

Public Utility Depreciation Practices

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PUBLIC UTILITIES DEPRECIATION PRACTICES

Costs may also be distributed over production rather than over service life. This method, the unit of production method, distributes the costs as units are produced using a rate per unit developed from the total estimated units to be produced. It is similar to the straight-line method but is a function of production rather than a function of time.

Salvage Considerations

Under presently accepted concepts, the amount of depreciation to be accrued over the life of an asset is its original cost less net salvage. Net salvage is the difference between the gross salvage that will be realized when the asset is disposed of and the cost of retiring it. Positive net salvage occurs when gross salvage exceeds cost of retirement, and negative net salvage occurs when cost of retirement exceeds gross salvage. Net salvage is expressed as a percentage of plant retired by dividing the dollars of net salvage by the dollars of original cost of plant retired. The goal of accounting for net salvage is to allocate the net cost of an asset to accounting periods, making due allowance for the net salvage, positive or negative, that will be obtained when the asset is retired. This concept carries with it the premise that property ownership includes the responsibility for the property's ultimate abandonment or removal. Hence, if current users benefit from its use, they should pay their pro rata share of the costs involved in the abandonment or removal of the property and also receive their pro rata share of the benefits of the proceeds realized.

This treatment of net salvage is in harmony with generally accepted accounting principles and tends to remove from the income statement any fluctuations caused by erratic, although necessary, abandonment and removal operations. It also has the advantage that current consumers pay or receive a fair share of costs associated with the property devoted to their service, even though the costs may be estimated.

The practical difficulties of estimating, reporting, and accounting for salvage and cost of retirement have raised questions as to whether more satisfactory results might be obtained if net salvage were credited or charged, as appropriate, to current operations at the time of retirement instead of being provided for over the life of the asset. The advocates of such a procedure contend that salvage is not only more difficult to estimate than service life but, for capital intensive public utilities, it is typically a minor factor in the entire depreciation picture. The obvious exception, of course, is the huge retirement cost of decommissioning nuclear power plants. The advocates of recording salvage at the time of retirement further contend that salvage could properly be accounted for on the basis of known happenings at the date of retirement rather than on speculative estimates of factors, such as junk material prices, future labor costs, and environmental remediation costs in effect at the time of retirement.

One of the practical difficulties of estimating net salvage is that reported salvage is a mixture of salvage on items retired and reused internally, salvage on items sold externally as functional equipment, and salvage on items junked and sold as scrap. Because the likelihood of reuse is greater for items that are retired at early ages, the historical salvage is usually higher than the future salvage to be realized when the account begins to decline and there is little opportunity for reuse. Therefore, under these circumstances, book salvage may overstate the average salvage realized over the entire life of the account. This has led to the proposal to

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Depreciation account will be related to retirements of plant recorded simultaneously.² It is cautioned, however, that this is frequently not the case, with the result being that plant retirements are recorded in one time period and the associated gross salvage and cost of removal are recorded in a different time period. The impact of this timing mismatch can be largely negated by analyzing a band of years, as discussed below. Another point to consider when gathering data for analysis is that changes may have occurred in the composition of plant accounts. For example, the Federal Communications Commission's Uniform System Of Accounts for telephone corporations was revised effective January 1, 1988; and both the title and content of many plant accounts changed.

Once the source of information is established, the analysis of data can commence to determine the past relationship of net salvage to retirements, i.e., net salvage as a percent of plant retired for each of the depreciation categories being studied. Net salvage can be directly analyzed as a percent of retirements. However, in order to obtain a clear understanding of the composition of net salvage and the forces that cause it to change from year to year, generally it is best to analyze gross salvage and cost of removal separately as a percent of retirements. In making this analysis it is common to look at data for bands of years, such as 1988-93, 1989-94, 1990-95, etc. These bands may, or may not, coincide with the bands used in making the life analysis. They should be just broad enough so a fairly smooth trend can be detected, if one exists. If retirements are few or erratic from one period to another, it will be necessary to use a wider band. As a general rule, the greater the retirement activity, the shorter the band necessary for analysis, and vice versa. Also, the shorter the service life, the shorter the band needed, and vice versa. If the band is too long, it may mask any trend. However, with certain long-lived property, such as conduit and buildings, in order to obtain meaningful results it is usually necessary to examine data for a wide band of years, perhaps 20 or 30 years.

In many cases both gross salvage and cost of removal trend in the same direction so net salvage remains fairly steady. Quite often, when plant is removed with the intent of reusing it, the gross salvage is high but because of the extra care required to recover the plant in good condition, the cost of removal is also high. If the plant removed is old or obsolete, the gross salvage is low. In this case however, the cost of removal is also likely to be low since relatively less care is likely to be taken in the removal process.

Past trends should not be the sole guide in predicting future net salvage because they can be misleading. Recognition should be given to changes that may cause deviations from past trends, such as the kinds of materials to be removed in the future versus the kinds of materials that have been removed in the past, or changes in methods of removing plant from the way in which that plant was previously removed. Changes in company policy and environmental regulations can also affect the level of net salvage.

Most analysts are of the opinion that reasonable salvage and cost of removal estimates and forecasts can be made by trending experience and applying informed judgment. They believe it is difficult to justify the expense of detailed analyses. This would certainly hold true

² Retirements, cost of removal and salvage associated with each specific work order or estimate are collected until the project is completed and closed. All amounts are then transferred to the Accumulated Depreciation account together.