Public Utility

Depreciation Practices

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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

redefine net salvage and retirements to eliminate the effect of reused material. Reuse salvage is further discussed in Chapter III.

The sensitivity of salvage and cost of retirement to the age of the property retired is also troublesome. Due to inflation and other factors, there is a tendency for costs of retirement, typically labor, to increase more rapidly than material prices. In an increasing number of instances, the average net salvage is estimated to be a large negative number when expressed as a percentage of original cost, sometimes in excess of negative 100%. This may look unrealistic but is appropriate and necessary so that the required cost allocation occurs. Nonetheless, a careful analysis of retirements should be made to determine if such large negative net salvage values are due to unusual circumstances. An example is the retirement of old cast iron gas mains in congested metropolitan areas. Due to urban renewal, a utility may have a significant amount of such activity for a few years. Since most of the investment in this account may now be in plastic mains in rural or suburban areas where access is easier, the removal of old cast iron gas mains at today's cost may not be representative of the costs that can be expected for plastic mains.

While this situation should not impose insurmountable difficulties from a depreciation expense or cost allocation perspective, it presents an interesting problem from the standpoint of the rate base. Since rate base is generally the difference between book cost and accumulated depreciation, the provision for negative salvage further decreases the rate base. If the original book cost for old plant is less than the accumulated provision for depreciation, the rate base could be a negative amount.

As the foregoing discussion indicates, gross salvage, in contrast to service life, is usually small in its overall effect on calculating a depreciation rate. Cost of retirement, however, must be given careful thought and attention, since for certain types of plant, it can be the most critical component of the depreciation rate.

Group Plan

The group plan of depreciation accounting is particularly adaptable to utility property. Rather than depreciating each item by itself (unit depreciation) or depreciating one single group containing all utility plant, a group contains homogeneous units of plant which are alike in character, used in the same manner throughout the utility's service territory, and operated under the same general conditions.

Of course there will be different lives for individual units within groups. For example, poles are generally combined in a single group. Some poles will be retired because of storms or automobile accidents. Some will decay, some will be displaced due to road relocations and some will be retired because of underground replacements. However, they are combined in the same group because they are homogeneous units. Years ago when some poles were untreated, there was a need for a separate grouping as these poles were more susceptible to decay and termite infestation than treated poles. Likewise, concrete poles have unique characteristics and qualify to be grouped separately from wood poles. Buried, aerial, and underground (in conduit) cables are further examples of the same type of plant receiving different grouping because of