

The Wholesale Electricity Market

The Wholesale Electricity Market (WEM) operates across the Western Australian (WA) South West Interconnected System (SWIS), enabling the buying and selling of wholesale electricity.

Electricity production is matched to electricity consumption, ensuring supply and demand are balanced at all times to maintain system security and reliability.

The WEM comprises market participants that operate facilities such as coal and gas-fired plants, renewable generators (solar and wind), and firming technologies such as energy storage systems (batteries).

Other market participants include demand side providers (load or a group of loads), which can reduce consumption to alleviate the need for additional electricity and maintain the supply-demand balance, as well as large customers and retailers who purchase electricity from the wholesale market.



SWIS facts



Supplies electricity from 72 registered generation facilities to 1.2 million homes and businesses.



More than 17 terawatt (TW) hours of electricity is traded and used annually through the SWIS.



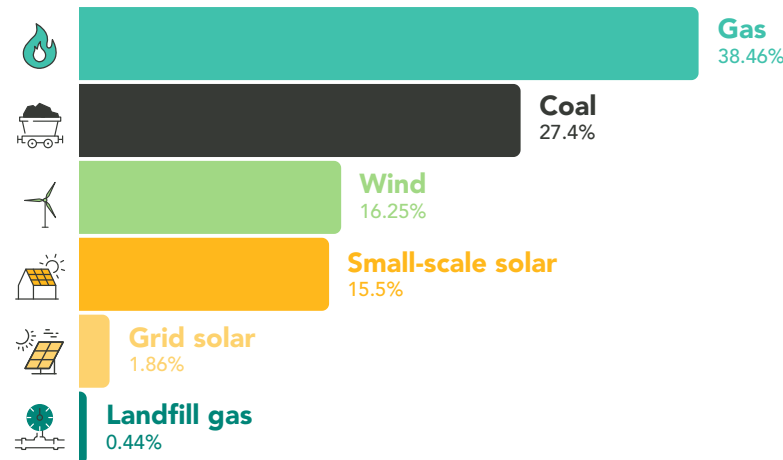
Collectively, rooftop solar is the largest generator in the SWIS. It is currently installed in more than one-in-three households.



The SWIS covers 260,000 km and includes 7,750 km of transmission and 93,350 km of distribution powerlines, owned and operated by Western Power.

The generation mix

Annual generation by fuel type (1 July 2022 – 30 June 2023)



SWIS RECORDS

Maximum demand record 4,233 MW (18 Feb 2024)

Minimum demand record 595.1 MW (25 Sep 2023)



Driven by mild weather and rooftop solar generation, which reduces demand for energy from the grid.

GERALDTON

KALGOORLIE

PERTH

MANDURAH

BUNBURY

ALBANY

WA's energy transition



A decade ago, 90% of electricity through the SWIS was supplied by burning coal and gas.

Today, wind and solar generation account for around a third of our annual electricity supply, peaking at about 84%, at times.

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%).

More info: aemo.com.au/about/who-we-are