

Meeting Date: 1 June 2022

AUTHORITY UPDATE ON FUTURE SECURITY AND RESILIENCE PROJECT

SECURITY AND RELIABILITY COUNCIL

The Authority's strategy team will provide the SRC with an update on the FSR project's various workstreams.

Future security and resilience

Update to SRC

1 June 2022

Context – Energy Transition Roadmap

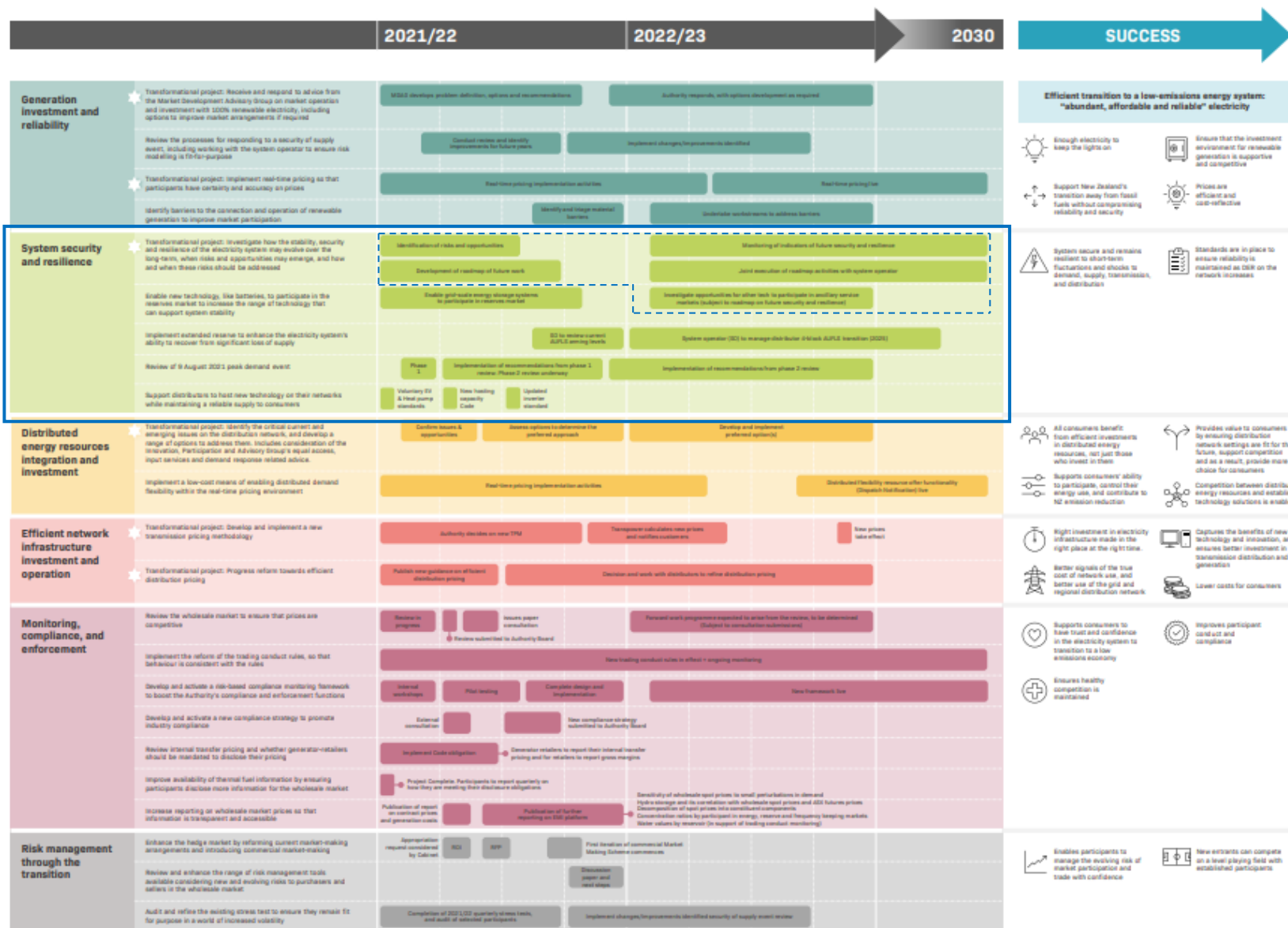


ENERGY TRANSITION ROADMAP

Supporting an efficient transition to a low-emissions energy system

New Zealand has committed to achieving net zero emissions by 2050, with the Government aspiring to achieve 100% renewable electricity by 2030. Heating and transportation in New Zealand will need to be electrified. The significant increase in demand for electricity will require large quantities of new renewable electricity generation, increased use of distributed energy resources, new ways to participate and more participants – changing the dynamics of the electricity system and markets.

As the regulator of New Zealand's electricity system, our work provides an important platform for the country's aspirations. Low-emissions energy is one of our five key strategic ambitions, and we are working to ensure the transition is as efficient as possible while maintaining energy security, system adaptability, and affordable electricity for consumers.



100% renewable electricity by 2030 | Net zero emissions by 2050



Ināia tonu nei:

A low emissions future for Aotearoa

The Climate Change Commission has released its final advice to Government on the steps New Zealand must take to drastically reduce greenhouse gas emissions and address climate change.

The Electricity Authority has a role to play in this shift as it is responsible for the reliability, efficiency, and competitiveness of the electricity system.

We are supporting the transition to an "abundant, affordable, and reliable" supply of renewable electricity so that New Zealanders' lives, prosperity, and environment are enhanced through electricity.

Alignment to Recommendation 20: **Decarbonise the energy system and ensure the electricity sector is ready to meet future needs:**

20.1 Develop and implement a national energy Strategy

20.2 Scale up investment in energy efficiency

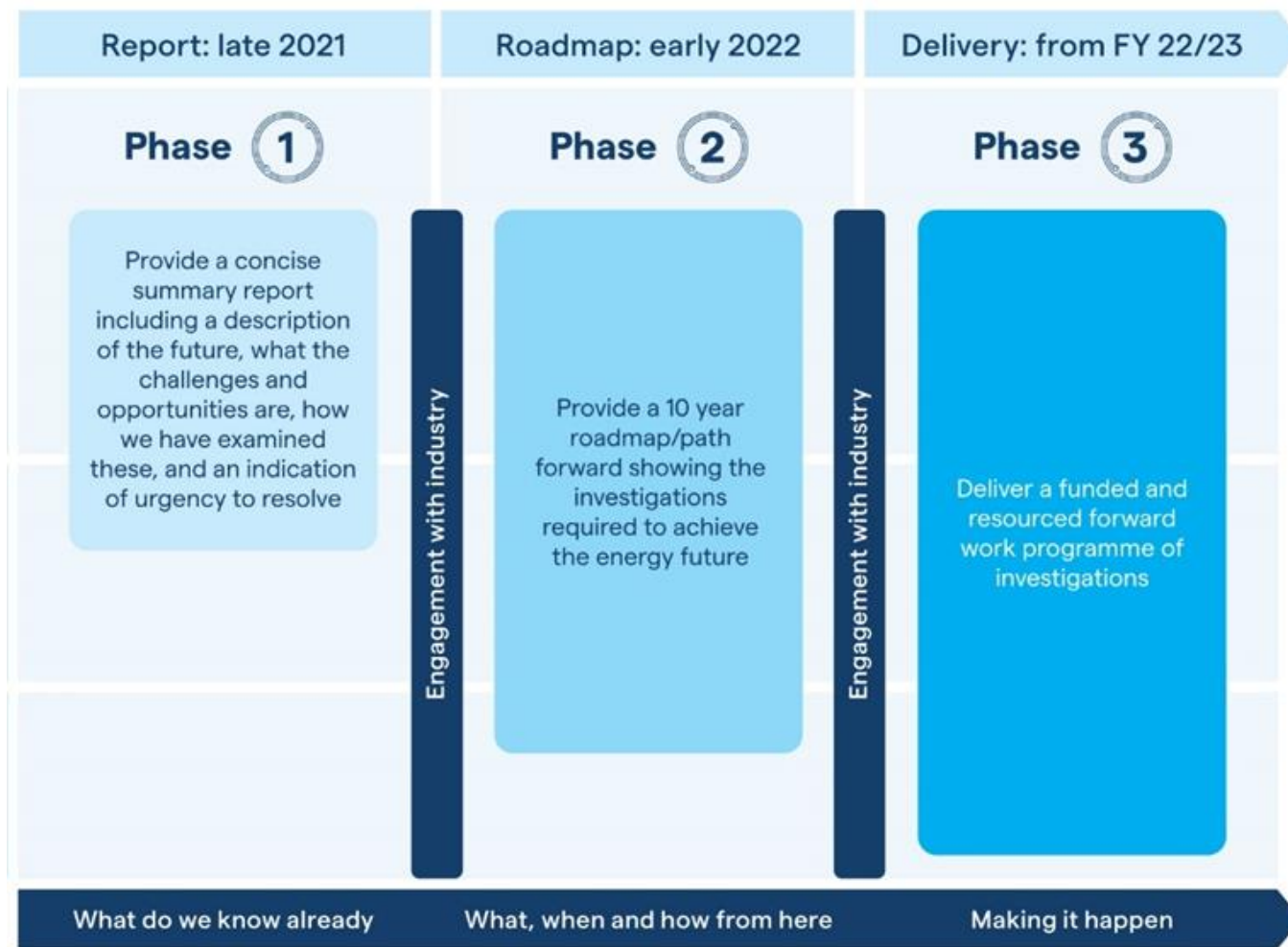
20.3 Support the evolution to a low-emissions electricity system

20.4 Design regulatory settings that meet the needs of diverse communities

20.5 Enable a fast-paced and sustained build of low-emissions electricity generation and infrastructure

20.6 Assess consequences of significant changes in the balance of supply and demand of electricity

Future security and resilience – programme overview



FSR – opportunities and challenges

Opportunities and challenges	Timeframe	Priority
 Enabling DER services for efficient power system operations	3-7 years	● Medium
 Visibility and observability of DER	3-7 years	● Medium
 Coordination of increased connections	0-3 years	● High
 Balancing renewable generation	3-7 years	● Low
 Managing reducing system inertia	7-10 years +	● Low
 Operating with low system strength	3-7 years	● Medium
 Accommodating future changes within technical requirements	0-3 years	● High
 Leveraging new technology to enhance ancillary services	Enduring	● Medium
 Maintaining cyber security	Enduring	● High
 Growing skills and capabilities of the workforce	Enduring	● High

● Rise of Distributed Energy Resources
● Changing generation portfolio
● Foundational opportunities and challenges

The rise of DER

High Priority = already negatively impacting on FSR and/or given level of understanding or effort to address means it needs immediate attention

The challenges of a changing generation portfolio

Medium Priority = no immediate negative impact on FSR but investigation required

Foundational

Low Priority = not likely to impact on FSR however will be monitored for changes in priority/urgency over time

FSR roadmap

