

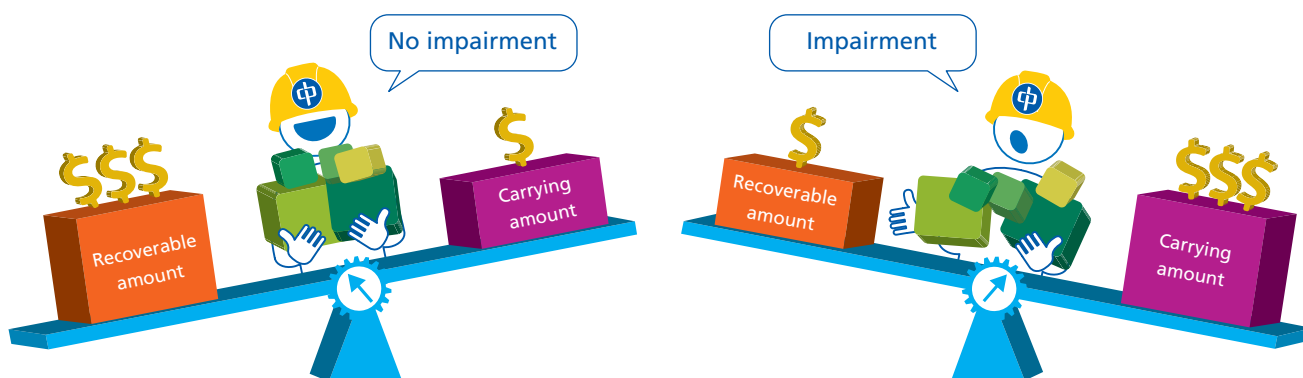
Impairment

Why talk about impairment?

CLP has steadily expanded its business activities beyond its original Hong Kong base since the mid-1990s. We adopt a disciplined investment approach with well-defined investment criteria for project selection. However, no matter how careful we are in making investment decisions, the regulatory, economic and business environments are sometimes beyond our control and the value of our investments can be affected. An impairment alarm rings when the return falls below our original expectation. After going through the financial crisis, we are particularly alert to any changes to our operating environment which might trigger an impairment review. We believe it is time to explain the mechanism of impairment assessment to our readers.

When does impairment occur?

The deterioration of market conditions, imposition of new regulations, technological advances and other significant changes are impairment indicators which may have a drastic impact on our operating environment and lead to an unexpected decrease in investment returns. Whenever a fall in returns is foreseen, we have to check whether an impairment loss has arisen. An impairment review assesses whether the benefits to be derived from an asset in the future (the recoverable amount) still exceed its current value in our financial statements (the carrying amount).



How to assess impairment?

The critical element in impairment assessment is the recoverable amount of an asset. The recoverable amount is the benefit to be derived from an asset, either by future use (i.e. value in use) or by disposal (i.e. fair value less costs to sell) of the asset, whichever is higher.



It is reasonably easy to determine the fair value less costs to sell by comparing this with current market transactions. However, in practice, an active market or reliable market information may not exist for all assets. When the market is illiquid or comparable transactions are few, especially for specific assets such as a power plant, it may not be possible to determine the fair value of the asset. We then have no choice, but to assess the recoverable amount of the asset by estimating its value in use.

How to assess the recoverable amount of a power company owning several power stations?

If each power station operates and generates cash inflows from electricity sales independently within a power company, we assess the recoverable amount of each power station individually when conducting impairment assessment. We do not assess impairment based on the power company as a whole, because each power station is considered as the smallest identifiable group of assets that can generate cash inflows independently from other assets of the company. In other words, each power station is regarded as a cash generating unit (CGU), the smallest unit on which a recoverable amount should be assessed.



How to calculate value in use?

The value in use of an asset is the present value of a series of future cash flows expected to be generated from using the asset. This is derived from the concept of discounted cash flows (the amount you would pay today for cash expected to be received in future years). The calculation of value in use of an asset seems complicated. It will be easier to understand if we divide the present value of cash flows into two basic elements: the cash flow projections and the discount rate.

Cash flow projections

Cash flow projections include cash inflows from continuing use of an asset over its expected useful life, as well as those expected to be received on disposal of the asset at the end of its useful life. In determining future cash flows, significant management judgment is involved. Management predict the future cash flows by estimating a range of economic conditions that will exist over the remaining useful life of an asset. This prediction is based on the current condition of the asset. Future expenditure on improving and enhancing the performance of the asset is excluded.

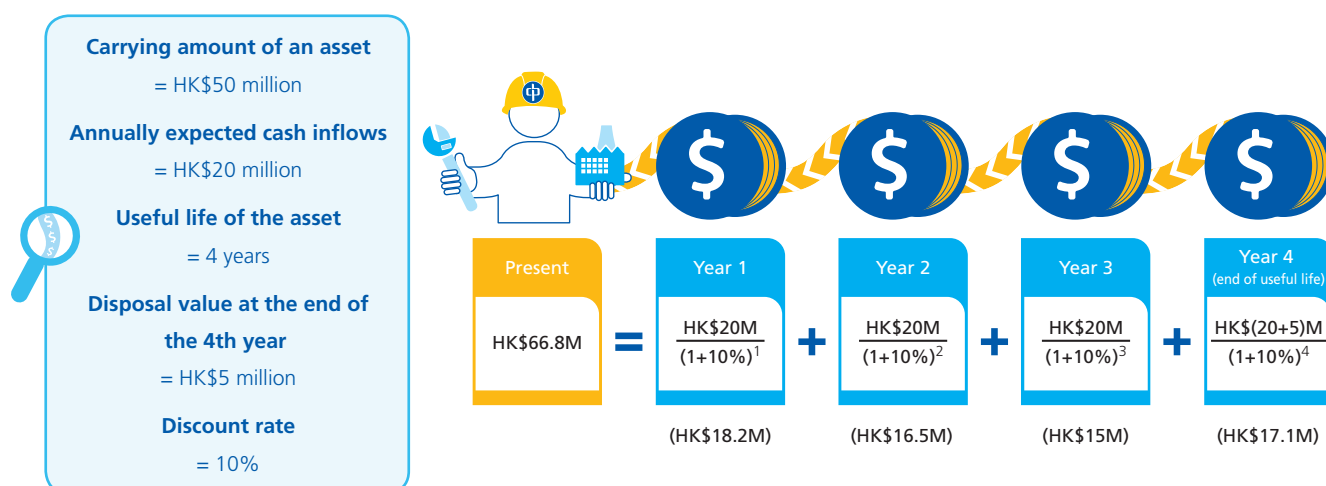


What is a discount rate?

Discount rate is the rate of return that an investor would require when he invests in a risk portfolio. The higher the risk, the higher the discount rate.



To illustrate the concept of present value, let us go through a very simple example.



By discounting the annual cash inflows, the present value of the asset (i.e., its value in use) is estimated to be HK\$66.8 million. As this is higher than its carrying amount of HK\$50 million, the asset is not impaired.

Note : The present value of the cash inflows is far less than HK\$85 million (the straight summation of 4 years cash inflows of HK\$20 million per year and the disposal value of HK\$5 million) because it takes into account the compensation for not receiving the cash immediately and the risk that the projected cash inflows may not ultimately materialise.

What is on our radar screen?

The Australian Government has proposed to implement a CPRS which requires carbon dioxide emitters to surrender a permit for every tonne of CO₂ that they emit. If such new legislation is imposed, it will impact our Yallourn Power Station. Assuming that the CPRS, in its current form, were passed, an impairment review of Yallourn Power Station would be performed as follows:

Yallourn Power Station is a brown coal-fired power station. It has a generation capacity of approximately 10,500GWh. It supplies approximately 22% of Victoria's electricity needs and 8% nationally in Australia.

What is the impairment indicator?

The imposition of the new legislation, the CPRS.

Is Yallourn a CGU?

Yes, Yallourn has been operated and managed as a standalone asset. It is one of several CGUs of TRUenergy.

Can fair value of Yallourn be determined?

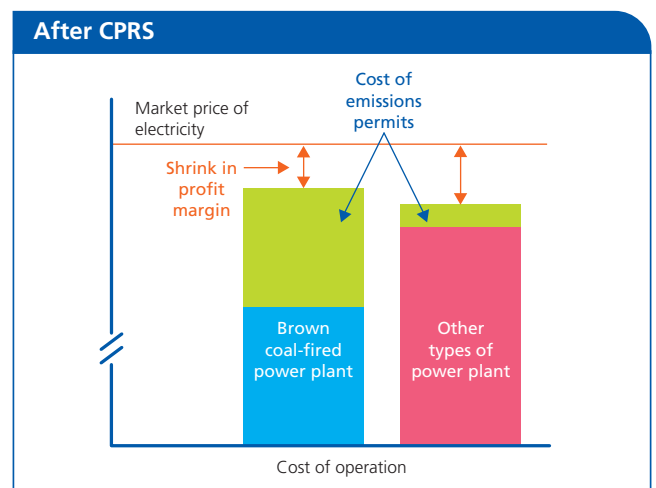
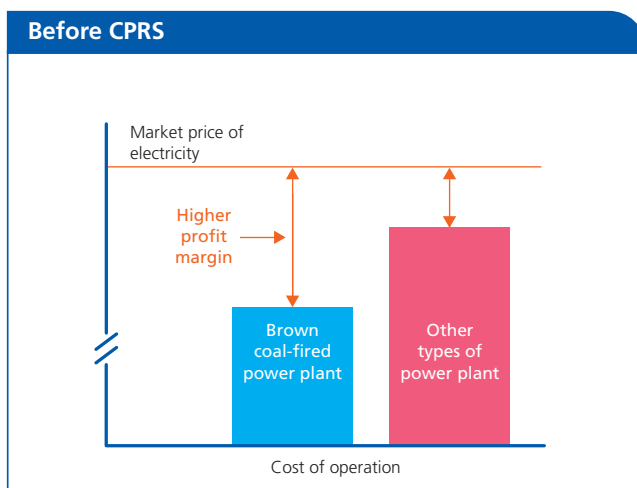
No. Because power plant is a specific asset with no active market.

What is the impact on Yallourn's assets?

The value in use of Yallourn will primarily be driven by its short run marginal costs and how these position it in the merit order of the wholesale electricity market (i.e., how competitive it is in the market against other generators).

Currently, the key short run marginal cost of Yallourn is its fuel cost. However, given the relative low cost of its mine-mouth brown coal fuel source, Yallourn's dispatch is heavily embedded in the merit order of the wholesale electricity market in Australia. Any change to Yallourn's short run marginal cost, such as the cost of carbon emissions contemplated by the CPRS, will significantly change its position in the merit order and hence its longer term operating profile and profit margins.

These changes will determine the cash flows used in the value in use calculations, with any detrimental changes to the margins and operating life of Yallourn having the potential to cause an impairment of this asset.



A hard lesson learned?

Even though making impairment provision is a painful decision, this reminds us to be cautious when making investment decisions. Our duty to make impairment assessments helps keep us alert to any changes in the market conditions so that we react to those changes promptly.