-18.34%	-19.65%	-22.07%	-23.20%	-26.21%	-29.88%	-30.56%
2002 37000 Meters	6,576,969	106,607	1,026,964	(920,357)	-9.61%	-10.13%	-9.31%	-11.37%	-15.44%	-16.85%	-18.96%	-20.20%	-22.87%	-26.12%
2003 37000 Meters	5,620,970	116,923	525,500	(408,577)	-7.27%	-8.74%	-9.35%	-8.88%	-10.60%	-14.11%	-15.50%	-17.46%	-18.71%	-21.22%
2004 37000 Meters	6,391,257	75,095	848,059	(772,964)	-12.09%	-9.84%	-9.74%	-10.00%	-9.50%	-10.86%	-13.79%	-15.03%	-16.78%	-17.95%
2005 37000 Meters	5,586,684	139,263	1,071,408	(932,145)	-16.69%	-14.24%	-12.01%	-11.16%	-11.14%	-10.55%	-11.64%	-14.14%	-15.21%	-16.77%
2006 37000 Meters	4,267,236	274,361	1,353,776	(1,079,416)	-25.30%	-20.41%	-17.14%	-14.60%	-13.08%	-12.78%	-12.02%	-12.90%	-15.08%	-15.98%
2007 37000 Meters	7,301,608	531,637	6,559,356	(6,027,718)	-82.55%	-61.43%	-46.86%	-37.42%	-31.61%	-26.17%	-24.30%	-22.33%	-22.39%	-23.57%
2008 37000 Meters	12,108,444	328,732	1,253	327,479	2.70%	-29.37%	-28.63%	-26.35%	-23.80%	-21.55%	-19.30%	-18.50%	-17.45%	-17.76%
2009 37000 Meters	25,452	1,273,060	4,788,137	(3,515,077)	-13810.67%	-26.27%	-47.41%	43.43%	-38.33%	-33.63%	-30.04%	-26.20%	-24.73%	-23.10%
2010 37000 Meters	165,653,056	1,584,672	366,817	1,217,855	0.74%	-1.39%	-1.11%	-4.32%	-4.79%	-5.13%	-5.36%	-5.41%	-5.59%	-5.73%
2011 37000 Meters	107,701,926	1,384,694	889,244	495,449	0.46%	0.63%	%99.0-	-0.52%	-2.56%	-2.89%	-3.14%	-3.33%	-3.40%	-3.58%
2012 37000 Meters	142,376,783	1,023,912	353,471	670,441	0.47%	0.47%	0.57%	-0.27%	-0.19%	-1.57%	-1.80%	-1.99%	-2.13%	-2.19%
2012 37000 Meters	142,376,783	1,023,912	353,471	670,441		0.47%		0.47%	0.47% 0.57%	, 0.47% 0.57% -0.27%	, 0.47% 0.57% -0.27% -0.19%	, 0.47% 0.57% -0.27% -0.19% -1.57%	, 0.47% 0.57% -0.27% -0.19% -1.57% -1.80%	, 0.47% 0.57% -0.27% -0.19% -1.57% -1.80% -1.99%

Lelloval
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1,684,538
2,006,991
2,287,008
2,948,254
4,115,281
5,415,203
8,225,812
7,605,647
3,130,372
6,023,233
6,356,097
6,128,041

Transaction		S CL	Cost of	ţ	ţ	2- yr Not	3-yr	A-yr	5- yr Net	6-yr	7-yr	8-yr	9- yr	10- yr
Year Description	Retirements	Salvage	Removal	Salvage	Salv. %	Salv. %	Salv. %	Salv. %	Salv. %	Salv. %	Salv. %	Salv. %	Salv. %	Salv. %
1986 390 Structures and Improvements	4,924		 	0	0.00%				!   			1		
1987 390 Structures and Improvements	2,373			0	0.00%	0.00%								
1988 390 Structures and Improvements	95,511		24,523	(24,523)	-25.68%	-25.05%	-23.85%							
1989 390 Structures and Improvements	1,807,455		7,749	(7,749)	-0.43%	-1.70%	-1.69%	-1.69%						
1990 390 Structures and Improvements	326,934		19,303	(19,303)	-2.90%	-1.27%	-2.31%	-2.31%	-2.31%					
1991 390 Structures and Improvements	274,700	463	33,860	(33,397)	-12.16%	-8.76%	-2.51%	-3.39%	-3.39%	-3.38%				
1992 390 Structures and Improvements	264,068		6,936	(6,936)	-2.63%	-7.49%	-6.89%	-2.52%	-3.32%	-3.32%	-3.31%			
1993 390 Structures and Improvements	203,813		342,336	(342,336)	-167.97%	-74.65%	-51.53%	-37.58%	-14.24%	-14.61%	-14.60%	-14.57%		
1994 390 Structures and Improvements	273,417		71,307	(71,307)	-26.08%	-86.68%	-56.74%	-44.68%	-35.24%	-15.27%	-15.58%	-15.56%	-15.54%	
1995 390 Structures and Improvements	2,713,123		71,122	(71,122)	-2.62%	-4.77%	-15.19%	-14.23%	-14.08%	-13.42%	-9.42%	-9.68%	%29.6-	%29.6-
1996 390 Structures and Improvements	182,711		29,884	(29,884)	-16.36%	-3.49%	-5.44%	-15.26%	-14.34%	-14.19%	-13.55%	-9.63%	-9.88%	-9.87%
1997 390 Structures and Improvements	1,310,305		112,087	(112,087)	-8.55%	-9.51%	-5.07%	-6.35%	-13.38%	-12.81%	-12.77%	-12.37%	-9.44%	-9.64%
1998 390 Structures and Improvements	1,236,386		86,602	(86,602)	-2.00%	-7.80%	-8.37%	-5.51%	-6.49%	-12.05%	-11.65%	-11.67%	-11.39%	%60'6-
1999 390 Structures and Improvements	4,582,497		704,315	(704,315)	-15.37%	-13.59%	-12.67%	-12.76%	-10.02%	-10.44%	-13.50%	-13.23%	-13.21%	-13.00%
2000 390 Structures and Improvements	1,966,593	23,266	374,864	(351,598)	-17.88%	-16.12%	-14.67%	-13.79%	-13.84%	-11.30%	-11.63%	-14.19%	-13.95%	-13.91%
2001 390 Structures and Improvements	3,165,241	365	502,134	(501,769)	-15.85%	-16.63%	-16.03%	-15.02%	-14.32%	-14.35%	-12.25%	-12.50%	-14.53%	-14.33%
2002 390 Structures and Improvements	8,578,718		542,287	(542,287)	-6.32%	-8.89%	-10.18%	-11.48%	-11.20%	-11.03%	-11.08%	-10.11%	-10.29%	-11.62%
2003 390 Structures and Improvements	3,616,720		591,369	(591,369)	-16.35%	-9.30%	-10.65%	-11.47%	-12.28%	-12.00%	-11.82%	-11.85%	-10.94%	-11.09%
2004 390 Structures and Improvements	4,374,542	1,191,391	799,154	392,237	8.97%	-2.49%	4.47%	-6.30%	-7.35%	-8.75%	-8.67%	-8.66%	-8.71%	-8.19%
2005 390 Structures and Improvements	1,527,788		882,067	(882,067)	-57.73%	-8.30%	-11.36%	-8.97%	-10.00%	-10.66%	-11.44%	-11.25%	-11.13%	-11.16%
2006 390 Structures and Improvements	1,535,921		380,259	(380,259)	-24.76%	41.20%	-11.70%	-13.22%	-10.21%	-10.99%	-11.54%	-12.14%	-11.93%	-11.79%
2007 390 Structures and Improvements	628,829		372,196	(372,196)	-59.19%	-34.76%	-44.27%	-15.40%	-15.69%	-11.73%	-12.28%	-12.72%	-13.12%	-12.88%
2008 390 Structures and Improvements	1,645,786		1,161,534	(1,161,534)	-70.58%	-67.43%	-50.23%	-52.38%	-24.75%	-22.47%	-16.15%	-16.11%	-16.24%	-16.11%
2009 390 Structures and Improvements	446,444		87,744	(87,744)	-19.65%	-59.71%	-59.59%	47.02%	49.85%	-24.52%	-22.38%	-16.22%	-16.17%	-16.29%
2010 390 Structures and Improvements	5,258,925		2,620,243	(2,620,243)	-49.82%	47.46%	-52.64%	-53.15%	48.57%	49.84%	-33.15%	-29.96%	-22.62%	-21.92%
2011 390 Structures and Improvements	8,993,517		2,048,472	(2,048,472)	-22.78%	-32.76%	-32.36%	-36.21%	-37.06%	-36.04%	-37.69%	-29.33%	-27.66%	-22.66%
2012 390 Structures and Improvements	23,039,873	•	2,732,872	(2,732,872)	-11.86%	-14.93%	-19.85%	-19.85%	-21.97%	-22.55%	-22.63%	-23.88%	-20.85%	-20.53%

## APPENDIX F

List of Appearances before Regulatory Bodies by Dane A. Watson

Asset Location	Commission	Docket (If Applicable	Company	Year	Description
North Carolina/South Carolin	FERC	ER13-1313	Progress Energy Carolina	2013	Electric Depreciation Study
Wisconsin	Public Service Commission of Wisconsin	4220-DU-108	Northern States Power- Wisconsin	2013	Electric, Gas and Common Transmission, Distribution and General
Texas	Public Utility Commission of Texas	41474	Sharyland	2013	Electric Depreciation Study
Kentucky	Kentucky Public Service Commission	2013-00148	Atmos Energy Corporation	2013	Gas Depreciation Study
Minnesota	Minnesota Public Utilities Commission	13-252	Minnesota Power	2013	Electric Depreciation Study
New Hampshire	New Hampshire Public Service Commission	DE 13-063	Liberty Utilities	2013	Electric Distribution and General
Texas	Railroad Commission of Texas	10235	West Texas Gas	2013	Gas Depreciation Study
North Dakota	North Dakota Public Service Commission	PU-12-0813	Northern States Power	2012	Electric, Gas and Common Transmission, Distribution and General
Alaska	Regulatory Commission of Alaska	U-12-154	Alaska Telephone Company	2012	Telecommunications Utility
New Mexico	New Mexico Public Regulation Commission	12-00350-UT	SPS	2012	Electric Depreciation Study
Colorado	Colorado Public Utilities Commission	12AL- 1269ST	Public Service of Colorado	2012	Gas and Steam Depreciation Study
Colorado	Colorado Public Utilities Commission	12AL-1268G	Public Service of Colorado	2012	Gas and Steam Depreciation Study
Alaska	Regulatory Commission of Alaska	U-12-149	Municipal Power and Light City of Anchorage	2012	Electric Depreciation Study
Texas	Texas Public Utility Commission	40824	Xcel Energy	2012	Electric Depreciation Study
South Carolina	Public Service Commission of South Carolina	Docket 2012- 384-E	Progress Energy Carolina	2012	Electric Depreciation Study
Alaska	Regulatory Commission of Alaska	U-12-141	Interior Telephone Company	2012	Telecommunications Utility

Asset Location	Commission	Docket (If Applicable	Company	Year	Description
Michigan	Michigan Public Service Commission	U-17104	Michigan Gas Utilities Corporation	2012	Gas Depreciation Study
North Carolina	North Carolina Utilities Commission	E-2 Sub 1025	Progress Energy Carolina	2012	Electric Depreciation Study
Texas	Texas Public Utility Commission	40606	Wind Energy Transmission Texas	2012	Electric Depreciation Study
Texas	Texas Public Utility Commission	40604	Crosss Texas Transmission	2012	Electric Depreciation Study
Minnesota	Minnesota Public Utilities Commission	12-858	Northern States Power	2012	Electric, Gas and Common Transmission, Distribution and General
Texas	Railroad Commission of Texas	10170	Atmos Mid-Tex	2012	Gas Depreciation Study
Texas	Railroad Commission of Texas	10174	Atmos West Texas	2012	Gas Depreciation Study
Texas	Railroad Commission of Texas	10182	CenterPoint Beaumont/ East Texas	2012	Gas Depreciation Study
Kansas	Kansas Corporation Commission	12-KCPE- 764-RTS	Kansas City Power and Light	2012	Electric Depreciation Study
Nevada	Public Utility Commission of Nevada	12-04005	Southwest Gas	2012	Gas Depreciation Study
Texas	Railroad Commission of Texas	10147, 10170	Atmos Mid-Tex	2012	Gas Depreciation Study
Kansas	Kansas Corporation Commission	12-ATMG- 564-RTS	Atmos Kansas	2012	Gas Depreciation Study
Texas	Texas Public Utility Commission	40020	Lone Star Transmission	2012	Electric Depreciation Study
Michigan	Michigan Public Service Commission	U-16938	Consumers Energy Company	2011	Gas Depreciation Study
Colorado	Public Utilities Commission of Colorado	11AL-947E	Public Service of Colorado	2011	Electric Depreciation Study
Texas	Texas Public Utility Commission	39896	Entergy Texas	2011	Electric Depreciation Study
MultiState	FERC	ER12-212	American Transmission Company	2011	Electric Depreciation Study

Asset Location	Commission	Docket (If Applicable	Company	Year	Description
California	California Public Utilities Commission	A1011015	Southern California Edison	2011	Electric Depreciation Study
Mississippi	Mississippi Public Service Commission	2011-UN-184	Atmos Energy	2011	Gas Depreciation Study
Texas	Texas Commission on Environmental Quality	Matter 37050-R	Southwest Water Company	2011	WasteWater Depreciation Study
Texas	Texas Commission on Environmental Quality	Matter 37049- R	Southwest Water Company	2011	Water Depreciation Study
Michigan	Michigan Public Service Commission	U-16536	Consumers Energy Company	2011	Wind Depreciation Rate Study
Texas	Public Utility Commission of Texas	38929	Oncor	2011	Electric Depreciation Study
Texas	Railroad Commission of Texas	10038	CenterPoint South TX	2010	Gas Depreciation Study
Alaska	Regulatory Commission of Alaska	U-10-070	Inside Passage Electric Cooperative	2010	Electric Depreciation Study
Texas	Public Utility Commission of Texas	36633	City Public Service of San Antonio	2010	Electric Depreciation Study
Texas	Texas Railroad Commission	10000	Atmos Pipeline Texas	2010	Gas Depreciation Study
Multi State – SE US	FERC	RP10-21-000	Florida Gas Transmission	2010	Gas Depreciation Study
Maine/ New Hampshire	FERC	10-896	Granite State Gas Transmission	2010	Gas Depreciation Study
Texas	Public Utility Commission of Texas	38480	Texas New Mexico Power	2010	Electric Depreciation Study
Texas	Public Utility Commission of Texas	38339	CenterPoint Electric	2010	Electric Depreciation Study
California	California Public Utility Commission	A10071007	California American Water	2009- 2010	Water and Waste Water Depreciation Study
Texas	Texas Railroad Commission	10041	Atmos Amarillo	2010	Gas Depreciation Study
Georgia	Georgia Public Service Commission	31647	Atlanta Gas Light	2010	Gas Depreciation Study

Asset Location	Commission	Docket (If Applicable	Company	Year	Description
Texas	Public Utility Commission of Texas	38147	Southwestern Public Service	2010	Electric Technical Update
Alaska	Regulatory Commission of Alaska	U-09-015	Alaska Electric Light and Power	2009- 2010	Electric Depreciation Study
Alaska	Regulatory Commission of Alaska	U-10-043	Utility Services of Alaska	2009- 2010	Water Depreciation Study
Tennessee	Tennessee Regulatory Authority	09-000183	AGL – Chattanooga Gas	2009	Gas Depreciation Study
Michigan	Michigan Public Service Commission	U-16055	Consumers Energy/DTE Energy	2009- 2010	Ludington Pumped Storage Depreciation Study
Michigan	Michigan Public Service Commission	U-16054	Consumers Energy	2009- 2010	Electric Depreciation Study
Michigan	Michigan Public Service Commission	U-15963	Michigan Gas Utilities Corporation	2009	Gas Depreciation Study
Michigan	Michigan Public Service Commission	U-15989	Upper Peninsula Power Company	2009	Electric Depreciation Study
Texas	Railroad Commission of Texas	9869	Atmos Energy	2009	Shared Services Depreciation Study
Mississippi	Mississippi Public Service Commission	09-UN-334	CenterPoint Energy Mississippi	2009	Gas Depreciation Study
Texas	Railroad Commission of Texas	9902	CenterPoint Energy Houston	2009	Gas Depreciation Study
Wyoming	Wyoming Public Service Commission	30022-148- GR10	Source Gas	2009- 2010	Gas Depreciation Study
Colorado	Colorado Public Utilities Commission	09AL-299E	Public Service of Colorado	2009	Electric Depreciation Study
Tennessee	Tennessee Regulatory Authority	11-00144	Piedmont Natural Gas	2009	Gas Depreciation Study
South Carolina	Public Service Commission of South Carolina		Piedmont Natural Gas	2009	Gas Depreciation Study
North Carolina	North Carolina Utilities Commission		Piedmont Natural Gas	2009	Gas Depreciation Study
Louisiana	Louisiana Public Service Commission	U-30689	Cleco	2008	Electric Depreciation Study

Asset Location	Commission	Docket (If Applicable	Company	Year	Description
Texas	Public Utility Commission of Texas	35763	SPS	2008	Electric Production, Transmission, Distribution and General Plant Depreciation Study
Wisconsin	Wisconsin	05-DU-101	WE Energies	2008	Electric, Gas, Steam and Common Depreciation Studies
North Dakota	North Dakota Public Service Commission	PU-07-776	Northern States Power	2008	Net Salvage
New Mexico	New Mexico Public Regulation Commission	07-00319-UT	SPS	2008	Testimony – Depreciation
Multiple States	Railroad Commission of Texas	9762	Atmos Energy	2007- 2008	Shared Services Depreciation Study
Colorado	Colorado Public Utilities Commission	10AL-963G	Public Service of Colorado	2007- 2008	Gas Depreciation Study
Minnesota	Minnesota Public Utilities Commission	E015/D-08- 422	Minnesota Power	2007- 2008	Electric Depreciation Study
Texas	Public Utility Commission of Texas	35717	Oncor	2008	Electric Depreciation Study
Texas	Public Utility Commission of Texas	34040	Oncor	2007	Electric Depreciation Study
Michigan	Michigan Public Service Commission	U-15629	Consumers Energy	2006- 2009	Gas Depreciation Study
Colorado	Colorado Public Utilities Commission	06-234-EG	Public Service of Colorado	2006	Electric Depreciation Study
Multiple States	Multiple	NA	CenterPoint Energy	2006	Shared Services Depreciation Study
Arkansas	Arkansas Public Service Commission	06-161-U	CenterPoint Energy – Arkla Gas	2006	Gas Distribution Depreciation Study and Removal Cost Study
Texas, New Mexico	Public Utility Commission of Texas	32766	Xcel Energy	2005- 2006	Electric Production, Transmission, Distribution and General Plant Depreciation Study
Texas	Railroad Commission of Texas	9670/9676	Atmos Energy Corp	2005- 2006	Gas Distribution Depreciation Study

Asset Location	Commission	Docket (If Applicable	Company	Year	Description
Texas	Railroad Commission of Texas	9400	TXU Gas	2003- 2004	Gas Distribution Depreciation Study
Texas	Railroad Commission of Texas	9313	TXU Gas	2002	Gas Distribution Depreciation Study
Texas	Railroad Commission of Texas	9225	TXU Gas	2002	Gas Distribution Depreciation Study
Texas	Public Utility Commission of Texas	24060	TXU	2001	Line Losses
Texas	Public Utility Commission of Texas	23640	TXU	2001	Line Losses
Texas	Railroad Commission of Texas	9145-9148	TXU Gas	2000- 2001	Gas Distribution Depreciation Study
Texas	Public Utility Commission of Texas	22350	TXU	2000- 2001	Electric Depreciation Study, Unbundling
Texas	Railroad Commission of Texas	8976	TXU Pipeline	1999	Pipeline Depreciation Study
Texas	Public Utility Commission of Texas	20285	TXU	1999	Fuel Company Depreciation Study
Texas	Public Utility Commission of Texas	18490	TXU	1998	Transition to Competition
Texas	Public Utility Commission of Texas	16650	TXU	1997	Customer Complaint
Texas	Public Utility Commission of Texas	15195	TXU	1996	Mining Company Depreciaiton Study
Texas	Public Utility Commission of Texas	12160	TXU	1993	Fuel Company Depreciation Study
Texas	Public Utility Commission of Texas	11735	TXU	1993	Electric Depreciation Study

## **SOUTHERN CALIFORNIA EDISON**

## ELECTRIC UTILITY PLANT DEPRECIATION RATE STUDY AT DECEMBER 31, 2012



http://www.utilityalliance.com

## SOUTHERN CALIFORNIA EDISON ELECTRIC UTILITY PLANT DEPRECIATION RATE STUDY EXECUTIVE SUMMARY

Southern California Edison ("SCE" or "Company") engaged Alliance Consulting Group to conduct a depreciation study of the Company's Electric and Common utility plant depreciable assets as of December 31, 2012.

This study was conducted using the standard industry depreciation study approach. The net salvage analysis in this study paralleled the approach previously used by SCE in its 2012 GRC. This study follows the California Public Utility Commission ("CPUC")'s long-standing precedent of STANDARD PRACTICE U-4, DETERMINATION OF STRAIGHT-LINE REMAINING LIFE DEPRECIATION ACCRUALS ("U-4," or "STANDARD PRACTICE U-4"), dated January 3, 1961. STANDARD PRACTICE U-4 "sets forth various factors influencing the determination of depreciation accruals and describes methods of calculating these accruals" with the purpose of assisting "the Commission staff in determining proper depreciation expenses." Although over 40 years old, the STANDARD PRACTICE U-4 represents conventional utility depreciation practices and the CPUC continues to adhere to this standard.

For Production accounts, some generating units were excluded from the study due to special circumstances regarding the recovery of those costs. The units excluded from the study were: Mohave, Four Corners, San Onofre, the decommission costs of Mountainview 1 and 2, and the decommissioning costs for Solar 2. For the units in scope, most generating units retained the same lives. The only generating unit to change its terminal life was Palo Verde, which reflects a 20-year life extension granted by the Nuclear Regulatory Commission. For all units, the terminal demolition costs were impacted by updated dismantling studies for all production facilities. These updated dismantling studies resulted in changes in depreciation rates for all production functions.

For Transmission, Distribution and General Accounts, the lives of most

<sup>1</sup> STANDARD PRACTICE U-4, p. 5.

accounts with changes exhibited longer lives than currently in effect. There are seven accounts that have increasing lives, two that have a decreasing life and ten accounts that have the same life. There are shifts in net salvage: Fourteen accounts increasing their negative net salvage, four accounts with no change, and one account decreasing its negative net salvage. The accounts with the largest increases in negative net salvage are Account 369, Distribution Services where the net salvage moved from negative 85 percent to negative 125 percent and Account 364 Distribution Poles which moved from negative 190 percent to negative 225 percent. The only account with a change in net salvage which produced a decrease was Account 358 Transmission Underground Conductor and Devices which moved from negative 20 percent to negative 15 percent.

This study recommends an overall increase of \$102 million in annual depreciation expense for all accounts. This consists of a decrease of \$14 million in annual depreciation expense for production facilities compared to the depreciation rates currently in effect and an increase of \$116 million in Transmission, Distribution, General, Amortized, and Intangible assets annual depreciation expense compared to the depreciation rates currently in effect. Appendix B demonstrates the change in depreciation expense for the various accounts.

# SOUTHERN CALIFORNIA EDISON ELECTRIC UTILITY PLANT DEPRECIATION RATE STUDY AT DECEMBER 31, 2012

## **Table of Contents**

PURPOSE	1
STUDY RESULTS	2
GENERAL DISCUSSION	
Definition	4
Basis of Depreciation Estimates	4
Survivor Curves	
Life Span Procedure	
Theoretical Depreciation Reserve	12
Depreciation Study Process	14
Depreciation Rate Calculation	17
Remaining Life Calculation	17
Life Estimates	23
Salvage Analysis	
APPENDIX A Depreciation Rate Calculations	99
APPENDIX B Depreciation Expense Comparison	
APPENDIX C Depreciation Parameter Comparison	118
APPENDIX D Production Retirement Dates and Terminal Removal Cost	122
APPENDIX F Net Salvage Analysis	124

### **PURPOSE**

The purpose of this study is to develop depreciation rates for the depreciable property as recorded on Southern California Edison's books at December 31, 2012. The account based depreciation rates were designed to recover the total remaining undepreciated investment, adjusted for net salvage, over the remaining life of Southern California Edison's property on a straight-line basis. Non-depreciable property and transportation property were excluded from this study.

Southern California Edison ("SCE") is one of the largest utilities in the United States. In 2011, the Company delivered 87.34 billion kWh of electricity in 2011 and powered a total of: 14 million+ people, 180 cities, 11 counties, 50,000 square miles of service area, 5,000 large businesses, and 280,000 small businesses. To deliver power safely, reliably and affordably, the Company monitors and maintains a vast electricity system with the following transmission and distribution assets: 1.5 million+ electric poles. 700,000+ transformers, 55,000+ distribution switches, and 88,000+ miles of distribution lines.

## STUDY RESULTS

Overall depreciation rates for all Southern California Edison depreciable property are shown in Appendix A. These rates translate into an annual depreciation accrual of \$1,494.3 million based on Southern California Edison's depreciable investment at December 31, 2012. The annual equivalent depreciation expense calculated by the same method using the approved rates is \$1,392.0 million. Certain generating units, namely San Onofre Nuclear Generating Station, Mohave Generating Station, and Four Corners Generating Station, are excluded from this depreciation study. Additionally, decommissioning related to Solar 2 and Mountainview Units 1 & 2, will not be covered in this testimony. Special circumstances surrounding those assets are being addressed by SCE. A table showing the present vs. proposed depreciation accrual rates is shown below.

Type of Plant	Accrual at	Accrual at	Difference
	Existing Rates	Proposed	\$ x million
	\$ x million	Rates \$ x	
		million	
Electric Nuclear – Palo Verde	\$25.6	\$9.7	(\$15.9)
Electric Hydro	\$22.3	\$27.7	\$5.4
Electric Other Production	\$61.2	\$58.5	(\$3.3)
Electric Transmission	\$199.4	\$216.9	\$17.5
Electric Distribution	\$654.6	\$727.8	\$73.2
Electric General Depreciable and	\$186.0	\$211.5	\$25.5
Amortized			
Electric Intangible and Common	\$242.3	\$242.3	\$0
Amortized			
Total	\$1392.0	\$1494.3	\$102.4

Appendix A demonstrates the development of the annual depreciation rates and accruals. Appendix A-1 shows proposed Production Accrual rates and A-2 shows Transmission, Distribution, General Depreciable, and Amortized accounts proposed accrual rates. Appendix B presents a comparison of approved rates versus proposed rates by account. Appendix C presents a summary of mortality and net salvage estimates by account for Transmission, Distribution and General Depreciable assets. Appendix D presents the terminal retirement dates for production facilities. Appendix E presents the net salvage analysis for Transmission, Distribution, and General Accounts.

## **GENERAL DISCUSSION**

## **Definition**

The term "depreciation" as used in this study is considered in the accounting sense, that is, a system of accounting that distributes the cost of assets, less net salvage (if any), over the estimated useful life of the assets in a systematic and rational manner. It is a process of allocation, not valuation. This expense is systematically allocated to accounting periods over the life of the properties. The amount allocated to any one accounting period does not necessarily represent the loss or decrease in value that will occur during that particular period. The Company accrues depreciation on the basis of the original cost of all depreciable property included in each functional property group. On retirement the full cost of depreciable property, less the net salvage value, is charged to the depreciation reserve.

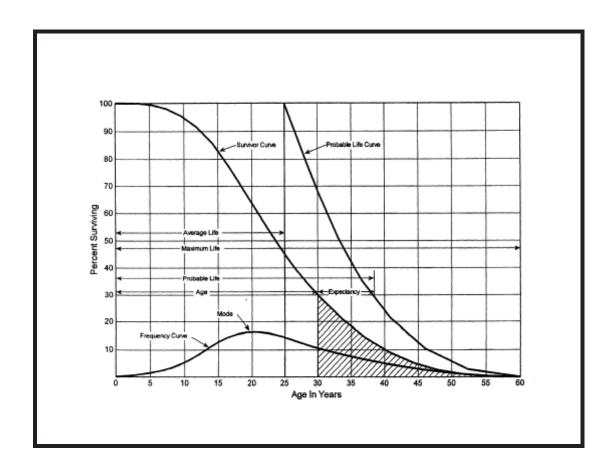
## **Basis of Depreciation Estimates**

The straight-line, broad (average life) group, remaining-life depreciation system was employed to calculate annual and accrued depreciation in this study. In this system, the annual depreciation expense for each group is computed by dividing the original cost of the asset less allocated depreciation reserve less estimated future net salvage by its respective average life group remaining life. The resulting annual accrual amounts of all depreciable property within a function were accumulated, and the total was divided by the original cost of all functional depreciable property to determine the depreciation rate. The calculated remaining lives and annual depreciation accrual rates were based on attained ages of plant in service and the estimated service life and salvage characteristics of each depreciable group. The computations of the annual functional depreciation rates are shown in Appendix A.

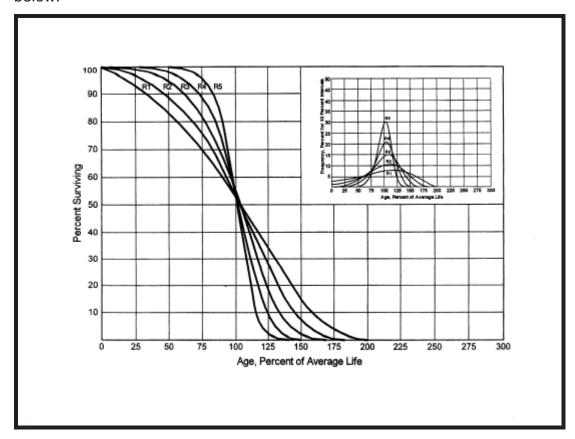
SPR analysis was used with each account within a function where sufficient data was available, and judgment was used to some degree on all accounts.

## **Survivor Curves**

To fully understand depreciation projections in a regulated utility setting, there must be a basic understanding of survivor curves. Individual property units within a group do not normally have identical lives or investment amounts. The average life of a group can be determined by first constructing a survivor curve which is plotted as a percentage of the units surviving at each age. A survivor curve represents the percentage of property remaining in service at various age intervals. The lowa Curves are the result of an extensive investigation of life characteristics of physical property made at lowa State College Engineering Experiment Station in the first half of the prior century. Through common usage, revalidation and regulatory acceptance, these curves have become a descriptive standard for the life characteristics of industrial property. An example of an lowa Curve is shown below.



There are four families in the Iowa Curves that are distinguished by the relation of the age at the retirement mode (largest annual retirement frequency) and the average life. For distributions with the mode age greater than the average life, an "R" designation (i.e., Right modal) is used. The family of "R" moded curves is shown below.



Similarly, an "S" designation (i.e., Symmetric modal) is used for the family whose mode age is symmetric about the average life. An "L" designation (i.e., Left modal) is used for the family whose mode age is less than the average life. A special case of left modal dispersion is the "O" or origin modal curve family. Within each curve family, numerical designations are used to describe the relative magnitude of the retirement frequencies at the mode. A "6" indicates that the retirements are not greatly dispersed from the mode (i.e., high mode frequency) while a "1" indicates a large dispersion about the mode (i.e., low mode frequency). For example, a curve with an average life of 30 years and an "L3" dispersion is a

moderately dispersed, left modal curve that can be designated as a 30 L3 Curve. An SQ, or square, survivor curve occurs where no dispersion is present (i.e., units of common age retire simultaneously).

Most property groups can be closely fitted to one lowa Curve with a unique average service life. The blending of judgment concerning current conditions and future trends along with the matching of historical data permits the depreciation analyst to make an informed selection of an account's average life and retirement dispersion pattern.

## Life Span Procedure

The life span procedure was used for production facilities for which most components are expected to have a retirement date concurrent with the planned retirement date of the generating unit. The terminal retirement date refers to the year that each unit will cease operations. The terminal retirement date, along with the interim retirement characteristics of the assets that will retire prior to the facility ceasing operation; describe the pattern of retirement of the assets that comprise a generating unit. The estimated terminal retirement dates for the various generating units were determined based on consultation with Company management, financial, and engineering staff. Those estimated terminal retirement dates are shown in Appendix D.

## **Interim Retirement Rates**

Interim retirement rates were used to model the retirement of individual assets within primary plant accounts for each generating unit prior to the terminal retirement of the facility. The life span procedure assumes all assets are depreciated (straight-line) for the same number of periods and retire at the same time (the terminal retirement date). Adding interim retirement rates to the procedure reflects the fact that some of the assets at a power plant will not survive to the end of the life of the facility and should be depreciated (straight-line) more quickly and retired earlier than the terminal life of the facility. The goal of interim retirement rates is to project how many of the assets that are currently in service will retire each year in the future using historical analysis and judgment. In most of Alliance's

depreciation studies, lowa curves are used based on an analysis of the historical retirement pattern of the Generation assets and consultation with Company personnel. SCE has used interim retirement rates to model this activity in past GRC proceedings. This methodology has been approved by the CPUC in prior proceedings and is used in this depreciation study. Interim retirement rates for each plant account were modeled using a 10 year history of SCE specific experience. By applying interim retirement rates, recognition is given to the obvious fact that generating units will have retirements of depreciable property before the end of their lives.

Although interim retirements have been recognized in the study, interim additions (i.e. future additions) have been excluded from the study. The estimated amount of future additions might or might not occur. However, there is no uncertainty as to whether the full level of interim retirements will happen. The assets that are being modeled for retirement are already in rate base. Depreciation rates using interim retirements are known and measurable in the same way that setting depreciation rates for transmission or distribution property using lowa Curves is known and measurable. There is no depreciable asset that is expected to live forever. All assets at a power plant will retire at some point. Interim retirements simply model when those retirements will occur in the same way that is done for transmission or distribution assets.

## Simulated Plant Record Procedure

The Simulated Plant Record Procedure - Balances approach ("SPR") is one of the commonly accepted approaches to analyze mortality characteristics of utility property. SPR was applied to the Transmission, Distribution, and General accounts due to the unavailability of vintaged transactional data. In this method, an lowa Curve and average service life are selected as a starting point of the analysis and its survivor factors are applied to the actual annual additions to give a sequence of annual balance totals. These simulated balances are compared with the actual balances by using both graphical and statistical analysis. Through multiple comparisons using various bands (i.e. comparing the results of various groupings of

specific numbers of years of account balances in the calculation such as the closeness of fit of 30 years of balances to the calculated balances, 40 years of balances, etc.), the mortality characteristics (as defined by an average life and lowa Curve) that are the best match to the property in the account can be found.

The Conformance Index ("CI") is one measure used to evaluate various SPR analyses. CIs are also used to evaluate the "goodness of fit" between the actual data and the Iowa Curve being referenced. The sum of squares difference ("SSD") is a summation of the difference between the calculated balances and the actual balances for the band or test year being analyzed. This difference is squared and then summed to arrive at the SSD, where n is the number of years in the test band as follows:

$$SSD = \sum_{i=1}^{n} (Calculated \ Balance_{i} - Observed \ Balance_{i})^{2}$$

This calculation can then be used to develop other calculations, which the analyst feels might give a better indication for the "goodness of fit" for the representative curve under consideration. The residual measure ("RM") is the square root of the average squared differences as developed above. The residual measure is calculated as follows:

$$RM = \sqrt{\left(\frac{SSD}{n}\right)}$$

The CI is developed from the residual measure and the average observed plant balances for the band or test year being analyzed. The calculation of conformance index is shown below:

$$CI = \frac{\sum_{i=1}^{n} Balances_{i} / n}{RM}$$

The Retirement Experience Index ("REI") gives an indication of the maturity of the account and is the percent of the property retired from the oldest vintage in the band at the end of the test year. Retirement indices range from 0 percent to 100 percent and a REI of 100 percent indicates that a complete curve was used. A REI less than 100 percent indicates that the survivor curve was truncated at that point. The originator of the SPR method, Alex Bauhan, suggests ranges of value for the CI and REI. The relationship for CI proposed by Bauhan is shown below<sup>2</sup>:

CI	Value
Over 75	Excellent
50 to 75	Good
25 to 50	Fair
Under 25	Poor

The relationship for REI proposed by Bauhan<sup>3</sup> is shown below:

REI	Value
Over 75	Excellent
50 to 75	Good
33 to 50	Fair
17 to 33	Poor
17 and below	Valueless

Depreciation analysts have used these measures in analyzing SPR results for nearly 60 years, since the SPR method was developed. Both the CI and REI statistics provide the analyst with important information with which to make a comparison between a band of simulated or calculated balances and the observed or actual balances in the account being studied.

Statistics are useful in analyzing mortality characteristics of accounts, as well as determining a range of service lives to be analyzed using the detailed graphical method. However, these statistics boil all the information down to one, or at most, a few numbers for comparison. Visual matching through comparison between actual and calculated balances expands the analysis by permitting the analyst to view many points of data at a time. The goodness of fit should be visually compared to plots of other lowa Curve dispersions and average lives for the selection of the appropriate curve and life. Detailed information for each account is shown later in

<sup>2 &</sup>lt;u>Public Utility Depreciation Practices</u>, p. 96. 3 <u>Public Utility Depreciation Practices</u>, p. 97.

this study and in workpapers.

## Judgment

Any depreciation study requires informed judgment by the analyst conducting the study. A knowledge of the property being studied, company policies and procedures, general trends in technology and industry practice, and a sound basis of understanding depreciation theory are needed to apply this informed judgment. Judgment was used in areas such as survivor curve modeling and selection, depreciation method selection, and simulated plant record method analysis. Judgment is not defined as being used in cases where there are specific, significant pieces of information that influence the choice of a life or curve. Those cases would simply be a reflection of specific facts into the analysis. Where there are multiple factors, activities, actions, property characteristics, statistical inconsistencies, implications of applying certain curves, property mix in accounts or a multitude of other considerations that impact the analysis (potentially in various directions), judgment is used to take all of these factors and synthesize them into a general direction or understanding of the characteristics of the property. Individually, no one factor in these cases may have a substantial impact on the analysis, but overall, may shed light on the utilization and characteristics of assets. Judgment may also be defined as deduction, inference, wisdom, common sense, or the ability to make sensible decisions. There is no single correct result from statistical analysis; hence, there is no answer absent judgment. At the very least for example, any analysis requires choosing which bands to place more emphasis.

The establishment of appropriate Production interim retirement rates requires judgment to incorporate the understanding of the operation of the system with the available accounting information. Selection of life parameters for Transmission, Distribution, and General Assets using the SPR method also requires judgment. The appropriateness of lives and curves depends not only on statistical analyses, but also on how well future retirement patterns will match past retirements.

Current applications and trends in use of the equipment also need to be factored into life and survivor curve choices in order for appropriate mortality characteristics to be chosen.

## **Broad Group Depreciation**

At the request of SCE, consistent with its prior and current practices, this study continues to use the broad depreciation procedure to group the assets within each account. After an average service life and dispersion were selected for each account, those parameters were used to estimate what portion of the surviving investment of each vintage was expected to retire. A straight-line rate for each broad group (BG) is calculated by computing a composite remaining life for each group across all vintages within the group, dividing the remaining investment to be recovered by the remaining life to find the annual depreciation expense and dividing the annual depreciation expense by the surviving investment. The resultant rate for each group is designed to recover all retirements less net salvage when the last unit retires. The BG procedure recovers net book cost over the life of each account by averaging many components.

## **Theoretical Depreciation Reserve**

The book depreciation reserve was derived from Company records. This study used a reserve model that relied on a prospective concept relating future retirement and accrual patterns for property, given current life and salvage estimates. The theoretical reserve of a group is developed from the estimated remaining life, total life of the property group, and estimated net salvage. The theoretical reserve represents the portion of the group cost that would have been accrued if current experience was used throughout the life of the group for future depreciation accruals. The computation involves multiplying the vintage balances within the group by the theoretical reserve ratio for each vintage. The average life group method requires an estimate of dispersion and service life to establish how much of each vintage is expected to be retired in each year until all property within the group is retired. Estimated average service lives and dispersion determine the amount within each average life group. The straight-line remaining-life theoretical

reserve ratio at any given age (RR) is calculated as:

$$RR = 1 - \frac{(Average Remaining Life)}{(Average Service Life)} * (1 - Net Salvage Ratio)$$

## **DETAILED DISCUSSION**

## **Depreciation Study Process**

This depreciation study encompassed four distinct phases. The first phase involved data collection and field interviews. The second phase was where the initial data analysis occurred. The third phase was where the information and analysis was evaluated. Finally, the Fourth phase involved the calculation of deprecation rates and documenting the corresponding recommendations.

During the Phase I data collection process, historical data was compiled from continuing property records and general ledger systems. Data was validated for accuracy by extracting and comparing to multiple financial system sources. Audit of this data was validated against historical data from prior periods, historical general ledger sources, and field personnel discussions. This data was reviewed extensively to put in the proper format for a depreciation study. Further discussion on data review and adjustment is found in the Salvage Considerations Section of this study. Also as part of the Phase I data collection process, numerous discussions were conducted with engineers and field operations personnel to obtain information that would assist in formulating life and salvage recommendations in this study. One of the most important elements of performing a proper depreciation study is to understand how the Company utilizes assets and the environment of those assets. Interviews with engineering and operations personnel are important ways to allow the analyst to obtain information that is beneficial when evaluating the output from the life and net salvage programs in relation to the Company's actual asset utilization and environment. Information that was gleaned in these discussions is found both in the Detailed Discussion of this study in the life analysis and salvage analysis sections and also in workpapers.

Phase 2 is where the statistical analysis is performed. Phase 2 and 3 overlap to a significant degree. The detailed property records information is used in Phase 2 to develop observed life tables for life analysis. These tables are visually compared to industry standard tables to determine historical life characteristics. It is possible that the analyst would cycle back to this phase based on the evaluation process

performed in Phase 3. Net salvage analysis consists of compiling historical salvage and removal data by functional group to determine values and trends in gross salvage and removal cost. This information was then carried forward into Phase 3 for the evaluation process.

Phase 3 is the evaluation process which synthesizes analysis, interviews, and operational characteristics into a final selection of asset lives and net salvage parameters. The historical analysis from Phase 2 is further enhanced by the incorporation of recent or future changes in the characteristics or operations of assets that were revealed in Phase 1. Phases 2 and 3 allow the depreciation analyst to validate the asset characteristics as seen in the accounting transactions with actual Company operational experience.

Finally, Phase 4 involved the calculation of accrual rates, making recommendations and documenting the conclusions in a final report. calculation of accrual rates is found in Appendix A. Recommendations for the various accounts are contained within the Detailed Discussion of this report. The depreciation study flow diagram shown as Figure 1<sup>4</sup> documents the steps used in Depreciation Systems<sup>5</sup>, documents the same basic conducting this study. processes in performing a depreciation study which are: Statistical analysis, evaluation of statistical analysis, discussions with management, forecast assumptions, and document recommendations.

 <sup>&</sup>lt;sup>4</sup> Public Utility Finance & Accounting, A Reader (Modified)
 <sup>5</sup> <u>Depreciation Systems</u>, Wolf & Fitch, 1994, pg. 289.

## SOUTHERN CALIFORNIA EDISON DEPRECIATION STUDY PROCESS

## Book Depreciation Study Flow Diagram

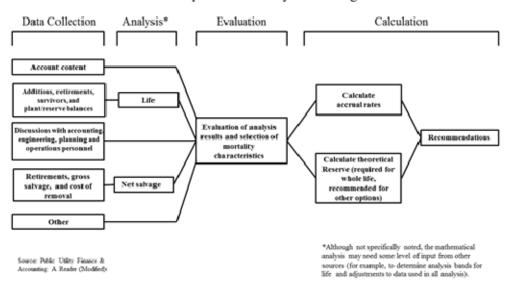


Figure 1

## **Depreciation Rate Calculation**

Annual depreciation expense amounts for the depreciable accounts of Southern California Edison were calculated by the straight-line method, broad group procedure, and remaining-life technique. With this approach, remaining lives were calculated according to standard broad group expectancy techniques, using the lowa Survivor Curves noted in the calculation. For each plant account, the difference between the surviving investment, adjusted for estimated net salvage, and the allocated book depreciation reserve, was divided by the average remaining life to yield the annual depreciation expense. These calculations are shown in Appendix A.

## Remaining Life Calculation

The establishment of appropriate average service lives and retirement dispersions for each account within a functional group was based on engineering judgment that incorporated available accounting information analyzed using the SPR Balances method. After establishment of appropriate average service lives and retirement dispersion, remaining life was computed for each account. Theoretical depreciation reserve with zero net salvage was calculated using theoretical reserve ratios as defined in the theoretical reserve portion of the General Discussion section. The difference between plant balance and theoretical reserve was then spread over the depreciation accruals. Remaining life computations are found for each account in workpapers.

## **Production Depreciation Calculation Process**

Annual depreciation expense amounts for the Steam, Hydraulic and Other Production accounts were calculated by the straight line, remaining life procedure. In a whole life representation, the annual accrual rate is computed by the following equation:

$$Annual\ Accrual\ Rate = \frac{(100\% - Net\ Salvage\ Percent)}{Average\ Service\ Life}$$

In the case of steam production facilities with a terminal life and interim retirement curve, each vintage within the group has a unique average service life and remaining life determined by computing the area under the truncated lowa Curve coupled with the group's terminal life.

Use of the remaining life depreciation system adds a self-correcting mechanism, which accounts for any differences between theoretical and book depreciation reserve over the remaining life of the group. For each vintage modeled with an interim retirement curve and terminal life,

$$Remaining \ Life(i) = \frac{Area \ Under \ Survivor \ Curve \ to \ the \ Right \ of \ Age \ (i)}{Survivors \ (i)}, \ and$$
 
$$Average \ Service \ Life = \frac{Area \ Under \ Survivor \ Curve}{Survivors \ at \ age \ zero}$$

With the straight line, remaining life, broad group system using lowa Curves, composite remaining lives were calculated by computing a direct weighted average of each remaining life by vintage within the group. Within each group (plant account/unit), for each plant account, the difference between the surviving investment, adjusted for estimated net salvage, and the allocated book depreciation reserve, was divided by the composite remaining life to yield the annual depreciation expense as noted in this equation.

$$\label{eq:annual Depreciation Expense} Annual Depreciation \ Expense = \frac{Original \ Cost - Book \ Reserve - Original \ Cost * (1 - Net \ Salvage \%)}{Remaining \ Life}$$

In this equation, the net salvage percent represents future net salvage.

Within a group, the sum of the group annual depreciation expense amounts, as a percentage of the depreciable original cost investment summed, gives the annual depreciation rate depreciation rate as shown below:

$$Annual \, Depreciation \, Rate = \frac{\sum \, Annual \, Depreciation \, Expense}{\sum Original \, Cost}$$

These calculations are shown in Appendix A. The calculations of the theoretical depreciation reserve values and the corresponding remaining life calculations are shown in the workpapers. Book depreciation reserves were reallocated from specific functional groups to a plant account/unit level basis within that specific functional group and theoretical reserve computations were used to compute remaining life for each group.

## **Other Accounts Calculation Process**

Annual depreciation expense amounts for accounts other than production were calculated by the straight line, remaining life procedure.

In a whole life representation, the annual accrual rate is computed by the following equation,

Annual Accrual Rate = 
$$\frac{(100\% - \text{Net Salvage Percent})}{\text{Average Service Life}}$$

Use of the remaining life depreciation system adds a self-correcting mechanism, which accounts for any differences between theoretical and book depreciation reserve over the remaining life of the group. With the straight line, remaining life, average life group system using lowa Curves, composite remaining lives were calculated according to standard broad group expectancy techniques, noted in the formula below:

$$Composite \ Remaining \ Life = \frac{\sum Original \ Cost - Theoretical \ Reserve}{\sum Whole \ Life \ Annual \ Accrual}$$

For each plant account, the difference between the surviving investment, adjusted for estimated net salvage, and the allocated book depreciation reserve, was divided by the composite remaining life to yield the annual depreciation expense as noted in this equation.

$$Annual Depreciation Expense = \frac{Original Cost - Book Reserve - (Original Cost)*(1 - Net Salvage \%)}{Composite Remaining Life}$$

In this equation, the Net Salvage% represents future net salvage.

Within a group, the sum of the group annual depreciation expense amounts, as a percentage of the depreciable original cost investment summed, gives the annual depreciation rate as shown below:

$$Annual \ Depreciation \ Rate = \frac{\sum \ Annual \ Depreciation \ Expense}{\sum Original \ Cost}$$

These calculations are shown in Appendix A. The calculations of the theoretical depreciation reserve values and the corresponding remaining life calculations are shown in workpapers. Book depreciation reserves at the plant account level were used for individual accounts, and the theoretical reserve computation was used to compute a composite remaining life for each account.

## **Terminal Retirement Date**

The terminal retirement date refers to the year in which a generating unit will be retired from service. The retirement can be for a number of reasons such as the physical end of the generating unit but will generally be driven by economic retirement of the unit. SCE' personnel provided their estimated retirement dates for each generating unit. These dates are based on the current plans and investment in the generating units. Retirement dates for generating units can be found in Appendix D. As new investment is committed to these units or decisions made that units are not economically viable, these lives may change. At this time, these retirement dates are the best estimate of the current lives remaining in the generating assets.

## **Interim Retirement Rates**

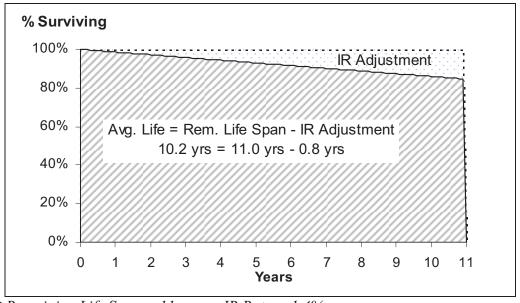
Interim retirement rates were computed by analyzing data from 2003-2012, Data was segregated into functional groups: coal, nuclear, hydro and other. For each functional group and plant account, Company history showing plant balance, retirements, gross salvage and cost of removal was compiled by plant account. By examining those trends, interim retirement rates and interim net salvage rates were

developed by function and account. Those results were applied to each generating unit. Those results are provided in workpapers.

SCE's historical practice considers the interim retirement rate adjustment first by estimating the future level of interim retirements as a percent of the plant balance (i.e., an interim retirement rate). The estimate of the IR rate is made by analyzing the historical levels of interim retirements. Judgment is used in selecting IR rates, just as is done with interim retirement curves. To add the IR rate to the computation of the depreciation accrual rate, the IR rate is applied to the current plant balance over the remaining life of the plant to determine the necessary adjustment to the overall remaining life of the generating station. For example, if a generating unit has an 11 year remaining life and an IR rate of 1.4 percent per year, then about 15 percent of the current plant balance would retire as an interim retirement (11 years times 1.4 percent per year and the remaining 85 percent would retire as a final retirement.

A graph in the interim retirement curve with these parameters is shown below.

## INTERIM RETIREMENT CURVE WITH 11 YEAR REMAINING LIFE SPAN AND 1.4% IR.



<sup>\*</sup> Remaining Life Span = 11 years; IR Rate = 1.4%.

The average life of the group is equal to the life span adjusted for the shorter life of the interim retirements. The remaining life adjustment is calculated as follows:

## **Life Span: Remaining Life Adjustment**

Remaining Life Adjustment	Remaining Life Span x  IR Rate  2	Remaining Life Span
0.8 Years	11 Years x 1.4%	11 Years

The remaining life used to compute the depreciation accrual is decremented to be 10.2 years.

When analyzing a large pool of assets like power plant accounts, these shorter lived items can be accurately modeled together statistically. Thus, given that interim retirements will occur, this statistical analysis enables one to measure the interim retirement rates applicable to property groups. Some examples of "long lived" property that are projected to last until the retirement of a unit are: Roads, Bridges, Railroad track, Intake/Discharge Structures, Structural Steel (and misc. steel), Cooling towers, Buildings, Cranes, Dams, Ponds, Basins, Canals, Foundations, Stacking and Reclaiming equipment, Surge Silos, Crushers, Transfer Towers, Fly Ash and Bottom Ash Systems, Precipitators, Bag Houses, Stack, Turbine (except blades) and Piping, Generator Cooling System, Vacuum Systems, Generator and Main Leads, Station Transformers, Conduits and Ducts, Station Grounding System, Start-up Diesel Generators, and Stores Equipment.

Some examples of "shorter lived" property that are projected to retire prior to the retirement of the unit are: fences, signs, sprinkler systems, security systems, Intake screens, roofs, cooling fan units, air compressors, fuel oil heaters, heating, ventilation and air conditioners, piping, motors, pumps, conveyors, pulverizers, air preheaters, economizers, control equipment, feed water heaters, boiler feed water pumps, forced draft (FD) and induced draft (ID) fans, scrubbers, continuous emissions monitoring systems (CEM), turbine blades and buckets, turbine plant instruments, condensers, control equipment, station service switchgear, and universal power supply (UPS) batteries.

## **Life Estimates**

## PRODUCTION PLANT

The only Generation life span changed from the 2012 GRC is the Palo Verde Nuclear plant. The Company was granted a 20 year life extension for each of the Palo Verde units. All other generation life spans are unchanged from the 2012 GRC. For Hydro plants, individual life spans for each generating station are used to develop a composite life. For Nuclear, Hydraulic and Other Production Plant study recommendations will be based on a life span analysis using IR rates which were explained above. The following plants/units will not be addressed in this study: Mohave, Four Corners, San Onofre, and Mountainview 1 and 2 Decommissioning.

## **PRODUCTION**

The table below shows the total life for each plant.

**GENERATING UNIT LIFE SPANS** 

Plant	2012-2014	2015-2017
	Authorized	Proposed
Nuclear- Palo Verde	16.1 Years	33.5 Years
Hydro	Various	Various
Other- Pebbly Beach	45 Years	45 Years
Other- Mountainview	30 Years	30 Years
Other- Peakers	25 Years	25 Years
Other- Solar Photovoltaic	20 Years	20 Years

A discussion of the each generating station occurs below.

## Nuclear

SCE has two nuclear locations, San Onofre Nuclear Generating Station (SONGS) and Palo Verde. SCE announced the permanent shutdown of SONGS units 2 and 3 in June of 2013. As a result of this determination, SCE is addressing proposed recovery of the remaining asset separate from this depreciation study. Palo Verde Nuclear Generating Station's NRC licenses for units 1, 2, and 3 expire on

December 31, 2044, December 9, 2045 and March 25, 2047 respectively. These units each received 20 year life extension from the original NRC license. On a composite basis, the plant has a 33.5 year remaining life.

PALO VERDE REMAINING LIFE

ACCT	Life Span	IR Rate	Avg. Remaining
	Remaining Life		Life
321	33.5	0.00%	33.5
322	33.5	0.00%	33.5
323	33.5	0.00%	33.5
324	33.5	0.00%	33.5
325	33.5	0.00%	33.5

## **Hydro**

For Hydro facilities, SCE has 76 different generating units at 33 different locations. All but five of SCE's hydro investment has a FERC license in place to determine the life span. The licenses have a variety of termination dates – from expired (in the process of being relicensed) to 2046. The total life span of SCE's current license periods range between 29 and 50 years. Recently, FERC has issued renewals with license periods averaging 39.33 years. There are no guarantees that the FERC will continue to grant the company licenses going forward or that the generating units will continue to be economic. The individual components making up a generating station will continue to wear out, retire, and need to be replaced. Consequently, this study proposes that the hydro generation plant be depreciated over the remaining life spans associated with the individual FERC licenses. For generating stations within five years of license termination, however, this study proposes that the life spans be extended by the estimated license life in its current FERC license applications. I

In the case of the 1 percent of hydro plant not covered by a FERC license, SCE applies the average life determined for the plant that is covered by FERC license.

The average application license period is 45 years. The exception to this life span extension is the amortization period for the hydro relicensing costs. These relicensing costs are only amortized over the associated license period for which they were spent.

## HYDRO REMAINING LIFE

ACCT	Life Span	IR Rate	Avg.
	Remaining Life		Remaining Life
331	41.4	0.20%	39.6
332	35.1	0.05%	34.8
333	38.4	0.25%	36.4
334	33.3	0.40%	30.6
335	39.8	0.25%	37.6
336	34.8	0.50%	31.3

## **Pebbly Beach**

The Pebbly Beach generating station consists of six diesel generating units, ranging in capacity from 1.0 MW to 2.8 MW. SCE engineers estimate that the average life span of these generating units is 45 years. This estimate is premised on the fact that the diesel generators require a major overhaul after 140,000 operating hours (about 22 years assuming a 75 percent capacity factor). After two such operating periods, obsolescence increased operating and maintenance costs, and reduced reliability can affect the retirement of these generators. Another retirement factor that can affect this generation is the need for capacity upgrades requiring more space-efficient generation given the limited space at Pebbly Beach. The weighted average age of the diesel generators is 20 years. There have been insufficient interim retirements to estimate an IR rate for this plant; consequently both the remaining life span and the average remaining life are 18.7 years, as shown below.

PEBBLY BEACH REMAINING LIFE

ACCT	Life Span	IR Rate	Avg. Remaining Life
	Remaining Life		
341	18.7	0.00%	18.7
342	18.7	0.00%	18.7
343	18.7	0.00%	18.7
344	18.7	0.00%	18.7

345	18.7	0.00%	18.7
346	18.7	0.00%	18.7

#### **Mountainview**

Mountainview Units 3 and 4 currently has a 30-year life span. Since the plant is 7 years old, this leaves a remaining life of 23 years as part of the Purchase Power Agreement (PPA). At this time, however, SCE is not estimating interim retirements to estimate an IR rate for this plant. Consequently both the remaining life span and the average remaining life are 23.0 years. The remaining life is 23 years, as shown below:

MOUN <sup>-</sup>	TAIN\/	IE/W	RFM	ΔΙΝΙΝ	IG I	IFF

ACCT	Life Span	IR Rate	Avg. Remaining	
	Remaining Life		Life	
341	23.0	0.00%	23.0	
342	23.0	0.00%	23.0	
343	23.0	0.00%	23.0	
344	23.0	0.00%	23.0	
345	23.0	0.00%	23.0	
346	23.0	0.00%	23.0	

#### **Peakers**

It is estimated that the Peakers will have a life span of approximately 25 years. SCE currently has no retirement data for Peakers' generation. At this time this study is not adjusting remaining life for estimated interim retirements until more information is available. Given that the Peakers were in-service mid-2007, the remaining life is 20.6 years as of year-end 2012, as shown below.

PEAKERS REMAINING LIFE

ACCT	Life Span	IR Rate	Avg.	
	Remaining		Remaining	
	Life		Life	
341	20.6	0.00%	20.6	

342	20.6	0.00%	20.6
343	20.6	0.00%	20.6
344	20.6	0.00%	20.6
345	20.6	0.00%	20.6
346	20.6	0.00%	20.6

#### **Solar Photovoltaic**

It is estimated that Solar Photovoltaic has a life span of approximately 20 years. SCE currently has no retirement data for Solar Photovoltaic generation. At this time this study is not adjusting remaining life for estimated interim retirements until more information is available. The remaining life for Solar Photovoltaic assets is 18.6 years as of year-end 2012, as shown below.

SOLAR PHOTOVOLTAIC REMAINING LIFE

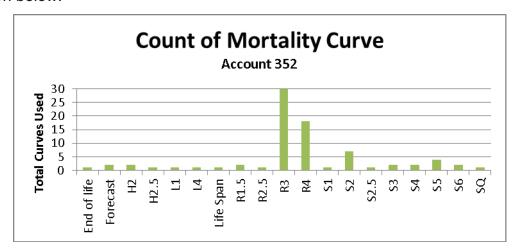
ACCT	Life Span Remaining Life	IR Rate	Avg. Remaining Life
341	18.6	0.00%	18.6
343	18.6	0.00%	18.6
345	18.6	0.00%	18.6

#### TRANSMISSION and DISTRIBUTION PLANT

**Transmission Accounts, FERC Accounts 352-359** 

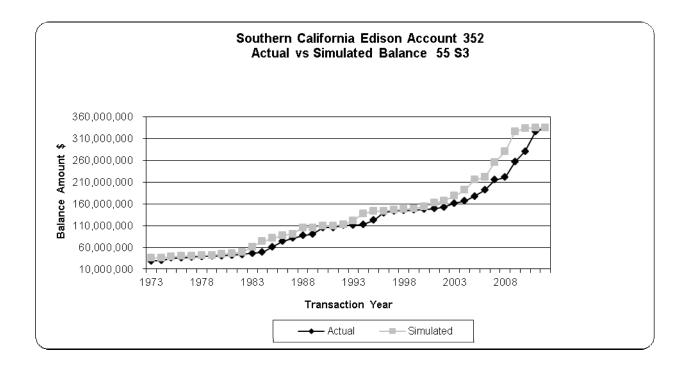
FERC Account 352 Transmission Structures & Improvements (proposed 55 year life with a S3 dispersion curve)

This account includes structures, fencing, containment, security and similar assets found in a transmission substation. The current investment balance is \$377 million. The approved life and curve is 55 years with a S2 dispersion curve. A 55 S3 curve is ranked at or near the top for the full band (i.e. using all available account balances in the calculation), 60, 50, 40 and 30 years with CIs and REIs in the excellent range. Indications in shorter life runs show changing characteristics that produce flat curves that are anomalous with the type of property in the account. Since the existing life is 55 years, indications from the widest bands were used to predict future life characteristics for this account. Although life characteristics are specific to individual companies where many factors affect the life, the dispersion characteristics can be of use in understanding the retirement pattern generally applicable to assets in a specific account. For that reason, a graph based on 2012 FERC Form 1 information showing the distribution of industry dispersion patterns is shown below.



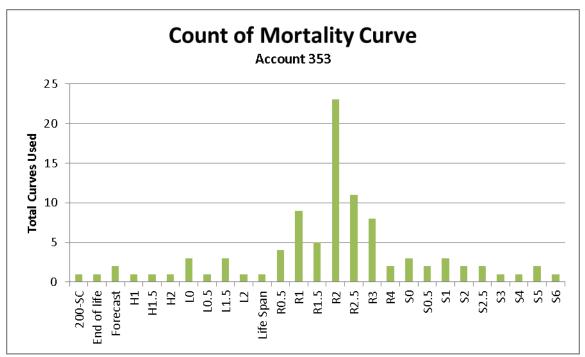
Although an R3 dispersion curve is predominant in the industry data, an S3 curve has many similar characteristics of the R3 curve and was chosen due to the better match of SCE specific results for the account and the 55 year life exhibited by the S3 curve is consistent with expectations for the life of the account. Based on SPR runs, industry data, and Company experience, retaining the 55 year life is proposed for this

account with a move from a S2 dispersion curve to a S3 dispersion curve. A graph of the actual versus simulated balances for this account is shown below.



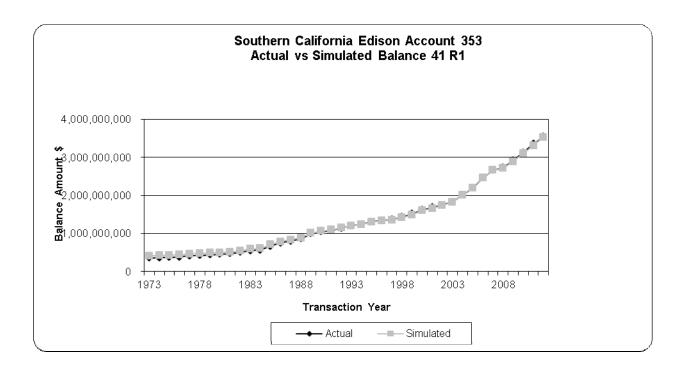
# FERC Account 353 Transmission Station Equipment (proposed 41 year life with a R1 dispersion curve)

This account contains a wide variety of transmission substation equipment, from transformers and circuit breakers to switchgear, as well as shorter-lived electronic equipment. The current investment balance is \$3.982 billion. The current approved life is 40 years with a R1 dispersion curve. In reviewing SPR results, the R1 curve is ranked near the top from the widest band (i.e. using all available account balances in the calculation) down to through 30 years. In 20 year bands, the life moves to approximately 42 years, but the shorter band contains too little information related to this long-lived account to support a further move to a 42 year life. In addition, the most recent 10 year band shows a shorter life, clustering around 32 years for the highest rank curves. These counter indications of changing life are reflective of bands with less information embedded in the calculation. A graph showing the distribution of industry dispersion patterns is shown below.



A low to medium mode R curve is predominant within in the electric utility industry. The SPR bands from 30 years and longer support a 41 year life with R1 dispersion. These signs are consistent with depreciation study results in the 2012 GRC. The various asset types in the account would be expected to have lives ranging from 15

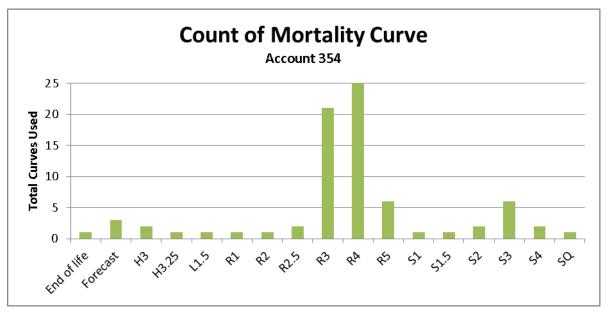
years to 40 years or more. From the information available, the recent retirement mix of long-lived versus shorter-lived assets is comparable to the mix of assets in the account. A graph of the actual versus simulated balances for this account is shown below. Based on SPR bands, input from Company personnel, and judgment regarding the asset groups in this account, this study recommends moving out to a 41-year life with a R1 dispersion curve for this account.



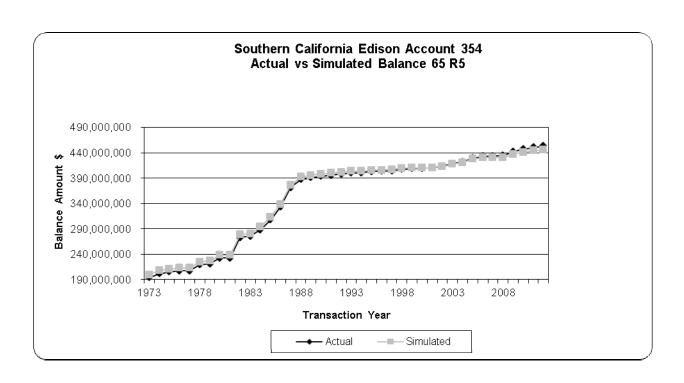
#### FERC Account 354 Transmission Towers & Fixtures (proposed 65 year life with a R5 dispersion curve)

This account consists of Transmission towers and fixtures, which are used to transmit electricity at a voltage of 69 kV and above. The current investment balance is \$772 million. The current approved life is the 65 years with a R5 dispersion curve. The R5 is ranked well across all bands with the S6 ranked slightly higher over the last few years. As the analysis moves from the longer to shorter bands, the life is increasing slightly. For example, longer bands of the S6 dispersion exhibited a 60 year life and moved to a 65 in more recent bands. A graph showing the distribution of industry dispersion patterns is shown below.

A high moded R3 or R4 curve is predominant within in the electric utility industry. The S6 dispersion which ranked well in many bands is not used by any utility reporting depreciation parameters.



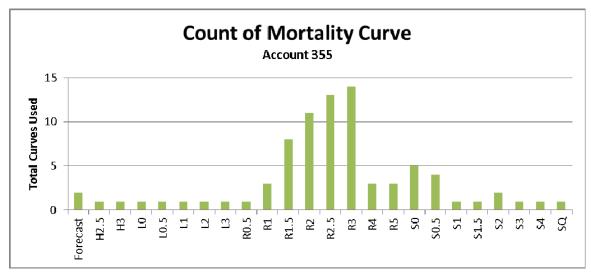
The current analysis is consistent with depreciation study results in the 2012 GRC. A graph of the actual versus simulated balances for this account is shown below. Based on SPR bands, input from Company personnel, and judgment regarding the asset groups in this account, this study recommends retaining a 65 -year life with a R5 dispersion curve for this account.



# FERC Account 355 Transmission Poles & Fixtures (proposed 45 year life with a R1 dispersion curve)

This account consists of Transmission poles and fixtures, which are used to transmit electricity at a voltage of 69 kV and above. The current investment balance is \$604 million. The current approved life is 50 years with a R1 dispersion curve. The highest rank curve in all bands was R0.5 which is much flatter than the asset characteristics would indicate. Another curve which ranked well across all bands was the 45 R1. A graph showing the distribution of dispersion patterns is shown below.

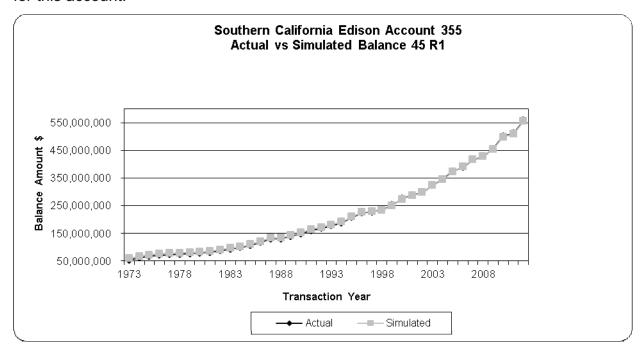
A low to medium mode R curve is predominant within in the electric utility industry. The top ranked R0.5 curve is used by only one company out of the 81 entities reporting depreciation parameters.



The pole loading inspection program initiated by the Company will decrease the life of many of the existing poles in the account – the program will especially affect the transmission category.

The Company introduced through-boring in early 2000's. The introduction of through-boring program for poles may eventually increase the life of this account but currently is still applied to a very small subset of the total 1.5 million poles on the system. The process may begin to affect the life of the account as a larger population of through-bored poles comes onto the system and creates an upwards pressure on the average life of the account as a whole. Based on the SPR analysis, input from Company personnel, and judgment regarding the asset groups in this

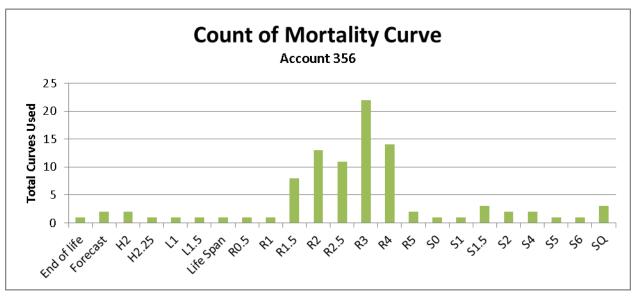
account, this study recommends moving to a 45-year life with a R1 dispersion curve for this account.



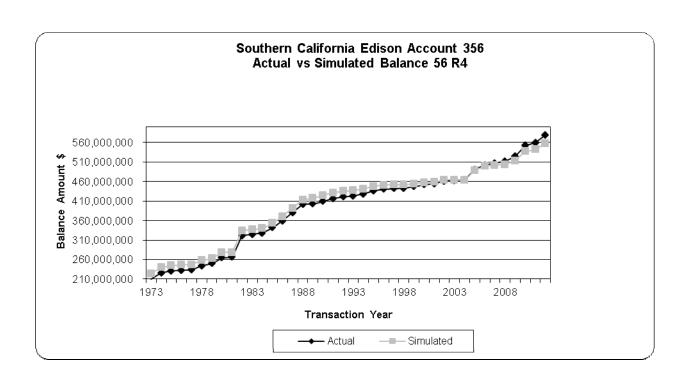
# FERC Account 356 Transmission Overhead Conductor & Devices (proposed 56 year life with a R4 dispersion curve)

This account consists of Transmission overhead conductors, which are used to transmit electricity at voltages of 69 kV and above. The current investment balance is \$706 million. The current approved life is 50 years with a R4 dispersion curve. In most bands, low modal curves were the top ranked curves by CI, but the REI for those curves was below Bauhan's recommended range. The R2 and R3 curves produced an acceptable REI, but the life indications are well beyond expectations for these types of assets. A graph showing the distribution of industry dispersion patterns is shown below.

Among the curves that produced acceptable REIs within reasonable life expectations were the R4, R5 and S5. Industry data for this account shows that most companies use a medium to high mode R curve for this account.



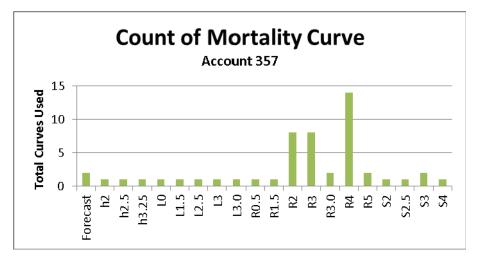
SCE specific data shows a life consistent with expectations and a somewhat longer life than approved in the 2012 GRC. Based on the SPR analysis, input from Company personnel, and judgment regarding the asset groups in this account, this study recommends moving to a 56-year life with a R4 dispersion curve for this account. A graph of actual versus simulated balances is shown below.



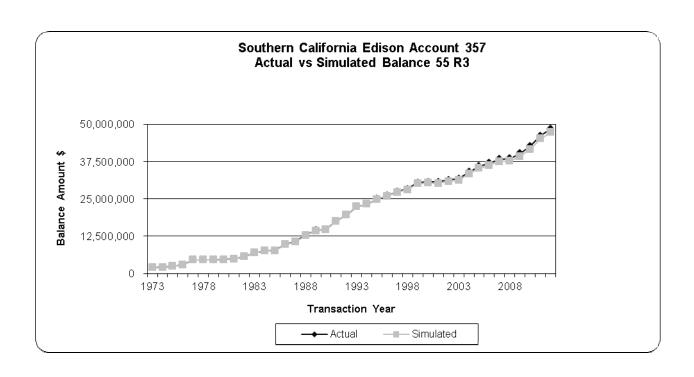
# FERC Account 357 Transmission Underground Conduit (proposed 55 year life with a R3 dispersion curve)

This account consists of underground conduit and vaults. The current investment balance is \$49 million. The current approved life is 55 years with a R3 dispersion curve. Various SPR bands show that the L4 is a good curve fit but not used often. The current R3 curve produces lives that are much longer than rational. R4 is a possibility but has a low REI. After considering the 57 L4, that curve was compared to industry norms. The L4 is not a good pattern for this type of property and has only a good REI, not excellent. Lives with a high REI are reflecting reductions from the approved life which, based on experience with other utilities and no indications from the field of changes in process which would tend to decrease the life, is not reasonable. Since there are few retirements, SPR is not giving reliable life indications. A graph showing the distribution industry dispersion patterns is shown below.

Industry data for this account shows that most companies use a high moded curve such as an R4 curve for this account.



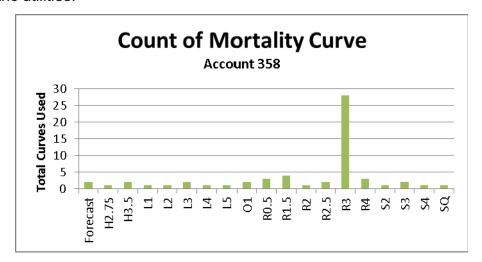
Given the limited data available for analysis, this study recommends retaining the currently approved 55 year life with a R3 dispersion curve for this account. A graph of actual versus simulated balances is shown below.



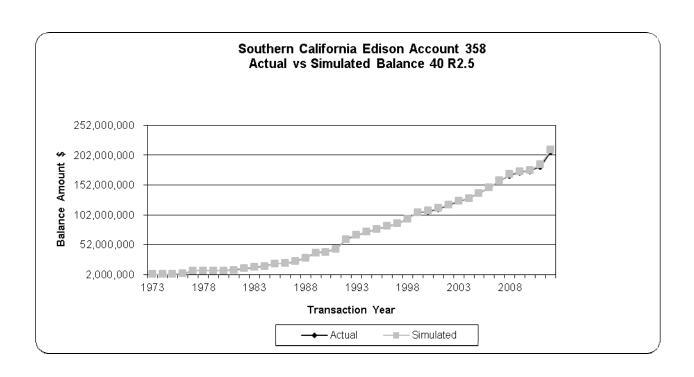
# FERC Account 358 Transmission Underground Conductor & Devices (proposed 40 year with a R2.5 dispersion curve)

This account consists of underground conductor. The lines are low pressure oil filled; paper wrapped 500 MCM copper cable. The currently approved curve for this account is a 40 R2.5. The current investment balance is \$208 million. A 40 L2 curve ranks highly in many bands, but other curves produce a much better REI. The next highest ranked curve is a 34 R4. The 34-year life is shorter than expectations for these types of assets. The next best curve than produced a life closer to expectations was a 38 R2.5. A graph showing the distribution of dispersion patterns is shown below.

An R3 or medium mode R curve is the predominant dispersion used by most electric utilities.



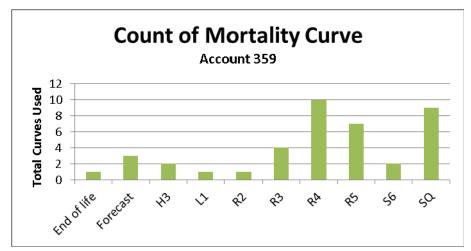
Since retirement data is limited for this account and no reason can be identified for a shorter life, this study recommends retention of the existing 40 R2.5 curve for this account. A graph of actual versus simulated balances is shown below.



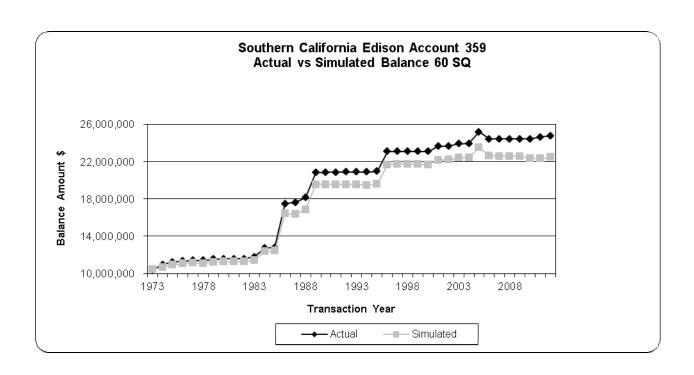
#### FERC Account 359 Transmission Roads and Trails (proposed 60 year with a SQ dispersion curve)

This account consists of roads and trails. The current investment balance is \$43 million. The current approved life is 60 years with a SQ dispersion curve. Few assets have been retired, rendering SPR results of little validity. Nearly All REIs fall in the valueless range and the lives produced by SPR were well beyond expectations. In most bands, low modal curves were the top ranked curves by CI, but the REI for those curves was below Bauhan's recommended range. A graph showing the distribution of dispersion patterns is shown below.



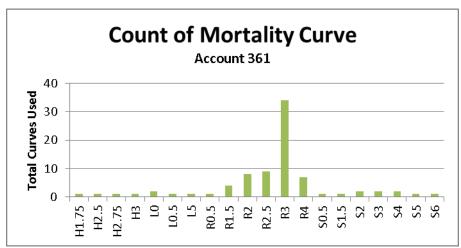


Based on analysis of Company data, this study concludes there is insufficient information to change the current life and retirement dispersion for this account. This study recommends retention of a 60-year life with a SQ dispersion curve for this account. A graph of actual versus simulated balances is shown below.

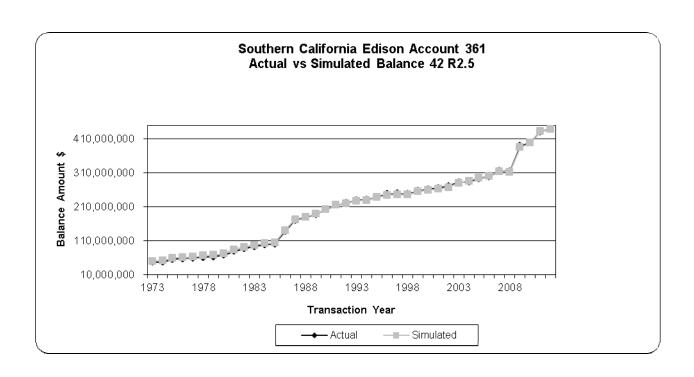


# Distribution Accounts, FERC Accounts 361.0-373.0 FERC Account 361.0 Structures & Improvements (proposed 42 year life with a R2.5 dispersion)

This grouping contains facilities ranging from fencing and other structures found in distribution substations. The current investment balance is \$437 million for this account. The approved curve and life is a 40 S2.5. For the 50-year, 60-year and full bands, the top ranked curve is a 40 R3 with the next highest curve being a 42 R2.5. In those bands, the CIs are in the good range, not in the excellent. All REIs are excellent. For bands of 30 and 40 years, the 42 R2.5 curve becomes the highest ranked with the 40 R3 curve ranking second. The shorter bands of 10 and 20 years show S-curves as the highest rank. The 10- and 20-year bands are too short compared to the currently approved life to use as the basis of a life change for this account. Within in the utility industry, a mid-moded R curve is the predominant dispersion type as shown below.

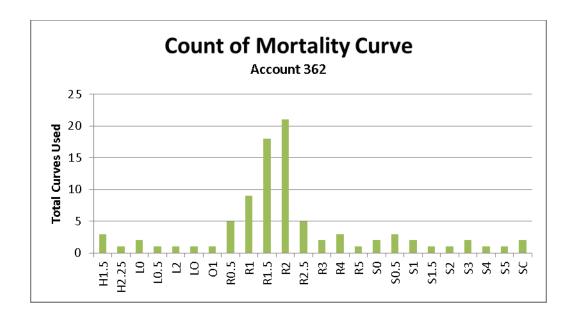


Based on SPR life analysis and industry input, this study recommends a 42-year life with a R2.5 dispersion pattern. A graph of the actual versus simulated balances for this account is shown below.



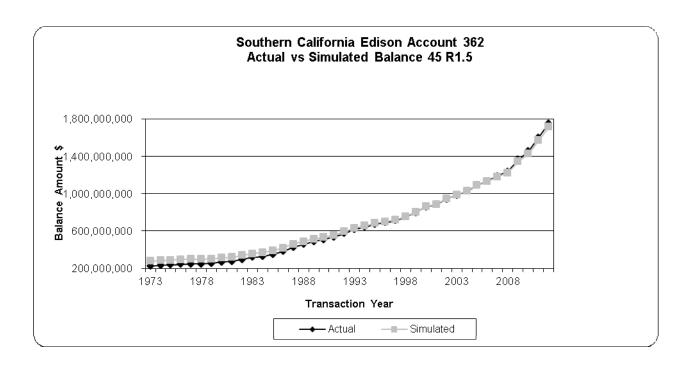
# FERC Account 362.0 Station Equipment (proposed 45 year life with a R1.5 dispersion)

This grouping contains a wide variety of distribution substation equipment, from transformers and circuit breakers to switchgear, as well as shorter-lived electronic equipment. The current balance is \$1.761 billion for this account. The existing approved life is 45 years with a R1.5 dispersion curve. In bands for 30 years and longer, the CI for this account is either poor or fair. For those bands, the top ranked curves are low moded L's, S's and R's. The predominant dispersion pattern within the utility industry is a mid-mode R curve.



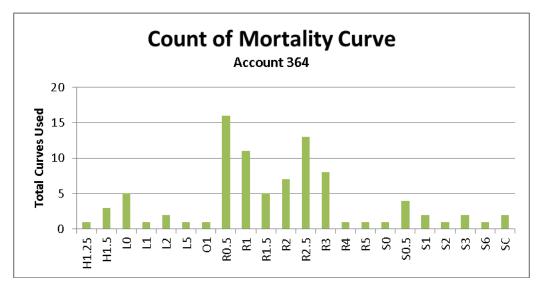
The R1.5 dispersion curve produces a 44-45 year life in bands from 30 to full in width. Narrow bands of 10 to 20 years produce many curves the have an excellent CI and REI, but the width of those bands is less than one fourth or one half a life cycle for this account. The various asset types in the account would be expected to have lives ranging from 15 years to 40 years or more. From the information available, the recent retirement mix of long-lived versus shorter-lived assets is reasonably comparable to the mix of assets in the account. That data is insufficient to support a change in life for this account. Based on SPR analysis and review of industry trends in dispersion, this study retains the currently approved 45-year life with a R1.5 dispersion curve. A graph of the actual versus simulated balances for

this account is shown below.



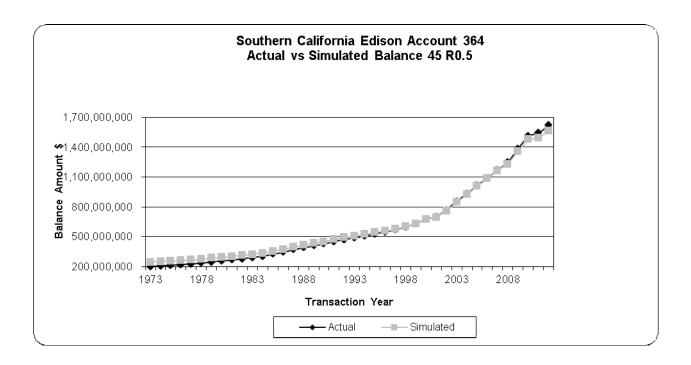
#### FERC Account 364.0 Poles, Towers, & Fixtures (proposed 45 year life with a R0.5 dispersion)

This account contains poles and towers of various material types: wood, concrete, and steel. Most of the poles across the system are made of wood. The height of these assets can range generally from 35 feet to 70 feet with the prevalent sizes being 45 feet and up. The current balance is \$1.655 billion for this account. The approved average service life and dispersion are 45 years with a R1 dispersion pattern. In bands for 30 years and longer, the CI for this account is either poor or fair. For those bands, the top ranked curves are low moded L's, S's and R's. The predominant dispersion pattern within the utility industry is a low to mid-mode R curve.



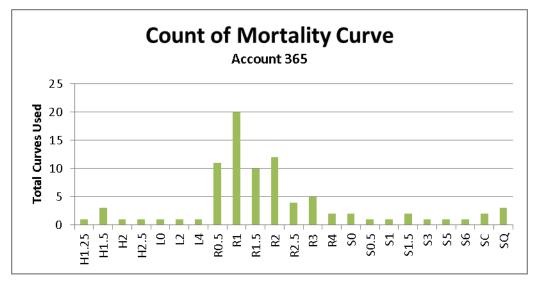
While the 10 and 20 year bands produce curves with excellent REIs and CIs, the bands are too narrow to rely upon to support a change in an account with a current life of 45 years. In bands of 50 years and more, the R0.5 curve is one of the top three ranked curves with a life of 45 years. In these wider bands, the R0.5 ranks higher than the Company's currently approved R1 dispersion. The R1 dispersion shows a life of 41 years during that period. The pole loading inspection program initiated by the Company will decrease the life of some of the existing poles in this account – the program will affect distribution less than the transmission category. The Rule 20 undergrounding program will also have the effect of decreasing the life of the account. In addition, the Company no longer repairs wood poles. The

introduction of through-boring program for poles in the early 2000's may eventually increase the average life of poles in this account but currently is still applied to a very small subset of the total 1.5 million poles on the system. The process will begin to affect the life of the account as a larger population of through-bored poles comes onto the system. With the significant downward life pressures reflected in the programs mentioned above, any reflection of an increase in life for the account based on the initiation of the through-boring process is premature. Based on the SPR result, judgment and the above discussion, this study recommends retaining the 45-year life and moving a slight shift to a R0.5 dispersion. A graph of the actual versus simulated balances for this account is shown below.

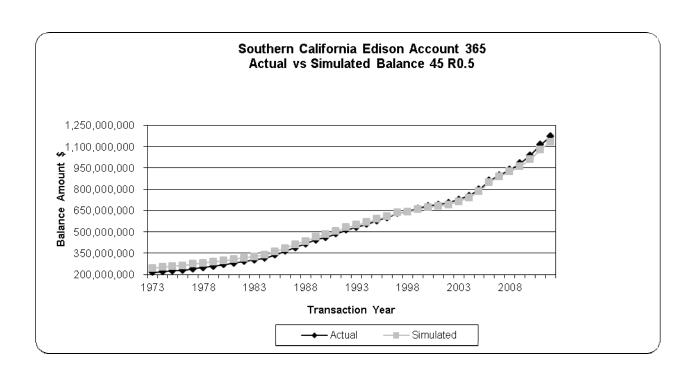


# FERC Account 365.0 Overhead Conductor & Devices (proposed 45 year life with a R0.5 dispersion)

This account consists of overhead conductor of various thickness, as well as various switches and reclosers. The current investment balance is \$1.196 billion for this account. The approved rate assumes an average service life of 45 years with a R0.5 dispersion curve. For bands of 50 years and longer, the top ranked curve is a 45 year life with a R0.5 dispersion. In narrower bands, the R0.5 curve ranks second below the L0. With the Rule 20 undergrounding program creating premature retirements in this account, the longer life exhibited by the L0 curve, and the characteristics of the curve itself as compared to the assets in the account, an L0 curve does not appear reasonable for this account. Within the utility industry, a low to mid mode R curve is the predominant selection. Since the life of this account is currently 45 years, indications from the widest bands were used to select depreciation parameters for this account.

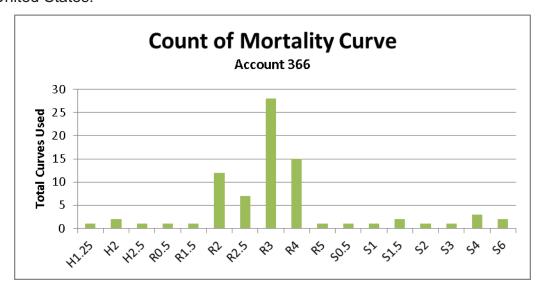


Based on the SPR results, this study recommends retaining the 45-year life and with a R0.5 dispersion. A graph of the actual versus simulated balances for this account is shown below.

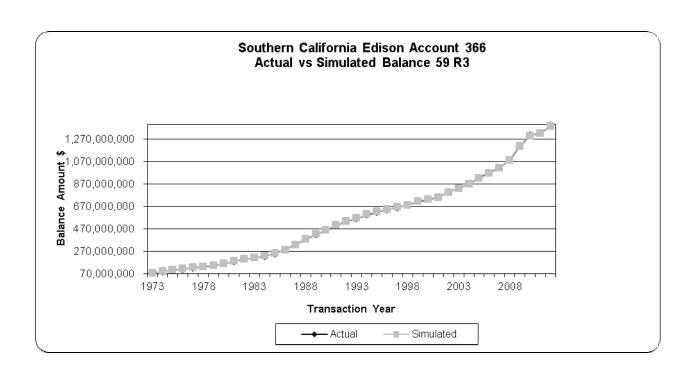


# FERC Account 366.0 Underground Conduit (proposed 59 year life with a R3 dispersion)

This account consists of conduit, duct banks, vaults, manholes, and ventilating system equipment. The investment balance is \$1.390 billion for this account. The existing rate is based on a life estimate of 55 years with a R3 dispersion pattern. In the widest bands that would be consistent with indication of life of this account, the top ranked curves produce REI's that are very low. The CI's are in the excellent range for most of the curves shown in the full and 60 years band. In all bands, the highest ranked curve that produces an REI at or near 100 is the R3 dispersion. Only in the most recent bands does the life move to 60 years. For the widest bands, the 59 R3 is the top ranked curve with an REI close to 100. As can be seen in the chart below, a mid-range R dispersion is the predominant choice for other utilities across the United States.

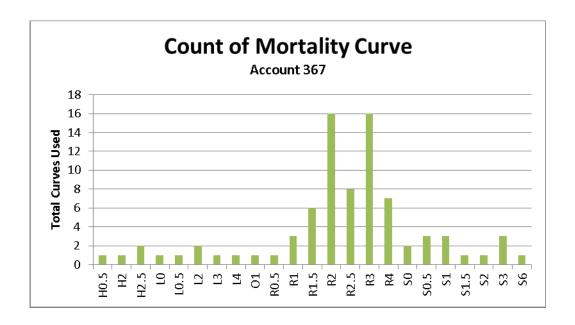


Based on the SPR results, this study recommends moving to a 59-year life and with an R3 dispersion. A graph of the actual versus simulated balances for this account is shown below.

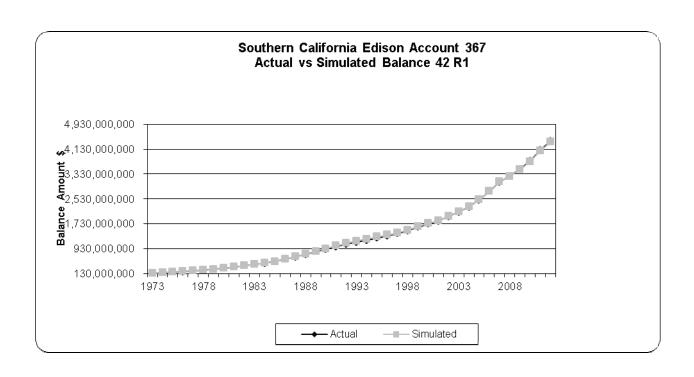


# FERC Account 367.0 Underground Conductor & Devices (proposed 42 year life with a R1 dispersion)

This account consists of underground distribution conductor, switches, and switchgear. The balance is \$4.402 billion for this account. The currently approved life is 40 years with an R1 dispersion curve. For all bands, the top ranked curves are R0.5, L0 and R1. The REI for the curves is approximately 97, 87, and 100 for the R0.5, L0, and R1 respectively. Both the R0.5 and L0 are used by only one utility each across the industry and shown in the chart below.

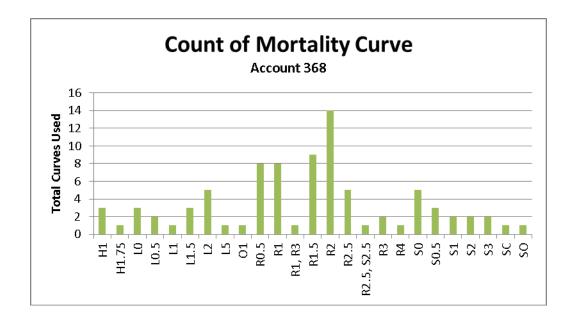


The R1 curve shows a life of 42 years across all bands except the narrowest 10 year band where the life lengthens slightly to 43. Based on the SPR results, this study recommends moving to a 42-year life and retaining the R1 dispersion. A graph of the actual versus simulated balances for this account is shown below.

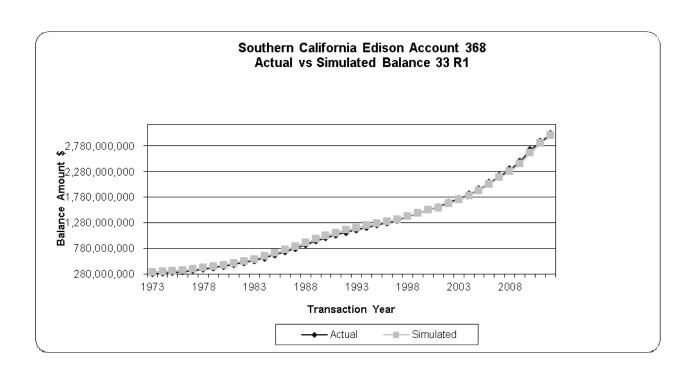


# FERC Account 368.0 Line Transformers (proposed 33 year life with a R1 dispersion)

This account consists of line transformers, regulators, and capacitors. The investment balance is \$3.022 billion for this account. The currently approved life for this account is 30 years with a R1.5 dispersion pattern. For all bands, the top ranked curves are R0.5, L0 and R1. The REIs are close to 100 for each curve with low CIs. Since the L0 curve is not widely used in the industry and would not reflect the as well expected retirement pattern of these types of assets, the choices focused on the R0.5 and R1 curves. The R0.5 curve shows a 36-year life, while the R1 curve demonstrates a 33-year life. The industry reflects a low to mid mode R curve as being the predominant choices in the utility industry.

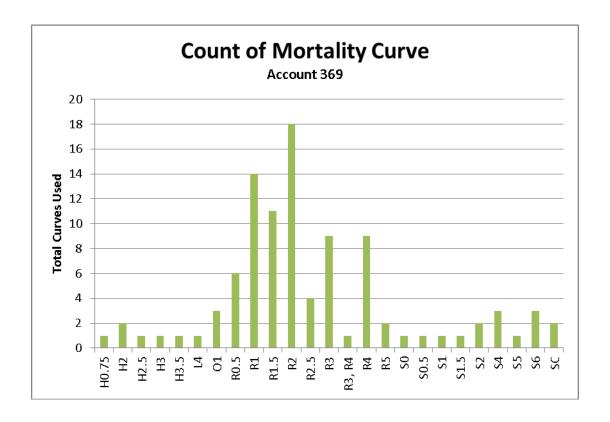


Given the low CIs for both curves and the lives for nearly all other curves being in the high 20's or low 30's, the longer life and flatter characteristics of the R0.5 curve are not as appropriate for this account. The R1 dispersion is recommended along with moving out to a 33-year life for this account. A graph of the actual versus simulated balances for this account is shown below.



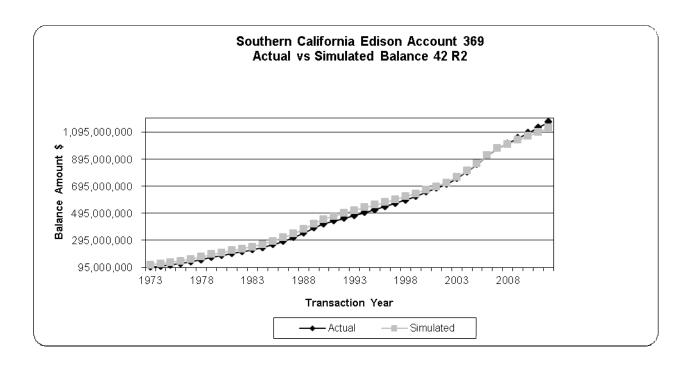
#### FERC Account 369 Services (proposed 42 year life with a R2 dispersion curve)

This account includes overhead and underground services with a balance of \$1.172 billion. The currently approved life for this account is 40 years with an R2 dispersion curve. For all bands except the 10 year band, the top ranked curves are very flat curves. The REIs are close to 100 for each curve. However, the CIs for this account are in the all in the Poor category until the shorter bands where they only move to the Fair range. In addition, most of the curves exhibit a much shorter life than the top few ranked curves and the predominance of very flat dispersions ranked at the top for this type of account would indicate changing life characteristics more so than valid characteristics of the assets. The currently approved curve is the R2 curve which exhibits a 42-year life. The R2 curve is the predominant curve for this account based on the industry data. Using SCE data, the R2 curve reflects a modest 2 year increase which can be considered acceptable even with the low CIs exhibited in the SPR analysis.



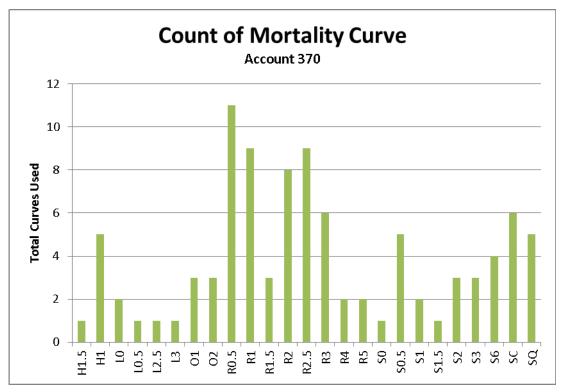
The current depreciation study recommendation is to move to a R2 dispersion curve and increase life to 42 years. A graph of the actual versus simulated balances for

this account is shown below.



#### FERC Account 370.0 Meters – Smart Connect (proposed 20 year life with a R3 dispersion)

This account includes smart connect meters with a balance of \$889 million. The currently approved life for this account is 20 years with an R3 dispersion curve. These assets have been installed since 2007. There is insufficient history to analyze the data using SPR analysis. The current life was established through information on battery life indicated by the manufacturer. Other utilities use a low to mid-range R dispersion curve for this account as can be seen from the chart below.



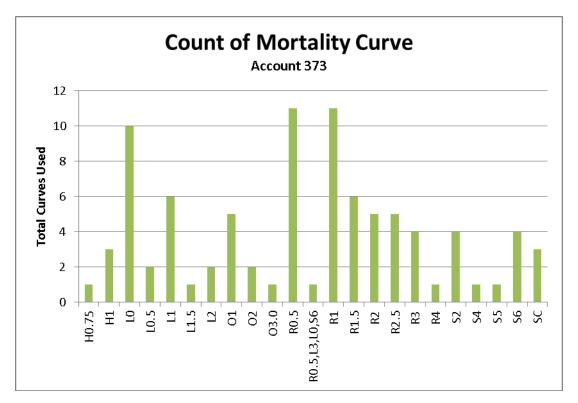
Based on judgment, this study recommends retaining the currently approved 20year life with an R3 dispersion for this account.

# FERC Account 370.0 Meters – Legacy (proposed amortization period through 2017)

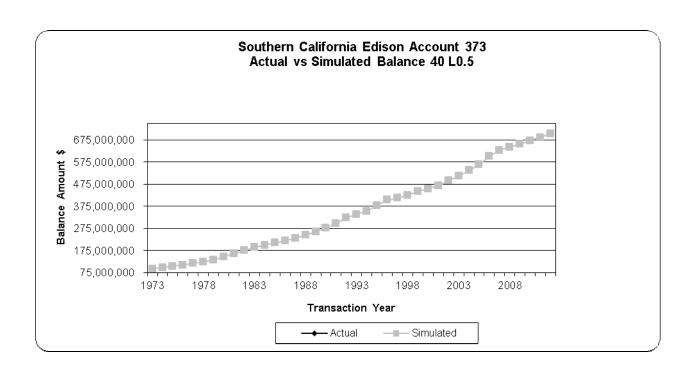
This account includes all distribution legacy meters that are being phased out. The current balance is \$87 million in plant with a net book value of \$312 million. These assets are being allocated over a 6 year life as approved in the 2012 GRC (2012-2017). The current recovery period through 2017 is retained.

# FERC Account 373.0 Street Lighting (proposed 40 year life with a L0.5 dispersion)

This account includes all distribution streetlights, conductor, conduit, luminaire, and standards. The current investment balance is \$754 million for this account. The currently approved life for this account is 40 years with an L0.5 dispersion curve. The top ranked curves are low modal curves in the R, L, or S dispersion families which given the variety of assets in the account is reasonable. The CIs for all but the 10 year band are in the fair or poor range. The industry showed a low mode R0.5, R1, or L0 curve as being the predominant choices in the utility industry.



Given the low conformance indices and input from company personnel, this study recommends retaining the 40-year life and with a L0.5 dispersion. A graph of the actual versus simulated balances for this account is shown below.

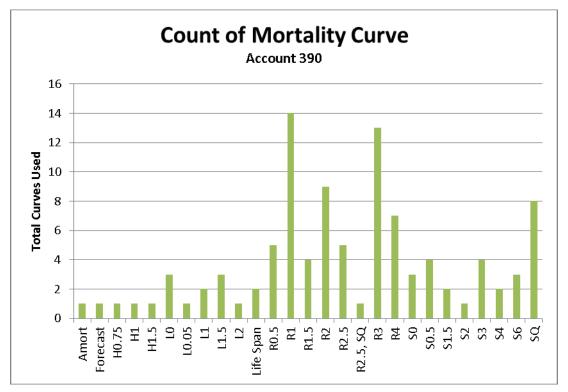


#### **GENERAL PLANT**

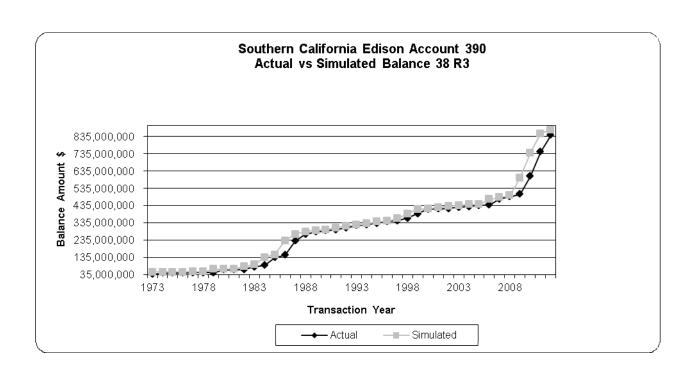
#### **General Accounts, FERC Accounts 390.0**

# FERC Account 390.0 Structures & Improvements (proposed 38 year life with a R3 dispersion)

This account includes the cost of general structures and improvements used for utility service. There is a balance of \$843 million in this account. The approved life for this account is 40 years and a R2.5 dispersion. The top ranked curves in the most recent 40 year and longer bands are S6, S5, L5, and R3. The high modal curves show lives of 30 years which are shorter than would be expected for this type of property. An R3 curve ranks high across all bands and reflects a 38 year life with a reasonably good CI in the shorter bands and a 100 percent REI.



Based on the SPR results and the types of assets in the account (i.e. a mix of long-lived buildings and shorter-lived components of the buildings), this study recommends moving to a 38-year life and with a R3 dispersion. A graph of the actual versus simulated balances for this account is shown below.



#### Forecast Service Lives – Summary

Some categories of plant neither lend themselves to statistical analysis nor belong in the life span category. These plant assets include most general plant (*i.e.*, FERC Accounts 391 - 398), intangible plant (*e.g.*, software, radio frequencies, etc.), and easements. A determination of a service lives was made through discussions with SCE engineers familiar with the assets, consideration of prior company procedure, and familiarity with industry practice.

After review, this study uses the same lives approved in the 2012 GRC for FERC Accounts 302-303 and 391-398 with the exception of certain subaccounts in Account 397. The Table below shows the forecast depreciation service lives for general and intangible plant accounts. The Table compares this study's proposed depreciation rates to authorized service lives.

### **General and Intangible Forecast Service Lives**

	<u>-</u>		
A		2012–2014	2015-2017
Account		Authorized	Proposed
No.	Account Description	(Years)	(Years)
General Plant			
391.1	Office Furniture	20	20
391.2	Personal Computers	5	5
391.3	Mainframe Computers	5	5
391.4	DDSMS-Power Mgmt System	Composite <sup>8</sup>	Composite
391.5	Office Equipment	5	5
391.6	Duplicating Equipment	5 5	5
391.7	PC Software	5	5
393	Stores Equipment	20	20
394	Tools & Work Equipment	10	10
395	Laboratory Equipment	15	15
397	Telecommunication Equipment	Composite <sup>9</sup>	Composite
398	Misc Power Plant Equipment	20	20
<u>Intangibles</u>			
302.020	Hydro Relicensing	Various	Various
303.640	Radio Frequency	40	40
302.050	Miscellaneous Intangibles	20	20
303.105	Capitalized Software – 5 year	5	5
303.707	Capitalized Software – 7 year	7	7
303.210	Capitalized Software – 10 year	10	10
303.315	Capitalized Software – 15 year	15	15
000.010	Capitalized Coltware 10 year	10	10
<u>Easements</u>			
350	Transmission Easements	60	60
360	Distribution Easements	60	60
389	General Easements	60	60
303	General Lascillellis	00	00

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<sup>&</sup>lt;sup>8</sup> Account 391.4 is depreciated at the subaccount level. The proposed life for each subaccount is shown in Appendix C-3 and remains unchanged from the 2012 GRC. On a composite basis, based on investment weighting in the account the life of 391.4 was 14.5 years in the 2012 GRC and is 12.3 years in this proceeding.
<sup>9</sup> Account 397 is depreciated at the subaccount level. The proposed life for each subaccount is shown in

<sup>&</sup>lt;sup>9</sup> Account 397 is depreciated at the subaccount level. The proposed life for each subaccount is shown in Appendix C-3 and remains unchanged from the 2012 GRC. On a composite basis, based on investment weighting in the account the life of 397 was 16.8 years in the 2012 GRC and is 7.7 years in this proceeding.

#### Forecast Service Lives - Account-By-Account

#### **General Plant**

Most general and intangible plant accounts consist of a large volume of items having a low value. Following FERC guidelines, the items in these accounts are not accounted for individually, but are amortized by vintage group over the specified service life and retired at the end of the life span. For example, personal computers are amortized over a 5-year period (*i.e.*, a 20 percent annual depreciation rate) and when a vintage group reaches five years of age, the vintage group of computers will be fully depreciated and retired off of the books. Following this approach eliminates costly plant record keeping and continuous physical tracking of the equipment. Over time, imbalances in the accumulated depreciation can occur if there are depreciation life or rate changes and if net salvage is recorded to the books but not reflected in the depreciation rate. These accumulated depreciation surpluses (deficits) are amortized over this GRC cycle (2012-2014).

#### Account 391.1 – Office Furniture

Account 391.1 consists of all costs incurred in the acquisition of office furniture. It includes such items as modular furniture, desks, cabinets, and files used for general utility service and not permanently attached to buildings. A 20-year average service life is reasonable for both modular and free standing furniture.

#### Account 391.2 And 391.3 – Computer Equipment

The assets in Account 391.2 can include Central Processing Units and associated components (e.g., monitors, printers, etc.) when purchased as a bundled unit, or when any of these items are purchased individually and meet the capitalization threshold. Account 391.3 is where SCE records all investment related to mainframe computer and file server equipment. SCE information technology personnel state that the average life for this equipment should be five years or less. Retention of the five-year life is reasonable.

### **Account 391.4 – Power Management System**

Account 391.4 contains Supervisory Control and Data Acquisition (SCADA) equipment for control and monitoring the SCE electrical system. Contained within this account are the components making up the Power Management System specifically, computer and data gathering equipment, man-machine interface, analog and digital telemetry devices, and data center facility infrastructure. The account consists of components that have very different lives, depending upon the technical sophistication and other retirement factors affecting the equipment. SCE's power management personnel have assessed this equipment as having service lives in categories of 7, 10, 15, 20, or 25 years. A dollar weighting of these equipment lives yields a theoretical combined average service life of about 12.3 years. This study recommends no change in the individual asset group lives. Each of these equipment life categories are addressed in the following discussions.

#### **Seven-Year Power Management System Equipment**

SCE's power management personnel indicate that the equipment falling into the 7-year category is typically modern, digital electronic computer and microprocessor-based equipment which is subject to discontinued support by manufacturer or replaced with newer equipment within a short period of time. Furthermore, these devices contain rotating disk, printers and CRTs that become obsolete and/or worn out after seven years of continuous use. The equipment included in this group is shown in the table below.

Life (years)	CPR Acct	<u>Description</u>
7	391.400	Central Processing Unit
7	391.401	CPU Memory Unit
7	391.407	Line Printer
7	391.408	Magnetic Tape Drive
7	391.409	Bulk Storage Unit
7	391.413	Display Controller
7	391.415	Full Graphics CRT Workstation
7	391.416	PC-Based Workstation
7	391.417	Teletypewriter
7	391.432	Interface/Application Processor
7	391.438	Battery System
7	391.442	Cathode Ray Tube Terminal
7	391.443	Optical Projection Unit

#### **Ten-Year Power Management System Equipment**

SCE's power management personnel indicate that the ten-year lived equipment is less sophisticated than the typical 7-year items. They contain digital electronics as well as some electromechanical devices. Most of this equipment is specialized, proprietary and generally supported by the vendor for 10 years. Past experience indicates this equipment will be replaced after about 10 years. The equipment included in this group is shown in the table below.

Life (years)	CPR Acct	<u>Description</u>
10	391.420	Data Acq Concentrator/Controller
10	391.422	Communication Controller
10	391.423	Data Communication Unit
		Standard Time/Freq Clock
10	391.428	Receiver
10	391.429	Wall Strip Chart Recorder
10	391.435	Dial-Up Remote Terminal Unit

#### Fifteen-Year Power Management System Equipment

SCE's power management personnel indicate that the telemetry equipment consists of analog devices with mostly user repairable parts. They do not contain a high degree of sophistication and with proper maintenance, these devices should last approximately 15 years. The Uninterruptible Power System is an electromechanical device with a rated life of about 15 years. Both of these devices become high maintenance due to failure of passive components and/or electromechanical failures beyond 15 years. The subaccounts included in this group are shown in the table below.

Life (years)	CPR Acct	<u>Description</u>	
		Telemetering	
15	391.426	Receiver/Transmitter	
		Uninterruptible	Power
15	391.436	System	

#### **Twenty-Year Power Management System Equipment**

SCE's power management personnel indicate that this category contains hardened substation field equipment used for data gathering. The equipment is highly fault tolerant and is typically supported by the vendor for approximately 20

years. Also included here are Wall Strip Chart Recorders and Backup Control Systems. These are robust analog devices containing some passive electronics typically rated for 20 years of service. The equipment included in this group is shown in the table below.

Life (years)	CPR Acct	<u>Description</u>
20	391.405	Input/Output Unit
20	391.406	Control Console
20	391.421	Real Time Remote Terminal Unit
20	391.430	Broadcast Control System

#### **Twenty-Five Year Power Management System Equipment**

SCE's power management personnel indicate that the Dynamic Map Board consists of structural components used to house equipment and graphically represent the power system. The equipment is subject to physical or mechanical deterioration due day-to-day changes/use. It should have a service life in the range of 20 to 25 years. The subaccount for this equipment is shown in the table below.

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(years)	CPR Acct	<u>Description</u>
25	391.419	Dynamic Map Board

### Account 391.5 and 391.6 – Office Equipment; Duplicating Equipment

These accounts represent investment in miscellaneous office equipment such as video projection equipment, public address equipment, plotters, duplicating equipment, and like assets. The current service life of five years is reasonable.

#### **Account 393 – Stores Equipment**

Account 393 represents investment in equipment used for the receiving, shipping, handling, and storage of materials and supplies for warehouses. It includes electric pallet jacks, lifting tables, stretch wrapping machine, racking, rotobins/storage bins, battery charger, transformer trays, hand-held scanners, lockers, picking carts, awning, barrel grabber, warehouse heaters, screen netting, cable cutting machine, and like assets. Based on historical Stores Equipment usage and knowledge of warehouse equipment, the operational personnel state that this

equipment has a useful service life of 20 years or less. Retaining the current 20-year service life is reasonable for this account.

#### Account 394 – Tools & Work Equipment

Account 394 represents investment in tools and equipment for construction, repair, maintenance, general shop, and garage, but not specifically includable in other accounts. This study recommends retaining the current service life of 10 years.

#### **Account 395 – Laboratory Equipment**

Account 395 represents investment in laboratory and field test equipment. The account has a wide variety of equipment. It includes for example, calibrators, baths, furnaces, current shunts, dew point meters, gauge calibrators, insulation testers, gas leak detectors, mass comparator, micrometers, multimeters, oscilloscopes, phase meters, watt-hour meter testing power source, power system analyzers, self-contained portable calibration carts, sound meters, metrology standards, thermometer, vibration analysis data pack, and volt meters.

The expected average service life of lab and test equipment is impacted by two major retirement factors: technological obsolescence and normal "wear and tear" from usage in both the field and lab environments. SCE engineers report that field test equipment has service lives between 5 and 15 years, with an average service life of about 7 or 8 years. The service lives of the lab equipment, on the other hand, are mostly impacted by technological obsolescence and range between 2 and 8 years and average about 5 years. Accordingly, this study's proposal to retain the authorized average service life at 15 years is conservative.

#### Account 397 – Telecommunication Equipment

Account 397 represents SCE's investment in communication equipment for the company's system. Contained within this account are the electronic and computer-based equipment (such as transmission equipment, dynamic network multiplexers, data network interconnection system, and radio equipment), as well as communication infrastructure (such as the copper and fiber optic cable, conduit,

microwave equipment, and the electrical power generator system). SCE telecommunication engineers have assessed this equipment as having service lives of 5, 7, 10, 15, 20, 25, or 40 years depending on the type of equipment. These are the same service lives the Commission authorized in the prior rate case. The equipment lives are addressed in the following discussions.

#### **Five-Year Communication Equipment**

SCE telecommunication engineers indicate that the equipment falling into the 5-year category experiences shorter lives from lack of vendor support, facility relocations, and insufficient capacity to meet current demand. The equipment in this group resides entirely in the following account:

<u>Life (years)</u>	CPR Acct	<u>Description</u>	
5	397.550	Data Network System	
Seven-Year Communication Equipment			

SCE telecommunication engineers indicate that the equipment falling into the 7-year category is typically modern, state of the art, electronic and/or computer-based equipment which is subject to being discontinued by manufacturer or replaced with newer equipment within a short period of years. The equipment included in this group is shown below.

<u>Life</u>		
(years)	CPR Acct	<u>Description</u>
7	397.559	Videoconferencing System

### **Ten-Year Communication Equipment**

SCE telecommunication engineers state that the NetComm radio equipment is not as sophisticated as the other electronic equipment and warrants a 10-year service life. They further report that they are experiencing replacements of the NetComm radios after about 10 years. This equipment is shown below.

<u>Life</u>		
(years)	CPR Acct	<u>Description</u>
		iDirect Remote SatComm Station
10	397.098	(VSAT)
10	397.110	Radio Base Station Control System
10	397.130	Telephone System
10	397.135	Circuit Treatment
10	397.145	Transmission Equipment
10	397.151	Lightwave Transmission Equipment
10	397.153	Sync Equipment
10	397.154	Microwave Transmission Equipment
10	397.155	Channel Equipment Assembly
10	397.160	Communications Alarm/Control System
10	397.540	Mobile/Portable Unit
10	397.561	NetComm Radio Assembly
10	397.562	NetComm Control & Monitoring System
10	397.990	Spare Parts

#### **Fifteen-Year Communication Equipment**

SCE telecommunication engineers designate the equipment shown below as having an average life of about 15 years. This group of assets is typically subject to environmental wear. The equipment fails or is replaced as a result of unreliability and/or high maintenance due to failure of passive components or electromechanical failure. In the case of electronic components included in this category, the telecommunication engineers state that these are relatively basic and not the state-of-the-art electronics reflected in the 7-Year life category. This equipment is shown below.

<u>Life</u>		
(years)	CPR Acct	<u>Description</u>
15	397.136	Cable Protection
15	397.140	Antenna Assembly
15	397.255	Public Address System (PA)

#### **Twenty Year Communication Equipment**

SCE Engineers have indicated that certain 15-year equipment will generally last longer than expected in previous rate cases. 20 year equipment is subject to equipment failure, facility relocation retirements, and retirement for capacity issues. Equipment expected to last 20 years is shown in the table below.

<u>Life (years)</u>	CPR Acct	<u>Description</u>
20	397.240	D.C. Power System
20	397.245	Electrical Power Generation System

#### **Twenty-Five Year Communication Equipment**

Although SCE has not yet had fiber optic cable as long as 25 years, SCE telecommunication engineers believe that it may be subject to greater level of degradation than the copper cable. They estimate that 25 years is a reasonable life for the fiber optic cable. This equipment is shown below.

<u>Life</u> (years)	CPR Acct	Description
25	397.802	Communication Cable, Overhead, Fiber Optic
25	397.806	Communication Cable, Underground, Fiber Optic

### **Forty-Year Communication Equipment**

The balance of the communication infrastructure includes such equipment as overhead and underground communication cable, the communication conduit system, and antenna support structures. SCE telecommunication engineers estimate that this equipment has an average 40-year service life. The items are

subject to physical or mechanical deterioration since they are subject to outdoor environments. This equipment is shown below.

<u>Life</u>	<u>CPR</u>	
(years)	<u>Acct</u>	<u>Description</u>
40	397.330	Pole, Wood - Edison Solely Owned
40	397.430	Switch, Disconnect
40	397.600	Pole, Wood - Joint Foreign Set
40	397.790	Conductor, Open Wire Communication
		Communication Cable, Overhead, Copper
40	397.801	Jacketed
		Communication Cable, Underground, Copper
40	397.805	Jacketed
40	397.821	Communication Riser
40	397.825	Antenna Support Structure
40	397.865	Communication Conduit System

#### Account 398 - Miscellaneous

Account 398 represents investment in miscellaneous utility equipment that does not fit other plant accounts. Examples can include such diverse items such as kitchen and infirmary equipment. The current service life of 20 years is a reasonable depreciation period for this account.

#### Intangibles

SCE has investments in a number of intangible assets, including hydro relicensing, radio frequencies, long-term franchise fees, capitalized software, and land easements and right-of-ways. As previously discussed, the hydro relicensing costs are amortized over the remaining life of the FERC project license period. This study recommends the continued amortization of radio frequency investments over the 40-year service life and land easements and rights-of-way over the 60-year service life determined in prior rate case proceedings. The other categories are discussed below.

#### **Miscellaneous Intangibles**

The year-end 2012 plant balance for miscellaneous intangibles is approximately \$510 thousand at year-end 2012, which is largely made up of long-term franchise costs. This study recommends allocating these costs over 20 years.

#### **Capitalized Software**

The depreciable life of capitalized software reflects the estimated life prior to investments required to replace or optimize the software as a result of technology, vendor, or business obsolescence. This study proposes to continue the seven-year service life category for capitalized software in addition to the three existing service life categories of five, ten, and fifteen years determined in prior proceedings as was adopted in the 2009 GRC. The seven-year service life category was established to appropriately account for the depreciation of the capital costs related to SCE's ERP and MRTU Projects.

SCE surveyed 24 utilities to evaluate industry application of depreciable lives for ERP systems in the last few years. The results of the survey yielded a range of lives from five to fifteen years. Of the utilities surveyed, 13 apply a five-year life, 4 apply a seven-year life, 4 apply a ten-year life, and 3 apply a fifteen-year life. The average depreciable life amongst the surveyed companies is 7 years, which is also consistent with SCE's expectations for its ERP project.

#### **Easements**

This study does not recommend any changes to the authorized amortization period of 60 years for its easements and rights-of-way.

#### Salvage Analysis

When a capital asset is retired, physically removed from service and finally disposed of, terminal retirement is said to have occurred. The residual value of a terminal retirement is called gross salvage. Net salvage is the difference between the gross salvage (what the asset was sold for) and the removal cost (cost to remove and dispose of the asset). Salvage and removal cost percentages are calculated by

dividing the <u>current</u> cost of salvage or removal by the <u>original</u> installed cost of the asset. Some plant assets can experience significant negative removal cost percentages due to the timing of the original addition versus the retirement. The net salvage analysis uses the history of the individual accounts to estimate the future net salvage that the Company can expect in its operations. As a result, the analysis not only looks at the historical experience of SCE, but also takes into account recent and expected changes in operations that could reasonably lead to different future expectations for net salvage than were experienced in the past.

#### Steam Production, Hydraulic and Other Production, FERC Accounts 310-346

The concept behind the net salvage cost component of depreciation rates for power plants is different from that of Transmission or Distribution assets. Power plants are discrete units that will need to be dismantled after the end of their useful lives. Because of this, there are two types of analysis required, one for the interim activity and the other based on engineering studies conducted to determine the cost to dismantle the individual units or plants at end of life. The list of the individual account interim net salvage percentages are shown in Appendix C. The terminal or dismantlement net salvage percentages are shown in Appendix D. The unit specific dismantling costs were calculated in current (2012) dollars and were trended to the year each plant was projected to retire to reflect the retirement costs in the year the plant will cease operations. These net salvage percentages were used in the calculation of the depreciation expense for each plant.

#### **Site-Specific Decommissioning Analyses**

#### <u>Life Span Final Retirements</u>

Life span properties consist of property units that will retire concurrently at a specific time. While mass property accounts include a large number of units, the life span groups generally contain a small group of large units. Although there are interim additions and retirement that occur over the service life, the plant as a whole is subject to final retirement. SCE's generating plant – Palo Verde, Hydro, Pebbly Beach, Mountainview, Peakers, and Solar Photovoltaic – fit these characteristics. For this reason, the net salvage for SCE's generation is considered in two basic

elements – interim retirement net salvage and final retirement net salvage (i.e., "decommissioning") – which are estimated separately. The final retirement net salvage entails an engineering estimate of the cost to remove and dispose of the plant and equipment extant at the time of the station's final shut-down. For example, at one of SCE's generating stations, final retirement net salvage may include the removal and disposal of the boiler and ancillary equipment, turbine generators and ancillary equipment, condensate and feed water equipment, fuel handling systems, the ash handling systems (which can include the bottom ash dewatering tanks, flyash storage silos, associated on site ash and disposal area), circulating/cooling/makeup water systems, water treatment systems, and other miscellaneous process equipment and associated infrastructure that continue operating up to the time the station is finally retired.

In contrast to final retirements, interim retirement net salvage is the removal cost associated with the numerous small retirements occurring over the life of the generating station. The interim retirements include the plant components that retire over the operating life of the generating station – pumps, motors, etc. This net salvage is estimated based upon an analysis of recorded interim net salvage ratios similar to the approach followed for mass property. Finally, the interim and final net salvage amounts are weighted together based upon the associated plant dollars to determine a total weighted average net salvage for the generating station.

### **Summary of Results**

The estimated decommissioning costs at retirement are shown in the table below. Interim retirement net salvage is relatively small with only a minor impact to amortization levels.

### **Generation Decommissioning Cost**

	2012–2014	2015-2017
	Authorized	Proposed
	(Retirement Year	Retirement
Plant	Dollars)	Year (Dollars)
Hydro Production	\$ 7,900,000	\$6,876,000
Other Production – Pebbly Beach	\$ 654,548	\$6,605,101
Other Production – Peakers	\$ 7,422,862	\$ 12,103,028
Solar Photovoltaic	\$27,174,842	\$81,903,634
Mountainview <sup>11</sup>	\$ 20,093,161	\$ 16,316,775

Mountainview excludes the decommissioning of Units 1 & 2 and only includes decommissioning of Units 3 & 4 at the end of the remaining life of the station.

### Interim Retirement Net Salvage Percentages

(As a percent of Gross Plant)

Nuclear Production (Palo Verde Only)			
321	Structures and Improvements	0.00%	0.00%
322	Reactor Plant Equipment	0.00%	0.00%
323	Turbogenerator Units	0.00%	0.00%
324	Accessory Electric Equipment	0.00%	0.00%
325	Misc. Power Plant Equipment	0.00%	0.00%
Hydro Production		<u>Net Salvage</u> Ratio	IR Rate
331	Structures and Improvements	-80%	0.20%
332	Reservoirs, Dams & Waterways	-200%	0.05%
333	Water Wheels, Turbines & Generators*	50%	0.25%
334	Accessory Electric Equipment*	-150%	0.40%
335	Misc. Power Plant Equipment*	25%	0.25%
336	Roads, Railroads & Bridges*	-80%	.0.50%

#### Interim Retirement Net Salvage Percentages

(As a percent of Gross Plant)

Other Production			
341	Structures and Improvements	0.00%	0.00%
342	Fuel Holders, Producers & Accessories	0.00%	0.00%
343	Prime Movers	0.00%	0.00%
344	Generators	0.00%	0.00%
345	Accessory Electric Equipment	0.00%	0.00%
346	Misc. Power Plant Equipment	0.00%	0.00%

<sup>\*</sup> Authorized net salvage percentages applied to current estimate of interim retirement percentages.

### Life Span Net Salvage Results – Plant-By-Plant

The net salvage estimates for generating stations will differ significantly depending upon a variety of factors. Although the net salvage consists of both interim retirement net salvage and final decommissioning costs, the scale of the decommissioning costs will generally drive the overall net salvage levels requested. In the case of the nuclear plants, only interim retirement net salvage is included in the filing and is estimated to be zero percent at this time. The Commission addresses the final decommissioning costs of nuclear plants in the Nuclear Decommissioning Cost Triennial Proceedings. The following sections discuss the decommissioning estimates for the respective generation facilities.

#### **Nuclear Net Salvage**

As previously mentioned, nuclear decommissioning is not addressed in this filing. The recorded retirement activity has been insufficient to make a provision for interim retirement net salvage at this time. This is not to suggest that there will be no interim retirement net salvage costs to be allocated. However, the level to date does not justify making an estimated provision in the depreciation rate at this time.

#### **Hydro Net Salvage**

#### Decommissioning

Hydro generating stations generally are not expected to be decommissioned. The company expects to continuously maintain and operate the hydro plants indefinitely. There can be exceptions to this in the case of catastrophic events, or if the economics do not support continued operation, or the FERC does not relicense the hydro plant. Because decommissioning is largely unexpected, the company is not requesting decommissioning in its depreciation expense until such time as the decommissioning is considered a reasonable certainty. In this filing, there is the continued decommissioning of the San Gorgonio station. The estimated decommissioning costs are \$6.9 million to be spent through 2017.

#### **Interim Retirement Net Salvage**

#### Hydro Net Salvage

The net salvage ratios for interim retirements are determined by analyzing the retirement history in a manner similar to the determination of net salvage ratios for mass property. The interim retirement net salvage ratios are estimated as a percent of the interim retirements and weighted as a percent of the plant balance. The net salvage ratios taken as a percent of retirements are relatively more negative than those experienced in the coal plants. This is probably the result of the relatively older age of the hydro-generating units. The older plant investment means that the denominator of the net salvage ratios will be small relative to the removal costs in the numerator. However, as shown in the table below, because interim retirements make up a small percent of the plant balance, the weighted average net salvage ratios for the account only range from about negative 2 to negative 18 percent.

Acct	Description	Weighted IR Rate
331	Structures and Improvements	-8.3%
332	Reservoirs, Dams and Waterways	-1.8%
333	Water Wheels, Turbines & Generators	-9.6%
334	Accessory Electric Equipment	-13.2%
335	Misc. Power Plant Equipment	-9.9%
336	Roads, Railroads & Bridges	-17.6%

#### Pebbly Beach Net Salvage

#### **Decommissioning - Study**

Pebbly Beach is a diesel-powered generation facility located on Santa Catalina Island. The facility has six generators varying in capacity from 1.0 MW to 2.8 MW. At the end of the 45-year life, there is very little gross salvage value anticipated. The expectation is that the salvage value for most generating units will be only for scrap value. At the end of that period, deterioration and obsolescence make the units operationally unreliable, economically ineffective, and environmentally problematic. Some retired generators might still have an operational value. For example, it is possible that a diesel generator might be retired earlier than the 45-year life. Since there is limited space at the Pebbly Beach site, if there is a need for increased capacity, it may be necessary to upgrade to a more efficient generator that takes up less space per kW capacity. Under the circumstance that a generating unit is still fully operational at the time of its retirement, it may have a salvage value of about \$50,000. Under this scenario, you might receive a little more salvage value, but you would also have a shorter depreciation life. In either case, operational or not, the cost to ship the generator off the island will cost between \$50,000 and \$100,000. In other words, the final removal cost will exceed the salvage value from the sale of the retired diesel generators as either scrap or as an "operating generating unit." SCE currently proposes that the depreciation rate

include decommissioning costs of \$670,000 per generating unit, or \$4.0 million in 2012 dollars. The decommissioning cost is escalated to the end of the station's average remaining life of 18.7 years resulting in a future decommissioning cost of \$6.6 million.

#### **Interim Retirement Net Salvage**

There has been little or no interim retirement net salvage for Pebbly Beach. At this time, SCE proposes to retain the 0 percent net salvage ratio.

#### **Peakers Net Salvage**

### **Decommissioning – Study**

SCE commissioned Arcadis to perform decommissioning cost studies for each of its five Peaker units being built in 2007. Those estimates from 2007 were updated to 2012 for each unit and are shown below.

	Decommissioning Estimate 2012 <sup>12</sup>
Peaker Unit	(\$000s)
Center	\$1,287.5
Grapeland	\$1,276.0
McGrath	\$1,437.2
Mira Loma	\$1,517.8
Barre	\$1,447.1

SCE escalated these estimates to the end of the estimated life of the units for a total future decommissioning cost of \$12.1 million over the remaining life of 20.6 years.

Each decommissioning cost estimate is net of estimated \$80 thousand salvage credit and includes an additional 20 percent on the removal portion for SCE management costs.

#### **Interim Retirement Net Salvage**

Although there is no retirement experience for SCE's Peakers generating units, it would not be unreasonable to apply SCE's experience with other generating stations. At this time, however, this study recommends no interim retirement net salvage for the Peakers at this time.

#### Solar 2 Net Salvage

#### **Decommissioning**

The retired Solar Two Project located adjacent to Reliant Resources' Cool Water Generating Station (CWGS) in Daggett, California has been decommissioned. The treatment of over or under accrual is addressed in SCE's depreciation study testimony.

#### Mountainview Decommissioning

#### **Decommissioning – Study**

In 1993, Halliburton NUS completed a decommissioning study for all SCE's gas-fired units including existing Mountainview units, formerly known as SCE's San Bernardino Generating Station Units 1 and 2. The existing plant consists of 2 conventional, 60 megawatt, gas-fired generating units built in 1957 and 1958. These units have been renamed "Mountainview Units 1 and 2" and will share limited common infrastructure with the new Mountainview units, known as "Mountainview Units 3 and 4." Decommissioning of Units 1 and 2 is complete and any under or over is addressed in SCE's depreciation study testimony. Mountainview Units 3 and 4 are 7 years old as of December 31, 2012.

The estimated decommissioning cost for units 3 & 4 is \$8.9 million (2012 dollars). 13 These costs are escalated to the end of the remaining life of the station, resulting in \$16.3 million. This study recommends allocation of future decommissioning costs associated with Mountainview Units 3 & 4 over the remaining life of the station.

<sup>13</sup> See workpapers to this exhibit entitled "Mountain View Generating Station Demolition Cost."

#### **Interim Retirement Net Salvage**

Although there is limited retirement experience for SCE's Mountainview generating station, it would not be unreasonable to use SCE's experience with other generating stations. At this time, however, this study recommends no interim retirement net salvage for Mountainview at this time.

#### **Solar Photovoltaic Net Salvage**

#### **Decommissioning Study**

Decommissioning costs are estimated at \$49.8 million in 2012 dollars. The different facility types (i.e., floating, ground mount, and anchored) result in a range of estimates from \$320,090 and \$547,000 per MW. Escalated to year of retirement this estimate increases to \$81.9 million. 14

#### **Interim Retirement Net Salvage**

There is no interim retirement net salvage forecast for the Photovoltaic units.

<sup>14</sup>See work paper in this exhibit entitled Decommissioning Solar Photovoltaic.

#### Salvage Characteristics – Non-Production Assets

For each account, data for retirements, gross salvage, and cost of removal for each account derived from 1986-2012. Moving averages, which remove timing differences between retirement and salvage and removal cost, were analyzed over periods varying from one to 10 years.

#### **Transmission, Distribution and General Plant**

The accounts contained in Transmission, Distribution, and General Plant were statistically analyzed using the historical cost for salvaging and removing assets with rolling and shrinking bands from 1986-2012. A discussion of the existing net salvage and current study recommendations for each account in those functions follow below.

A number of factors over the years have affected the removal cost reflected in the analysis. SCE makes use of an industry-standard compatible unit process to generate unit estimates that allocate removal cost. In addition, the loading rates have increased over the years adding to the loading on removal cost as well as the cost of the assets. The calculation of the net salvage percentage is made by dividing the net salvage (gross salvage minus removal cost) by the original cost of the retirements. These changes over time will affect the removal cost (numerator) after they are initiated but will only affect the retirement values (denominator) as those assets begin to retire. All else equal, the expectation is that the new salvage percentage will decrease over time when the higher value retirements begin to occur. For this reason, moderation was used in selecting net salvage percentages from the analysis. Other factors, however, are more permanent in nature such as a greater portion of the infrastructure replacement projects related to urban areas with their higher costs and higher permitting costs.

#### **TRANSMISSION**

#### **Transmission Accounts, FERC Accounts 352-359**

#### FERC Account 350.2 Rights of Way (proposed 0 percent Net Salvage)

This group contains transmission land rights and generally has no salvage and minimal or no cost of removal associated at retirement. A zero net salvage is approved and is the recommendation in this study.

# FERC Account 352 Transmission Structures & Improvements (proposed -35 percent net salvage)

This account consists of any gross salvage and cost of removal associated transmission structures and improvements which include buildings, fencing and other structures found in a transmission substation. The approved net salvage for this account is negative 30 percent as recommended by SCE and approved in the 2012 GRC which was a decrease from the previous net salvage rate of negative 40 percent in the 2009 GRC. In the most recent band, net salvage percentages range from negative 50.05 to negative 77.35 percent. There is some variability in the results and the retirement level is not robust enough to support significant movement. As a refinement to the 2012 GRC authorized net salvage rate it is necessary to reflect some movement in the direction of the recent indications, a negative 35 percent net salvage is the proposal for this account.

# FERC Account 353 Transmission Station Equipment (proposed -15 percent net salvage)

This account consists of any gross salvage and cost of removal associated with transmission substation equipment, from transformers and circuit breakers to switchgear, as well as shorter-lived electronic equipment. The approved net salvage for this account is negative 5 percent. In the 2012 GRC, SCE proposed to move in the direction of the increasingly negative net salvage being experienced for this account by requesting a negative 10 percent net salvage. The experienced net salvage is continuing to move more negative. The most recent 5 and 10 year

moving averages show negative 20.92 percent and negative 18.22 percent net salvage respectively. From the information available, the recent retirement mix of long-lived versus shorter-lived assets is comparable to the mix of assets in the account and emergency work is not generally expected for this type of asset. As addressed earlier, the recommended change is conservative based on historical accounting changes. Conservative movement in the direction of the indicated experience, a negative 15 percent net salvage for this account is recommended.

# FERC Account 354 Transmission Towers & Fixtures (proposed -100 percent net salvage)

This account consists of any gross salvage and cost of removal associated with transmission towers and fixtures, which are used to transmit electricity at a voltage of 69 kV and above. The approved net salvage for this account is negative 70 percent. In the 2012 GRC, SCE proposed to move in the direction of the increasingly negative net salvage being experienced for this account by requesting a negative 85 percent net salvage. The experienced net salvage is continuing to move more negative and a more negative recommendation is necessary. The most recent 5 and 10 year moving averages show negative 200.85 percent and negative 184.55 percent net salvage respectively. As mentioned earlier, historical retirement pricing levels are lower than are expected at some point in the future as a percentage of removal cost and the net salvage recommendation is moderated as compared to recent experience. The processes used to charge the level of removal cost expenditures is expected to be consistent in the future (e.g. the industry standard compatible unit process) and it would not be expected that emergency work would generally be required for this type of asset. All indications are that SCE will continue to experience a more negative percentage than the level currently authorized. Conservatively moving in the direction of the experience over most of the last ten years, a negative 100 percent net salvage for this account is recommended.

# FERC Account 355 Transmission Poles & Fixtures (proposed -85 percent net salvage)

This account consists of any gross salvage and cost of removal associated with transmission poles and fixtures, which are used to transmit electricity at a voltage of 69 kV and above. The approved net salvage for this account is negative 70 percent. In the 2012 GRC, SCE proposed to move in the direction of the increasingly negative net salvage being experienced for this account by requesting a negative 85 percent net salvage. The experienced net salvage is continuing to move more negative and a more negative recommendation is necessary. The most recent 5 and 10 year moving averages show negative 107.18 percent and negative 114.64 percent net salvage respectively. The processes used to charge the level of removal cost expenditures is expected to be consistent in the future (e.g. the industry standard compatible unit process) and it would not be expected that emergency work would generally be required for this type of asset. All indications are that SCE will continue to experience a more negative percentage than the level currently authorized. In the same way as Account 354 above, the recommendation is conservatively moving in the direction of the experience over most of the last ten years and a negative 85 percent net salvage for this account is recommended.

# FERC Account 356 Transmission Overhead Conductor & Devices (proposed -100 percent net salvage)

This account consists of any gross salvage and cost of removal associated with Transmission overhead conductors, which are used to transmit electricity at voltages of 69 kV and above. The approved net salvage for this account is negative 80 percent. In the 2012 GRC, SCE proposed to move in the direction of the increasingly negative net salvage being experienced for this account by requesting a negative 85 percent net salvage. The experienced net salvage is continuing to move more negative and a more negative recommendation is necessary. The most recent 5 and 10 year moving averages show negative 203.55 percent and negative 171.19 percent net salvage respectively. The processes used to charge the level of

removal cost expenditures is expected to be consistent in the future (e.g. the industry standard compatible unit process) and it would not be expected that emergency work would generally be required for this type of asset. All indications are that SCE will continue to experience a more negative percentage than the level currently authorized. In the same way that Account 354 and 355 are experiencing lower relative retirement prices and stable removal cost processes, the recommendation is conservatively moving in the direction of the experience over most of the last ten years and a negative 100 percent net salvage for this account is recommended.

### FERC Account 357 Transmission Underground Conduit (proposed 0 percent net salvage)

This account consists of any gross salvage and cost of removal associated with underground conduit. The approved net salvage for this account is 0 percent. The most recent 5 and 10 year moving averages show negative 39.98 and negative 35.79 percent respectively. Since retirement data is limited and there is little expectation for removal cost for the conduit (although there may be some for vaults) assets, this study recommends that no change in net salvage occur in this account. Consistent with life recommendations in this account, retention of 0 percent net salvage for this account is recommended.

# FERC Account 358 Transmission Underground Conductor & Devices (proposed -15 percent net salvage)

This account consists of any gross salvage and cost of removal associated with underground conductor. The lines are low pressure oil filled; paper wrapped 500 MCM copper cable. The approved net salvage for this account is negative 20 percent. Data is somewhat limited for this account. The most recent 5 and 10 year moving averages show negative 16.35 and 22.17 percent respectively. Since retirement net salvage experience is showing lower negative net salvage this study recommends moving to negative 15 percent net salvage for this account.

# FERC Account 359 Transmission Roads and Trails (proposed 0 percent net salvage)

This account consists of any gross salvage and cost of removal associated with roads and trails. There is 0 percent approved net salvage for this account. The most recent 5 and 10 year moving averages show negative 23.51 and negative 23.51 percent for both periods. Since retirement data is extremely limited and there is an expectation for little removal cost for these assets, this study recommends retention of 0 percent net salvage for this account.

# Distribution Accounts, FERC Accounts 360.2-373.0 FERC Account 360.2 Rights of Way (proposed 0 percent Net Salvage)

This group contains land rights and generally has no salvage and minimal or no cost of removal associated at retirement. A zero net salvage is approved and is the recommendation in this study.

# FERC Account 361.0 Structures & Improvements (proposed -25 percent Net Salvage)

This grouping contains facilities ranging from fencing and other structures found in distribution substations. The currently approved net salvage percent for this account is negative 25 percent. The most recent 5 and 10 year moving averages show negative 28.64 and negative 25.85 percent respectively. This study recommends retaining the negative 25 percent net salvage for this account.

#### FERC Account 362.0 Station Equipment (proposed -30 percent Net Salvage)

This grouping contains a wide variety of distribution substation equipment, from transformers and circuit breakers to switchgear, as well as shorter-lived electronic equipment. The currently approved net salvage percentage is negative 20 percent. In the 2012 GRC, SCE requested and was granted an incremental

movement toward the experienced level of negative net salvage being realized. This study recommends an additional incremental movement toward the experienced net salvage. The most recent 5 and 10 year moving averages show negative 57.77 and negative 43.04 percent respectively. From the information available, the recent retirement mix of long-lived versus shorter-lived assets is comparable to the mix of assets in the account. The processes used to charge the level of removal cost expenditures is expected to be consistent in the future (e.g. the industry standard compatible unit process) and it would not generally be expected that emergency work would reduce as the assets in this account age. All indications are that SCE will continue to experience a more negative percentage than the level currently authorized. Moving in the direction of the experience over the last several years, this study recommends moving to negative 30 percent net salvage for this account.

# FERC Account 364.0 Poles, Towers, & Fixtures (proposed -225 percent Net Salvage)

This account contains poles and towers of various material types: wood, concrete, and steel. The currently approved net salvage percentage is negative 190 percent. In the 2012 GRC, SCE proposed to move in the direction of the increasingly negative net salvage being experienced for this account by requesting a negative 200 percent net salvage. The experienced net salvage is continuing to move more negative and a more negative recommendation is necessary. The most recent 5 and 10 year moving averages show negative 538.52 and negative 413.05 percent respectively. As mentioned earlier, historical retirement pricing levels are lower than are expected at some point in the future as a percentage of removal cost and the net salvage recommendation is moderated as compared to recent experience. The processes used to charge the level of removal cost expenditures is expected to be consistent in the future (e.g. the industry standard compatible unit process) and it is not expected that the level of emergency work would decrease as these assets age. All indications are that SCE will continue to experience a more

negative percentage than the level currently authorized. The recommendation for this account is conservatively moving in the direction of the experience over most of the last ten years and a negative 225 percent net salvage for this account is recommended.

### FERC Account 365.0 Overhead Conductor & Devices (proposed -125 percent Net Salvage)

This account consists of overhead conductor of various thickness, as well as various switches and reclosers. The currently approved net salvage percentage is negative 110 percent. In the 2012 GRC, SCE requested and was granted an incremental movement toward the experienced level of negative net salvage being realized. This study recommends an additional incremental movement toward the experienced net salvage. The most recent 5 and 10 year moving averages show negative 277.48 and negative 200.35 percent respectively. The processes used to charge the level of removal cost expenditures is expected to be consistent in the future (e.g. the industry standard compatible unit process) and it would not generally be expected that emergency work would reduce as the assets in this account age. All indications are that SCE will continue to experience a more negative percentage than the level currently authorized. Moving in the direction of the experience over the last several years, this study recommends moving to negative 125 percent net salvage for this account.

# FERC Account 366.0 Underground Conduit (proposed -40 percent Net Salvage)

This account consists of Distribution conduit, duct banks, vaults, manholes, and ventilating system equipment. The currently approved net salvage percentage is negative 20 percent. This study recommends an incremental movement toward the experienced net salvage. The most recent 5 and 10 year moving averages show negative 124.78 and negative 107.18 percent respectively. In a few of the

recent years, vaults and manholes (which may have a higher removal cost) have has a higher portion of retirement than the mix of assets in the account and the recommendation takes that into account in the small movement toward the recent experience. The processes used to charge the level of removal cost expenditures is expected to be consistent in the future (e.g. the industry standard compatible unit process) and it would not generally be expected that emergency work would reduce as the assets in this account age. All indications are that SCE will continue to experience a more negative percentage than the level currently authorized. Conservatively moving in the direction of the recent experience over the long-term averages in the last ten years, this study recommends moving to negative 40 percent net salvage for this account.

# FERC Account 367.0 Underground Conductor (proposed -80 percent Net Salvage)

This account consists of Distribution conductor, switches, and switchgear. The currently approved net salvage percentage is negative 60 percent. This study recommends an incremental movement toward the experienced net salvage. The most recent 5 and 10 year moving averages show negative 162.30 and negative 141.55 percent respectively. The processes used to charge the level of removal cost expenditures is expected to be consistent in the future (e.g. the industry standard compatible unit process) and it would not generally be expected that emergency work would reduce as the assets in this account age. All indications are that SCE will continue to experience a more negative percentage than the level currently authorized. Conservatively moving in the direction of the recent experience over the long-term averages in the last ten years, this study recommends moving to negative 80 percent net salvage for this account

#### FERC Account 368.0 Line Transformer (proposed -20 percent Net Salvage)

This account consists of line transformers, regulators, and capacitors. The currently approved net salvage percentage is 0 percent. In the 2012 GRC, SCE

proposed to move in the direction of the increasingly negative net salvage being experienced for this account by requesting a negative 10 percent net salvage. The experienced net salvage is continuing to move more negative and a more negative recommendation is necessary. The most recent 5 and 10 year moving averages show negative 47.76 and negative 27.32 percent respectively. The processes used to charge the level of removal cost expenditures is expected to be consistent in the future (e.g. the industry standard compatible unit process) and it would not generally be expected that emergency work would reduce as the assets in this account age. All indications are that SCE will continue to experience a more negative percentage than the level currently authorized. Conservatively moving in the direction of that trend, this study recommends moving to negative 20 percent net salvage for this account.

#### FERC Account 369.0 Services (proposed -125 percent Net Salvage)

This account includes overhead and underground services. The currently approved net salvage percentage is negative 85 percent. In the 2012 GRC, SCE proposed to move in the direction of the increasingly negative net salvage being experienced for this account by requesting a negative 100 percent net salvage. The experienced net salvage is continuing to move more negative and a more negative recommendation is necessary. The most recent 5 and 10 year moving averages show negative 431.29 and negative 244.44 percent respectively. The processes used to charge the level of removal cost expenditures is expected to be consistent in the future (e.g. the industry standard compatible unit process) and it would not generally be expected that emergency work would reduce as the assets in this account age. All indications are that SCE will continue to experience a more negative percentage than the level currently authorized. Moving toward the longer term experience for this account, this study recommends moving to negative 125 percent net salvage.

FERC Account 370.0 Meters SmartConnect (proposed -5 percent Net Salvage)

This account includes all Distribution SmartConnect meters installed since 2007. The currently approved net salvage percentage is negative 5 percent. Retirement data is extremely limited. The overall moving average for this account is negative 11.66 percent. Given the small amount of historical data available, this study recommends retaining the currently approved negative 5 percent net salvage for this account.

#### FERC Account 370.0 Meters Legacy

This account includes all Distribution legacy meters. The deployment of the SmartConnect meters has been completed and the unamortized balance of legacy meters already includes retirement net salvage incurred. This balance is being amortized through 2017 per the Company's 2012 GRC decision.

#### FERC Account 373.0 Street Lighting (-40 percent Net Salvage)

This account includes all Distribution streetlights, conductor, conduit, luminaire, and standards. The currently approved net salvage percentage is negative 20 percent. In the 2012 GRC, SCE proposed to move in the direction of the increasingly negative net salvage being experienced for this account by requesting a negative 30 percent net salvage. The experienced net salvage is continuing to move more negative and a more negative recommendation is necessary. The most recent 5 and 10 year moving averages show negative 86.82 and negative 76.89 percent respectively. The processes used to charge the level of removal cost expenditures is expected to be consistent in the future (e.g. the industry standard compatible unit process) and it would not generally be expected that emergency work would reduce as the assets in this account age. All indications are that SCE will continue to experience a more negative percentage than the level currently authorized. In a few of the recent years, fixtures (which may be expected to have a lower negative net salvage) have has a higher portion of retirement than the mix of assets in the account. However, the recommendation does not reflect the likely higher negative net salvage that will occur when larger numbers of electroliers

are removed. Conservatively moving in the direction of the recent experience, this study recommends moving to negative 40 percent net salvage for this account.

#### **GENERAL PLANT**

#### FERC Account 390.0 Structures & Improvements (-10 percent Net Salvage)

This account includes any salvage and removal cost related to structures and improvements used for general utility operations (not the land on which the buildings reside, which could have resale value). The currently authorized net salvage rate for this account is negative 5 percent. The most recent 5 and 10 year moving averages show negative 21.97 and negative 20.53 percent respectively. Moving in the direction of the experience over the last several years, this study recommends moving to negative 10 percent net salvage for this account.

#### **Other General Plant**

Besides the Structures and Improvements discussed above, General Plant also includes various miscellaneous assets such as office furniture, computers, stores and laboratory equipment, telecommunication equipment, and tools and work equipment. Generally, these assets have experienced little or no net salvage or sporadic retirement history and do not warrant the inclusion of net salvage in the current amortization rate. Instead, any recorded net salvage amounts (positive or negative) will be allocated through the amortization rate updates in future rate proceedings, as necessary. 15

One exception is Power-Operated Equipment. The Power Operated Equipment amortization is not recovered through depreciation expense, but is cleared through a clearing account and charged to O&M or capital work orders. The Power-Operated Equipment subaccount has experienced a positive net salvage of about 25 percent, which will continue to be incorporated in the amortization rate.