



# ELECTRICITY NETWORK TRANSFORMATION ROADMAP

Conventional delivery of services is being upended across industry sectors by technology and customer preferences, including newspapers, postal services, telecommunications and taxis.

In what has been called the “disruption generation” there has also been a major shift in the way Australians interact with electricity services and providers.

This evolution of the way customers use, produce and value electricity and energy services will continue well into the future. While these changes challenge traditional business models for the Grid and the established electricity system, they also create opportunities for alternative services which can unlock additional value for customers and businesses alike.

In this context, Australia’s national science agency CSIRO and the peak national body representing gas distribution and electricity transmission and distribution businesses in Australia, the Energy Networks Association (ENA) have partnered to develop an Electricity Network Transformation Roadmap (the Roadmap).

2015-25





# OBJECTIVES

## Roadmap Objectives

In this time of unprecedented change for global energy services, the Roadmap is designed to identify the preferred transition which the electricity network industry must make in the next decade, to be ready to support better customer outcomes under a diverse range of long-term energy scenarios.

By setting out a pathway for the transition of electricity networks by 2025, the Roadmap seeks to position network businesses and the whole energy supply chain for the future, to support the evolving needs of customer, innovate and develop new services that customers value and foster the long-term resilience and efficiency of Australia's energy system.

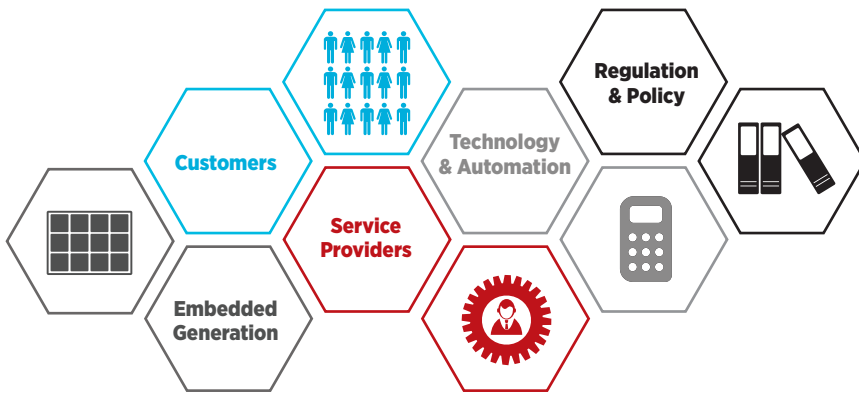
Focused on the 2015-25 decade, the Roadmap development process will involve collaboration with consumer representatives, service and technology providers, policy makers, regulators, and academia. Together, participants in the Roadmap development process will:

- 1 Update and build upon the CSIRO Future Grid Forum (FGF) work completed in 2013, with a specific focus on the 2015-25 decade of industry transformation;
- 2 Identify the new services and technologies that future residential, commercial and industrial customers will value; and,
- 3 Identify the options for regulation, business models and electricity pricing that are best able to support delivery of the future services which customers want, while ensuring an efficient, competitive and economically-robust value chain.

The development process will facilitate co-operation between existing and new market participants. Similar to the CSIRO's Future Grid Forum process, it is also expected that Roadmap collaborators will be exposed to a range of new perspectives and stakeholder relationships likely to prove critical in the advancement of new services that customers will value.



# COLLABORATION WITH PARTICIPANTS



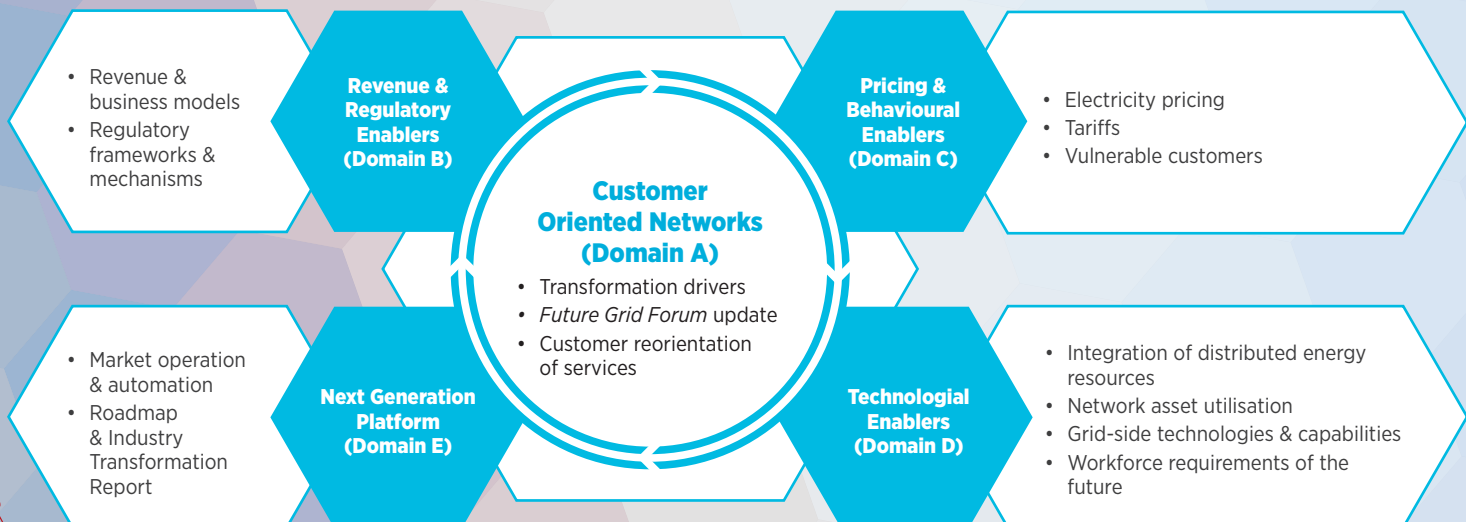
## Engagement

Recognising that the transformation of the energy system can not be 'engineered' by any single player, collaboration with participants across the energy supply chain is critical to the progress of the Roadmap. Stakeholders from service and technology providers, policy makers, regulators, consumer representatives and academia will be invited to shape and contribute to key elements of the work program.

## Roadmap Domains and Work Packages

The Roadmap framework involves five Domains which include a number of Work Packages and rely on significant stakeholder input and collaboration.

The Work Packages will focus on the features, barriers and enablers of the transformation for the electricity system, with each of the individual Work Packages functioning as distinct 'projects or tasks' that will be integrated within the broader Network Transformation Roadmap outcomes.



## Roadmap Progress

ENA and CSIRO will deliver a Roadmap Interim Report in November 2015 that shares early learnings with the community.

This work is intended to inform the 2015-2025 Network Transformation Roadmap that outlines actionable steps and milestones required to develop the operating environment(s) that an efficient and truly customer-oriented electricity future will require.

In support of the final Roadmap described above, the program will also develop a supporting 2015-25 Industry Transformation report that reveals the findings of Roadmap Work Packages which will provide the evidence base for the final Roadmap.

### Roadmap Interim Report

November 2015

- The outlook for energy transformation;
- Reorientation of networks to customers;
- Implications of distributed energy resources;
- Potential business models; and
- Priority directions for policy and regulation

### 2015-25 Industry Transformation Report

October 2016

### 2015-25 Network Transformation Roadmap

October 2016

## Roadmap Design Principles

To deliver the Roadmap, the following five design principles have been identified to inform all activities.

- 1 Create new customer value** through service innovation which anticipate customer-oriented energy futures;
- 2 Proactively inform Australia's electricity system evolution** to unshackle Australia's electricity market framework and its associated regulatory mechanisms, as well as allowing the full utilisation of all existing regulatory provisions;
- 3 Provide network businesses with the capacity and resources to change, innovate and provide leadership** by building organisational capabilities to underpin success in a customer-oriented future;
- 4 Enhance long-term asset productivity** by maximising the productive efficiency of the current electricity network businesses' \$82b asset base for both traditional and new value-creating applications; and,
- 5 Industry collaboration** to facilitate and integrate the parallel projects currently underway in the sector, foster innovation and strategically focus on the key knowledge gaps and barriers impeding timely and orderly network transformation.

## Want to know more?

For more information on the Electricity Network Transformation Roadmap, please contact Dr Stuart Johnston at ENA at [ntr@ena.asn.au](mailto:ntr@ena.asn.au) or 02 6272 1555