

Public Utility Depreciation Practices

August 1996



Compiled and Edited by
Staff Subcommittee on Depreciation of
The Finance and Technology Committee
of the
National Association of Regulatory Utility Commissioners

Published by

National Association of Regulatory Utility Commissioners
1101 Vermont Avenue, N.W., Suite 200
Washington, DC 20005
Telephone (202) 898-2200
Facsimile (202) 898-2213

mortality data were accumulated. The prediction of future retirement patterns is also necessary in application of the vintage group procedure. However, ELG is much more sensitive to these predictions. ELG may be expected to produce greater fluctuations in depreciation expense from year to year than the broad group procedure.

The Broad Group procedure does not require that an assumption be made concerning the shape of the appropriate survivor curve (see Chapter VI) in the grouping process. However, Vintage Group, as generally applied, and ELG require such a determination. ELG depends upon the survivor curve forecast to determine the subgroups. With the FCC's agreement, the ELG procedure has been widely adopted by telephone companies subject to FCC jurisdiction. Some of the state commissions, however, have disallowed its use for intrastate rate making on both practical and technical grounds. The Vintage Group and Equal Life Group procedures are discussed in more detail in Chapter XII.

Application Techniques

There are two techniques commonly used to determine the depreciation rate to be applied to a utility's plant depreciation categories: Whole Life and Remaining Life.

Whole Life

The Whole Life technique bases the depreciation rate on the estimated average service life of the plant category. Whole life depreciation results in the allocation of a gross plant base over the total life of the investment. However, to the extent that the estimated average service life assigned turns out to be incorrect, (and precision in these estimates cannot reasonably be expected), the Whole Life technique will result in a depreciation reserve imbalance. For example, such over-accrual or under-accrual may remain in the reserve indefinitely unless offset by later overages or underages in the opposite direction. However, when a depreciation reserve excess or deficiency is reasonably certain, the Whole Life technique may be modified to include an adjustment to the accrual rate designed to eliminate the reserve imbalance in the future. For example, a special amortization of the difference may be allowed.

Remaining Life

The Remaining Life technique seeks to recover the undepreciated original cost less future net salvage over its remaining life. With this technique, the gross plant less book depreciation reserve is used as the depreciable cost and the remaining life or future life expectancy is used in the denominator. The formula is:

$$D = \frac{B - U - C'}{E} \quad (11)$$

where D is the depreciation expense or annual accrual
where B is the book cost of the Gross Plant
where U is the book depreciation reserve at start of the year
where C' is the Estimated Future Net Salvage in dollars
where E is the Estimated Average Remaining Life

The following formula is used to arrive at the depreciation rate in percent:

$$\text{depreciation rate } d = \frac{D}{B} \times 100 \quad (12)$$

This rate may also be derived by dealing entirely in percentages as follows:

$$\text{depreciation rate } d = \frac{100 - u - c'}{E} \quad (13)$$

$$\text{where, in percent reserve, } u = \frac{U}{B} \times 100 \quad (14)$$

$$\text{where, in percent future net salvage, } c' = \frac{C'}{B} \quad (15)$$

A review of the depreciation reserve is appropriate at the commencement of use of the remaining life technique to ensure consistency with prior accounting and regulatory policies. The desirability of using the remaining life technique is that any necessary adjustments of depreciation reserves, because of changes to the estimates of life on net salvage, are accrued automatically over the remaining life of the property. Once commenced, adjustments to the depreciation reserve, outside of those inherent in the remaining life rate would require regulatory approval.

The Depreciation Model

The foregoing sections of this chapter discussed several depreciation Methods (e.g., Unit of Production, Straight-Line, Declining Balance), Procedures (e.g., Broad Group, Vintage Group, Equal Life Group) and Techniques (Whole Life and Remaining Life). A complete "depreciation model" is composed of a Method, a Procedure and a Technique, e.g., Straight-Line, Vintage Group, and the Remaining Life techniques. Subsequent chapters will also utilize this terminology.

**This foregoing document was electronically filed with the Public Utilities
Commission of Ohio Docketing Information System on**

2/6/2022 11:07:34 AM

in

Case No(s). 20-1651-EL-AIR, 20-1652-EL-AAM, 20-1653-EL-ATA

Summary: Exhibit Company Exh 89 electronically filed by Mr. Ken Spencer on
behalf of Armstrong & Okey, Inc.