



# Useful Lives and Residual Values of Fixed Assets

## What is the challenge?

As part of becoming a Utility of the Future, CLP is committed to achieving net-zero greenhouse gas emissions by 2050. Therefore, we are progressively phasing out coal for power generation while investing in renewable and other non-carbon emitting energy, as well as developing other streams of business, including power transmission, distribution and retail; and energy and infrastructure services.

This global trend of transitioning towards a low carbon economy, if not properly managed, could challenge the financial stability of companies, and it has resulted in the inclusion of climate change as one of the key risks reported by most organisations. No matter this, the accounting standard does not refer explicitly to climate-related matters, however these may affect the financial statements in various areas. One of the affected areas is related to the estimation of the useful life and the residual value of an asset.

In this accounting mini-series, we will check out what factors shall be considered in the determination and estimation of the useful life and the residual value of an asset and how climate-related risks may affect the decisions.

## What is useful life?

Useful life is defined as the period over which the company expects the asset to be available for use, or the number of production or similar units expects to be obtained from the asset. It is typically referred to as the length of time the asset can reasonably be used to generate income and be of benefit to the company, and therefore may be shorter than the design life of the asset.

As the useful life of an asset is an accounting estimate and the underlying assumptions may change over time, the accounting standard requires companies to review the estimated useful life of the assets at least every financial year end. The change in the estimated useful life of an asset affects the amount of depreciation recognised each year.

In the past, when reviewing or determining estimated useful lives, management mostly focused on existing guidelines in the accounting standard. Nowadays, with the evolving trends in climate change, climate-related factors shall also be taken into consideration. Details of both general and climate-related factors are set out in the adjacent table.



| Factors  | Accounting standard guidelines   | Climate-related considerations   |
|--|--|--|
| <b>Expected usage of the asset</b>                       | Usage is assessed by reference to the asset's expected capacity or physical output.  | ■ ■ ■ Company's climate-related decisions or strategies, such as commitments to transit to lower-carbon emission.  |
| <b>Expected physical wear and tear</b>                   | It depends on operational factors such as the number of shifts the asset is to be used for, the repair and maintenance programme of the company, and the care and maintenance of the asset when idle.                                  | ■ ■ ■ Climate change may affect the repair and maintenance programme. Capital expenditure to protect operations and supply chains, or repair damage caused by climate change-related weather events may increase to maintain the useful life of the asset.   |
| <b>Technical obsolescence</b>                            | Arises from changes or improvements in production. Expected future reductions in the selling prices of an item produced using an asset could indicate the technical obsolescence of the asset.   | ■ ■ ■ New technologies that support the transition to a lower-carbon economy such as the development or emergence of new environmentally friendly technologies can impact the demand for existing products.  |
| <b>Commercial obsolescence</b>                           | Arises from a change in the market demand for the product or service output of the asset. Expected future reductions in the selling prices of an item produced using an asset could indicate the commercial obsolescence of the asset. | ■ ■ ■ Change of consumer preferences towards green processes or products can lead to reduced demand for existing products or services.   |
| <b>Legal or other limitations on the use of an asset</b> | Such as the expiry dates of related leases on buildings or properties.   | ■ ■ ■ Policy actions by governments such as introducing climate-related regulations and carbon taxes, forcing company to abandon the asset sooner than expected or implementing caps on the use of resources. All of these can reduce demand for products or increase operating costs. An increase in climate-related legal claims also heightens legal risks. |

## What is residual value?

Residual value of an asset is the estimated amount that a company would currently receive from disposal of the asset, after deducting the estimated costs of disposal, if the asset were already of the age and in the condition expected at the end of its useful life. Thus, residual values take account of changes in prices up to the reporting date, but not of expected future changes. Residual values are not based on prices prevailing at the date of acquisition of an asset.

An asset is depreciated to its residual value, hence a change in the residual value affects its depreciation expense. Same as with the useful life, as uncertainty is associated with the estimates, the residual value of an asset is to be reviewed, as a minimum, at each financial year end. The common approaches to derive the residual value are set out in the adjacent table.

| Approaches  |  |   |
|---|--|---|
| Insignificant or no value   | Comparables  | Company's policy  |
| Basis   |  |   |
| It is assumed that the assets will be scrapped at the end of the useful life.               | The residual value is compared to the value of comparable assets, which are traded in a well-organised market. | A company policy that sets out a unified residual value to each class of assets.  |
| Pros  |  |   |
| A very efficient method that simplifies the depreciation calculation.                       | An objective approach, more defensible.  | Facilitates management evaluation of the performance of the assets in the same class.   |
| Cons  |  |   |
| Changes in the estimated residual value could cause volatility in the depreciation expense. | Not all assets have comparables in a well-organised market, including specific assets like power plant.        | Less supportive approach. Likely to be challenged especially if the company set the residual value higher than the market value, which results in lower depreciation expense. |



**The residual value and the useful life of an asset shall be reviewed at least at each financial year-end. (HKAS 16.51)**



## How to account for changes in useful lives and residual values?

A change in the useful life and /or the residual value of an asset is accounted for as a change in estimate, thus it has to be incorporated in a prospective manner i.e. the change will be implemented from the date of revision forward. Previous periods are not adjusted for changes in estimates.

A significant reduction in the estimated useful life of an asset may also indicate that the carrying amount of the asset is impaired as the period of income generation would be reduced significantly.

## What to disclose?

A change in estimates affect the depreciation expense for the current period as well as for each future period until the end of the asset's useful life. The company shall disclose the nature and amount of the change in these estimates.

The accounting standard does require disclosure of climate-related matters, including the exposure of the value of the assets to climate-related risks that could result in a material adjustment to the carrying amounts within the next financial year and /or could influence investors' decision-making process. The company shall disclose the nature of the assumptions applied in the estimates and the year-end balance of those assets.

## CLP Group case studies

CLP reviews and reassesses the useful lives and residual values of its assets not only at every financial year end, but also on a timely manner when certain circumstances arise. In recent years, management has paid special attention and consideration to climate-related matters during the revision of useful lives and residual values of the generation assets. The table below lists out some of our recent revisions, which illustrates how CLP applies vividly the accounting standard requirements as discussed in this accounting mini-series.



|           | Asset                     | Changes  | Factors driving changes  |
|-----------|---------------------------|--|--|
| Hong Kong | Black Point Power Station | <b>Extension of useful life</b><br>Useful lives of the generating plants have been extended by 5 years in 2018.  | After mid-life refurbishments, useful lives of the assets are prolonged.   |
| Australia | Yallourn Power Station    | <b>Early retirement</b><br>In March 2021, EnergyAustralia announced it would close Yallourn power station in mid-2028, four years earlier than planned.  | The early closure is the result of rapidly changing market dynamics as well as the age of the plant. EnergyAustralia is committed to delivering in the cleaner energy transition, and accordingly has announced the early retirement of its largest coal-based generating plant. |
| Australia | Mount Piper Power Station | <b>Accelerated exit</b><br>In September 2021, EnergyAustralia announced the early closure of Mount Piper coal-fired power plant in New South Wales to 2040, three years earlier than the previous indicated closure in 2043. | EnergyAustralia plans to reach net-zero greenhouse gas emissions by 2050, and to transition out of coal assets by 2040. The accelerated exit is part of a commitment to exit all coal generation by 2040 as part of the revised emissions reduction strategy.                    |
| India     | Jhajjar Power Station     | <b>The assumption of non-renewal of power purchase agreements (PPAs)</b><br>In 2021, management has restricted the time period to the contractual period of the PPAs in forecasting cash flows for impairment assessment.    | Apraava Energy expects that the current PPAs with the offtakers would unlikely be renewed after their expiry in 2037.  |