What is Capital Expenditure?

Powerlink's capital expenditure (capex) consists of investment in new assets that increase network capability or capacity, reinvestment in existing assets that are reaching the end of their serviceable life, and investment on other supporting assets. Powerlink's capital expenditure categories are detailed below.

Capital Expenditure Categories

Load-driven (network) – to comply with mandated reliability obligations as electricity demand grows and/or to deliver net benefits to the market.

Non load-driven (network) – associated with the reinvestment in assets to maintain the required capacity or capability of the network or investment to meet the need for system services such as system strength.

Non-network – comprising mostly business information technology and support for assets required in the normal day-to-day course of business, e.g. vehicles.

Forecasting Methodology

Powerlink will apply its Hybrid+ approach to determine its total forecast capital expenditure, which consists of a mix of both top-down and bottom-up forecasting methods. We used a similar hybrid approach in our previous Revenue Proposal for the current period. We have sought to improve the approach by targeting a greater number of bottom-up forecasts to complement the top-down method.

This Hybrid+ approach provides the required information for the AER to apply its preferred assessment approach, per the Expenditure Forecast Assessment (EFA) Guideline, and will be prepared in accordance with the National Electricity Rules.

Irrespective of the forecasting methodology used in the Revenue Proposal, detailed analysis and justification is developed to support each investment approval, and where relevant the Regulatory Investment Test for Transmission is conducted, as part of business as usual once these investment needs are confirmed.

Asset Development

Powerlink's forecasting approach is tailored across three stages of development:

Assets under construction – projects that have already received full financial approval consistent with Powerlink's corporate governance framework.

Confirmed investment need – projects that are not yet approved but the need for investment has been confirmed and options are being assessed in preparation for seeking project approval.

Future investment needs – investment needs that are not yet confirmed or ready to seek project approval, but are expected to be required in the future.

Top-Down Forecasting

Powerlink will adopt a mix of top-down forecasting methods that rely on historical information and established trends to forecast future investment needs. This approach is proposed as specific project details are not ordinarily available years in advance and, as much of our capital expenditure is for reinvestments and other recurring projects, we are able to use predictive modelling or trend analysis techniques effectively.

For future network reinvestment forecasts we will use the AER's Replacement Expenditure (Repex) Model. The Repex Model provides a forecast of asset reinvestment quantities. We used this approach to develop our 2018-22 Revenue Proposal capital expenditure forecast and devoted considerable time and effort to ensure the input parameters properly reflected our condition drivers and asset management practices.

A more detailed overview of the Repex Model and its application is included in our Expenditure Forecasting Methodology.

Recurring non-network capital expenditure, such as some IT investment and other support the business needs, will be based largely on historical trends.

In adopting a hybrid forecasting methodology we recognise that for some types of assets the forecast capital expenditure will require a merging of top-down and bottom-up forecasts. In our 2018-22 Revenue Proposal, we developed an approach for merging already approved capital expenditure projects with our top-down forecast. We will extend this approach to also incorporate those projects which are not yet fully approved but which form part of the bottom-up forecast.

Bottom-Up Forecasting

The bottom-up forecasting method involves developing specific justification, including risk/cost analysis where appropriate, a scope and an estimate for each proposed investment. Projects that are approved at the time we submit our Revenue Proposal (January 2021), load-driven projects, projects involving power transformers, large value projects and/or projects to meet the need for system services such as system strength will be forecast using the bottom-up forecasting method.

> Powerlink is targeting to adopt this method for at least 60% of its total forecast capital expenditure.

Contingent Projects

Projects where the timing of the need is uncertain and the scale of investment is significant are not included in the ex-ante capital expenditure allowance. These may include projects identified in AEMO's Integrated System Plan as well as some augmentations and reinvestment projects.

We will use a bottom-up approach to identify such potential investments, detailing the triggers for which they would be required and providing an indicative cost of each investment. Any contingent project included in the Revenue Proposal would be subject to detailed justification processes, including a Regulatory Investment Test for Transmission where relevant and formal assessment by the AER, prior to it being commenced.

For more information about Powerlink's expenditure forecasting methodologies (including operating expenditure), refer to Powerlink's *2023-27 Revenue Proposal Expenditure Forecasting Methodology.*