

# NETWORK VISION

The world is changing rapidly. The energy supply industry we operate in is undergoing transformative change, which hinges on three key uncertainties:



**Changing electricity consumption patterns**



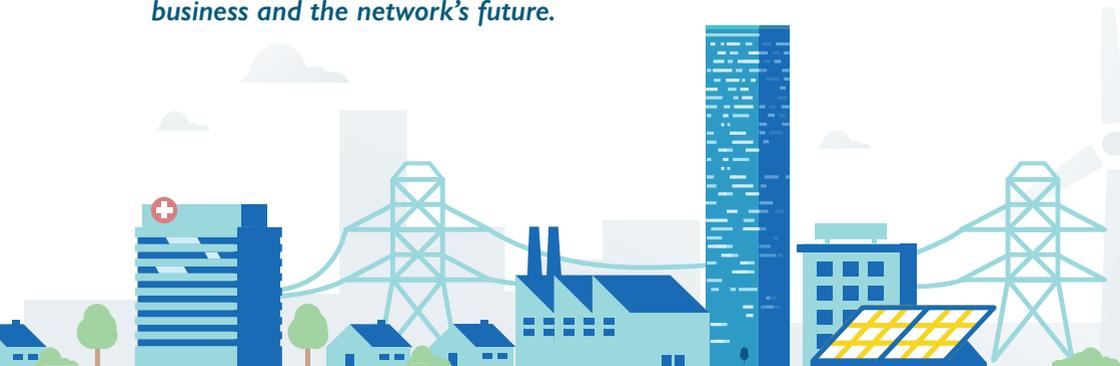
**A lower carbon future**



**Decentralised energy sources**

The way our customers access and use energy is at the forefront of this transition. Because of this, it's important we understand the services our customers value so we can develop a sustainable transmission network for the future.

*Together with our stakeholders, customers and employees, we've developed our Network Vision. It will help us shape our business and the network's future.*



# FUTURE SCENARIOS

We've explored how external trends will affect our customers and network, and clustered them into themes. By analysing these themes, we've identified which ones are the most uncertain and will have the most impact. These key uncertainties (decarbonisation, decentralisation and changing electricity patterns) have become the framework we use to identify a plausible range of future scenarios for the electricity supply industry.



## 1. Prosumer-led market

### *Consumer appliance symbiosis*

Residential and commercial prosumers (producer-consumer) embrace increasingly cheaper technology such as batteries and electric vehicles, which play a greater role in the electricity industry.

## 2. Community-based power

### *Wireless reliability*

Consumers in smaller communities generate their own electricity and are largely energy self-sufficient.



## 3. Renewable super grid

### *New and beyond*

As fossil fuel generation retires and reaches end of life, a rush of renewable generation connects to the network, supporting energy-intensive industry.



## 4. An evolving market

### *Technology agnostic*

A slow transition to renewables occurs in response to the gradual retirement of coal-fired power stations.



*We're developing signposts to help us track how future scenarios and trends are progressing. These signposts help us to understand when critical implications may occur and when opportunities may arise.*



# KEY INSIGHTS

Our NetworkVision future scenarios highlight key insights about the drivers we can monitor and the strategic opportunities we can explore. This will help us identify new opportunities, manage future risks and generate strategic possibility and choices. When it comes to energy supply industry transformation, we identified seven key drivers.



## Mobility

- More than just electric cars
- Dependent on international trends
- Impact on Powerlink's load profile



## Network designs and operations

- Data and automation
- Climate change impacts
- Managing a low system strength network



## Industrial and commercial loads

- Need for long-term price certainty
- Impact of industrial automation
- Potential for greater electrification



## Large scale asynchronous generation

- Managing and optimising renewable generation
- Transitioning from traditional generation



## Energy export markets

- Hydrogen export markets
- Interconnection to open up markets



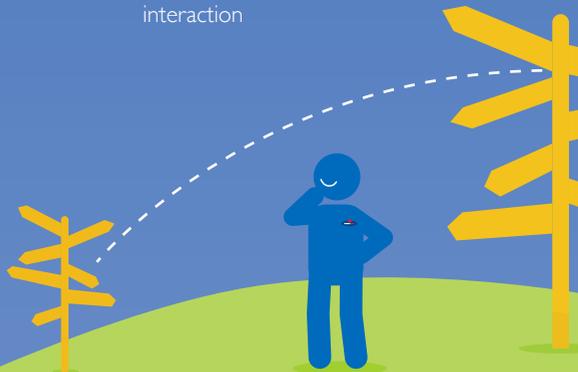
## End use customer expectations

- Technology improvements
- Third party energy providers
- Opportunities for greater affordability and control
- Improving customer interaction



## Distributed energy resources

- Prosumers
- Technology enabling new markets
- Network operations interactions



# THE FUTURE IS EXCITING

The next 30 years are going to be exciting for Powerlink.

Our NetworkVision will ensure Powerlink is well prepared to adapt and participate in the ongoing development and evolution of Australia's energy industry.

It also ensures our business and network is positioned to continue playing a pivotal role in the future of electricity supply for our customers and the Queensland community. It will inform our regulatory proposals, business and network planning, so we can shape and position Powerlink for the future.



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