

2002 Depreciation Study Update Assumptions

Finance Committee
January 14, 2004

2002 Depreciation Study Update

- Done by Gannett Fleming Valuation and Rate Consultants, Inc.
- Gannett Fleming affiliated companies employ over 1,900 people in 40 offices throughout U.S.
- Bill Stout, President, was responsible for original study in 1990 and all updates
 - Testified in front of RCA during 2000 Rate Case and in prior proceedings
 - Testified before Commissions in other states (PA, IN, NY, TX, NH, MO) and Canada
 - Testified before FERC

Definition of Terms

- Depreciation – method of distributing fixed capital costs over a period of time by allocating annual amounts to expense
- Service Life – estimated length of time property is expected to be used or “in service”.
- Net Salvage – gross salvage (estimated realizable value of materials or equipment upon retirement or disposal) less cost to remove the material or equipment.

Definition of Terms Continued

- Depreciation Reserve - cumulative effect of past depreciation expense recognized, actual gross salvage, and reduced by cost of removal, and plant previously retired.
- “Book” Depreciation Reserve – amount of reserve recorded on the books
- “Theoretical” Depreciation Reserve – amount of reserve that **should be** recorded based on the age of assets in the account and current service life and net salvage estimates

Example of how Depreciation Study Works using a 2 asset account

- Assumptions

- Each asset is \$1,000
- First asset lasts five years
- Second asset lasts fifteen years
- No salvage value or cost of removal

- Conclusions

- 10 year average service life:
 $(5 \text{ yrs} + 15 \text{ yrs}) / 2 \text{ assets} = 10 \text{ years}$
- 0% net salvage
- Will depreciate at a 10% rate per year:
 $(100\% / 10 \text{ yrs} = 10\% \text{ per year})$

“Remaining Life” Basis

- Compare level of existing book depreciation reserve to theoretical depreciation reserve
- If theoretical reserve is higher than book reserve, increase 10% rate to assure full recovery
- If theoretical reserve is lower than book reserve, decrease 10% rate to slow down reserve accrual

Annual depreciation accrual rate determined in 2 Stages

- Stage 1
 - Determine Service Life – average useful lives of the assets in the account
 - Determine Net Salvage
 - Gross salvage – estimated amount to be received for disposable material or equipment, less
 - Removal costs – expense involved in retiring or removing the property

In most cases the Average Service Lives are determined through statistical analysis of historical data

Average Service Lives may be modified based on

- Management's current plans and operating procedures
- Consideration of current developments in the electrical industry
- General knowledge of the life and salvage characteristics of other electric property
- Periodic field trips to observe representative portions of the plant

Estimated retirement years of generating units based on typical life spans for such facilities and specific plans of management

- Probable retirement years were estimated, no change since last update in 1999
- Life span procedure used to provide for the simultaneous retirement of all associated property, regardless of year of installation

Stage 2 - Annual depreciation accruals are calculated based on

- Straight line remaining life method
 - Seeks to recover the undepreciated original cost of property over the remaining life of the property
 - In this method the book cost less book reserve and estimated future net salvage is divided by the estimated remaining life
- Estimated service life and net salvage estimates determined in the first stage are used to calculate estimated remaining life and future net salvage

Summary of Assumptions

- Most depreciation rates are set based on analysis of historical service life data
- Estimated probable retirement years for generating plant unchanged since last update
- Straight line remaining life method used to calculate annual depreciation rates

Update Results

Net Change in depreciation expense based on
a full year of 1999 rates vs. 2002 rates

Generation	3,150,092
Transmission	(345,007)
Distribution	(1,176,451)
General Plant	(1,842,964)
	<hr/>
Total	(214,330)
	<hr/>