AEMO

ROADMAP FOR THE ENERGY TRANSITION

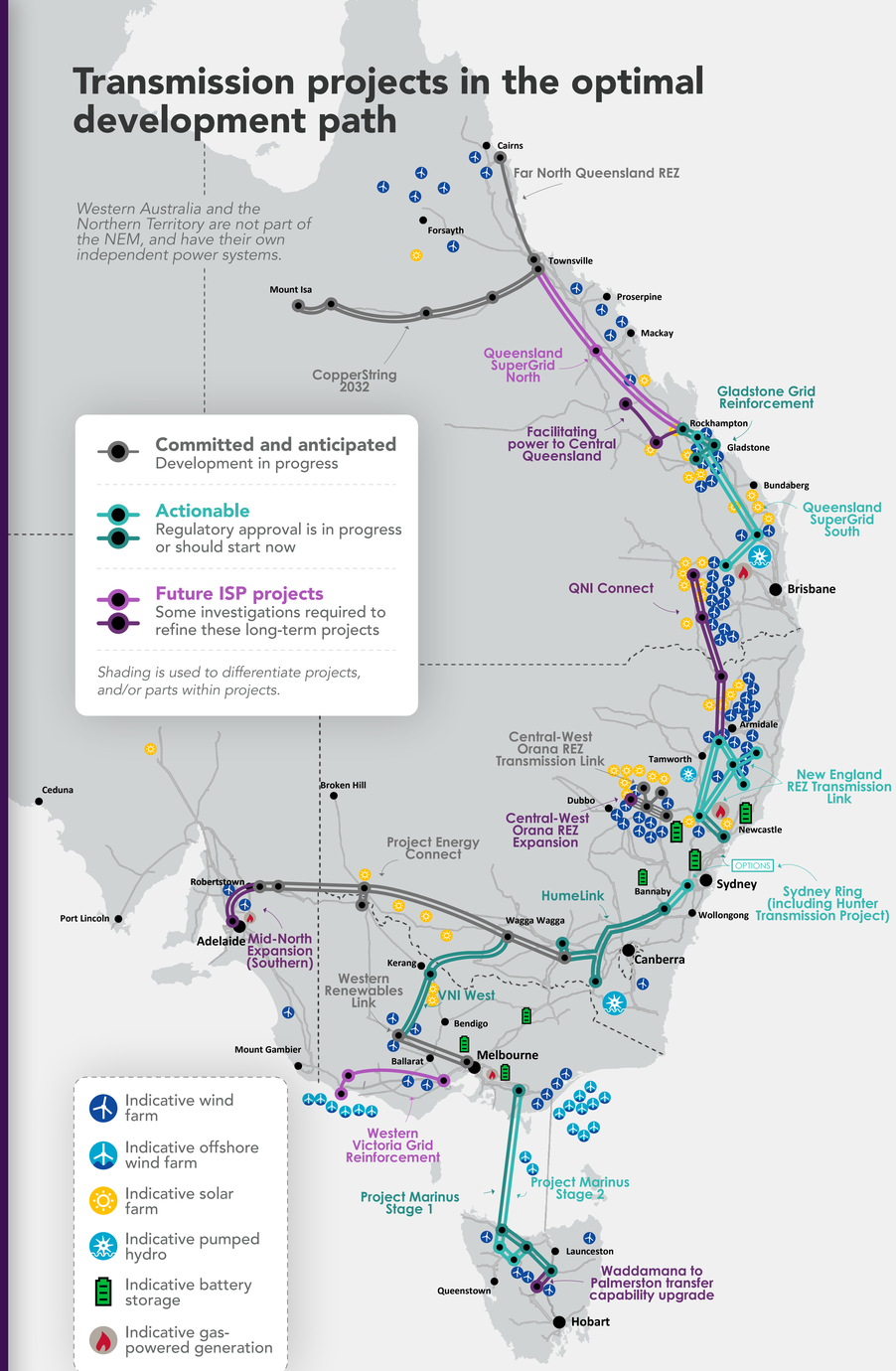
AEMO's Draft 2024 Integrated System Plan

This document provides an overview of the Draft 2024 Integrated System Plan (ISP), which is a roadmap for the energy transition for the next 20 years and beyond.

About us: AEMO is the independent energy market and system operator and system planner for the National Electricity Market (NEM) and Western Australia's Wholesale Electricity Market (WEM). We are a not-for-profit company, with a membership of state and federal governments (60%) and energy industry members (40%).

For more information: www.aemo.com.au

Transmission projects in the optimal development path



About the ISP

The energy transition is well underway, and AEMO's ISP outlines the changes needed to the NEM to continue delivering secure, reliable, and affordable electricity for millions of Australians.

Published every two years, the ISP details what, when, where, and how much electricity transmission, generation and storage is required in the NEM. This assists governments and industry to plan and invest to meet people's current and future energy needs as Australia transitions to a net-zero economy by 2050.

Developed in extensive consultation with consumers, policy makers, regulators, industry representatives and other groups, it is informed by a broad variety of technical expertise, voices and views.

The ISP is designed to ensure benefits to all who produce, consume and transport electricity in the NEM.

Key facts and figures

Household and business electricity consumption from the grid is **forecast to nearly double by 2050**.

With coal expected to retire faster than currently announced, the NEM is forecast to need a **seven-fold increase** in large-scale wind and solar generation by 2050.

As the energy transition brings both opportunities and challenges, listening and responding to the **voices, needs and concerns of consumers and local communities will be essential**.

It also requires building close to **10,000 km of new transmission lines and upgrades to existing networks by 2050** to connect new generation across the power system.

Delivering the transmission projects identified in this plan is expected to avoid $17 billion in additional costs to consumers if those projects were not delivered.

Storage capacity
to increase significantly
Batteries, virtual power plants, pumped hydro

NOW	2030	2050
3 GW	19 GW	57 GW

Grid-scale wind and solar
to increase 7-fold

NOW	2030	2050
19 GW	57 GW	126 GW

Distributed solar PV
to increase 4-fold
Rooftop solar, other distributed solar

NOW	2030	2050
21 GW	36 GW	86 GW

Electricity consumption from the grid
to nearly double

NOW	2030	2050
174 TWh	202 TWh	313 TWh

Gas-powered generation
to increase
While current mid-merit plants will all retire within that period

NOW	2050
11 GW	16 GW

Coal generation
to be withdrawn
Capacity to be retired by:

2030	2050
46%	100%