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Depreciation for regulated utility enterprises

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Depreciation

- Depreciation recognizes the consumption of a plant or equipment as it performs its intended function
- Annual depreciation represents reduction in useful life of the plant during one year in service
- Depreciation is a non-cash expense to be recovered from tariffs
- Often it is called ‘return of investment’
- This money belongs to the investor
- In practice, this money is ploughed back as shareholder equity to be invested in future plant and equipment
- Depreciation rate has significant impact on tariffs and thus an item of some debate in tariff cases.

Depreciation

- As accounting practice depreciation expense is recovered and booked in depr. reserve until the full original cost of plant has been recovered
- Any net salvage value, cost of removal is adjusted against the reserve .
- Depreciation vs Amortization: depreciation usually refers to a physical plant or equipment; amortization is generically used for non-tangible assets e.g good will, regulatory assets
- Sometimes plant depreciated on the basis of output rather time in service

Estimating Depreciation

- Estimating the useful service lives of different components of equipment and capital items
- A plant is classified according to the accounting rules and the type of plant, functional activity, vintage etc
- utility will maintain detailed property records for all capital expenditures for new plant and intermittent additions during the service life.
- Each group of plant analyzed for the service life, net salvage value, cost of removal etc. to calculate the effective depreciation rate for that plant account

Depreciation Methods

- Whole Life: Under the whole life method depreciation expense must cover invested capital, recognize credit for the salvage and recover cost of removal
- Remaining Life: Under the remaining life method an additional adjustment is made for the difference between the theoretical reserves and the book reserves.
- Equal Life: Plant is grouped according to the vintage
- Accelerated Depreciation: double declining balance
- Tax vs. Regulatory depreciation: tax laws often allow accelerated depr. methods as investment incentives which is different from regulatory depr.
- Most reg. commissions use whole life method combined with straight-line recovery, for tariff regulation.
- Obsolescence: Tax laws allow economic life vs. physical life for writing off an asset, e.g telecom switches from electronic to digital

Calculating Depreciation

- The weighted average of all the depreciation rates by plant account is approved by the regulator.
- The composite depreciation rate (% of plant) is then applied to the test year rate base (net book value) to arrive at the total annual depreciation expenses
- Typically detailed depreciation studies performed every three or four years to recognize any changes in parameters, plant additions, technology etc.
- Regulator approves the depreciation rate applicable to future rate cases, until the next depreciation study
- Actual annual depreciation expenses are accumulated in the depreciation reserve account and reconciled against the net plant balances
- The initial book values minus the accumulated reserves provide the net book value for the plant account

Calculating Depreciation

- result in net book value which is rate base on which return is earned
- A separate record maintained for the intangible plant, franchise fees and amortization schedules.

Example

Account	Salvage %	COR %	Life	Life Rate	COR Rate	Total Rate
311 Structures	5%	-55%	60	1.58%	.92%	2.50%
312 Boiler Plant	1%	-11%	55	1.80%	.20%	2.00%
3121 NOX	0%	0%	10	10.00%	0%	10.00%
314 Turbo generator	0%	0%	60	1.67%	0%	1.67%
315 Misc Electric	1%	-9%	45	2.20%	.20%	2.40%
316 Misc Equipment	1%	-6%	45	2.20%	.13%	2.33%

THANK YOU !