



Energy Transition and Sustainability in Thailand

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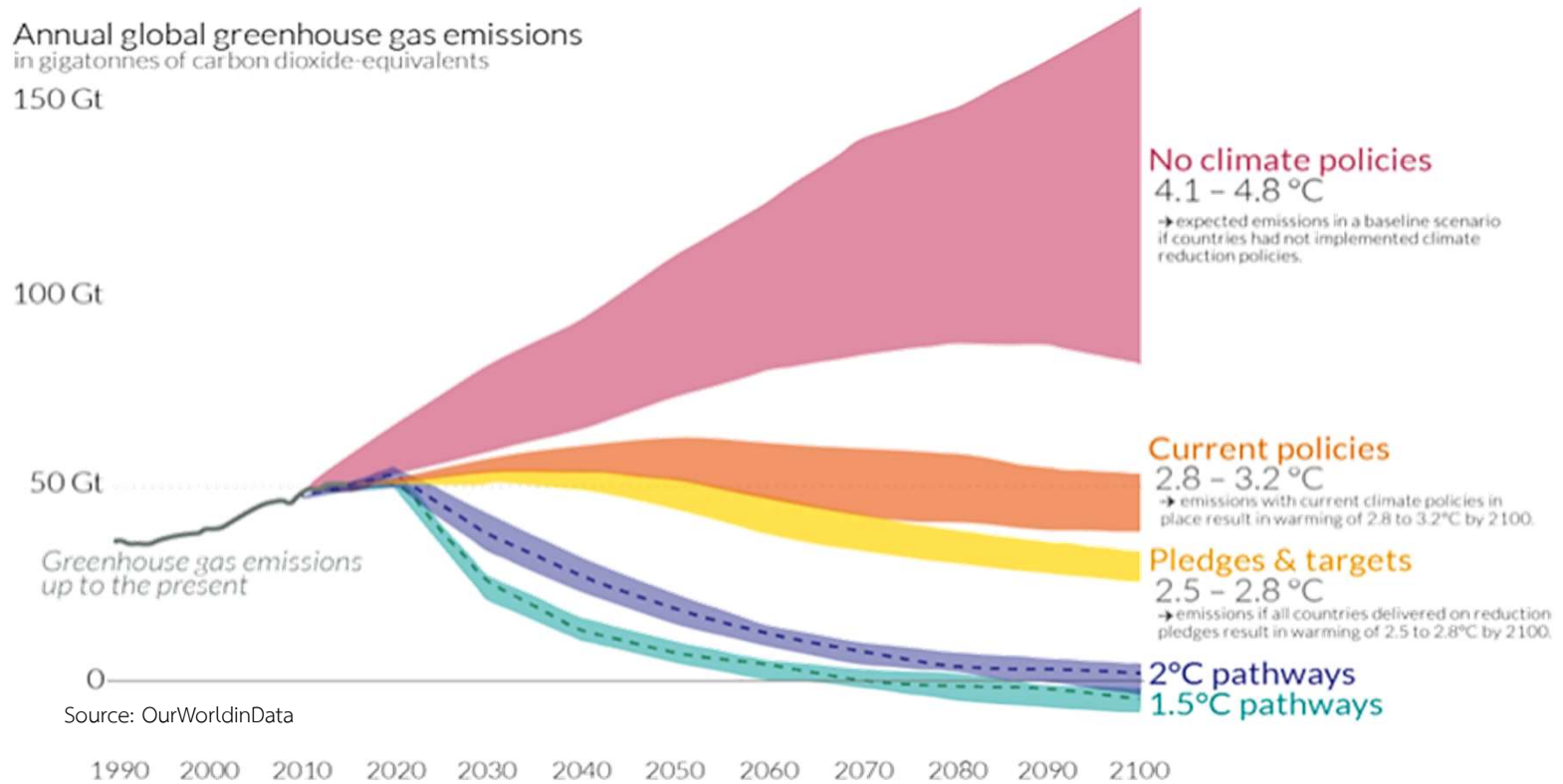
24 June 2022

Thailand's Energy Policy on Energy Transformation

Key Driver's Global Energy Direction

Diving force : 2 Degree Pathway

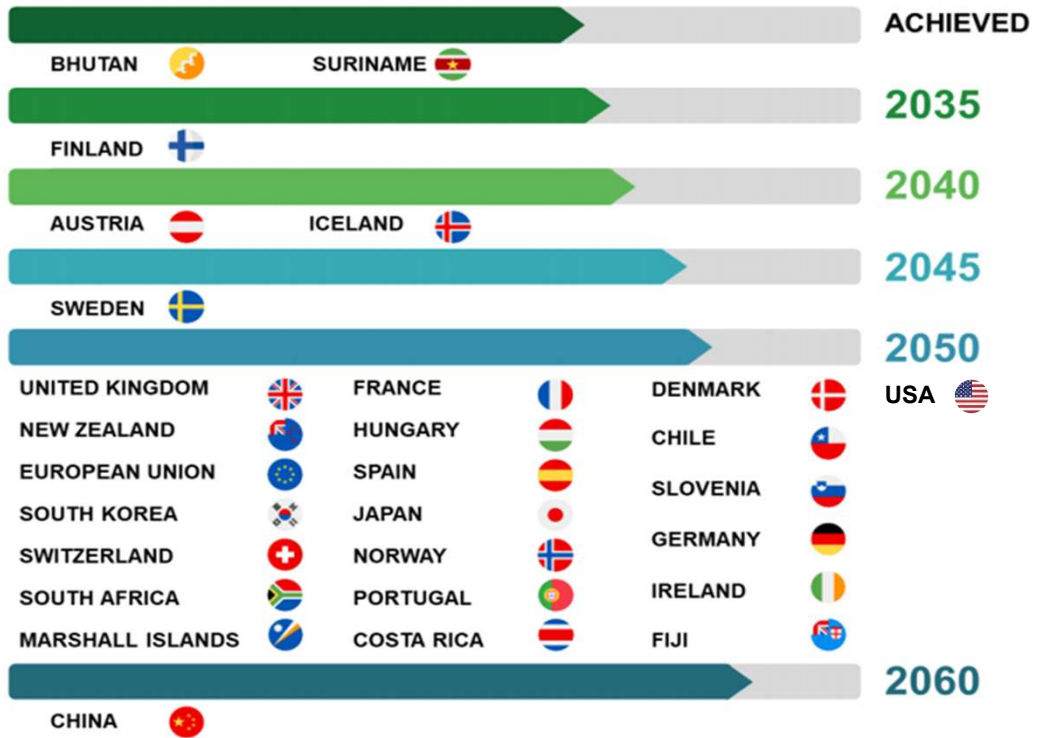
Annual global greenhouse gas emissions
in gigatonnes of carbon dioxide-equivalents



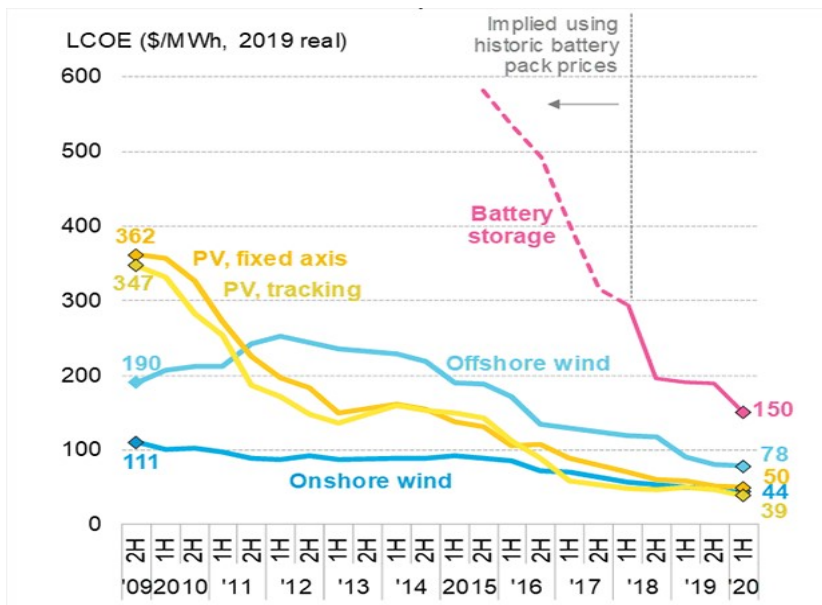
■ ■ ■ Key Driver's Global Energy Direction



NET ZERO EMISSIONS RACE

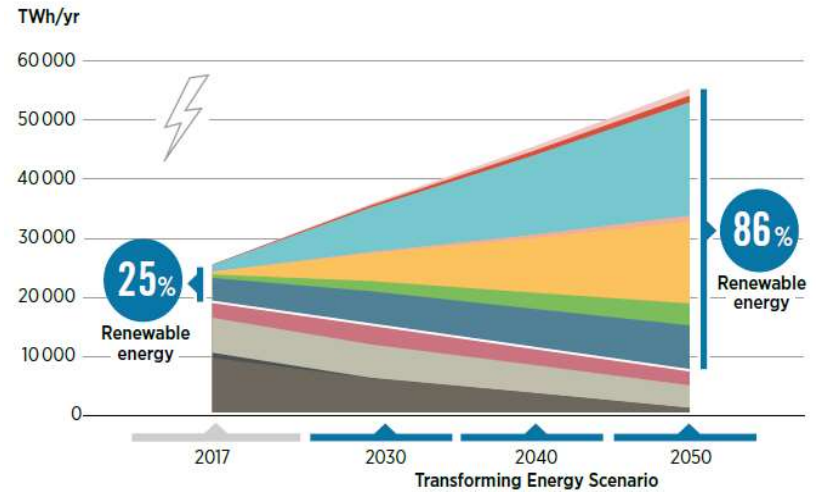


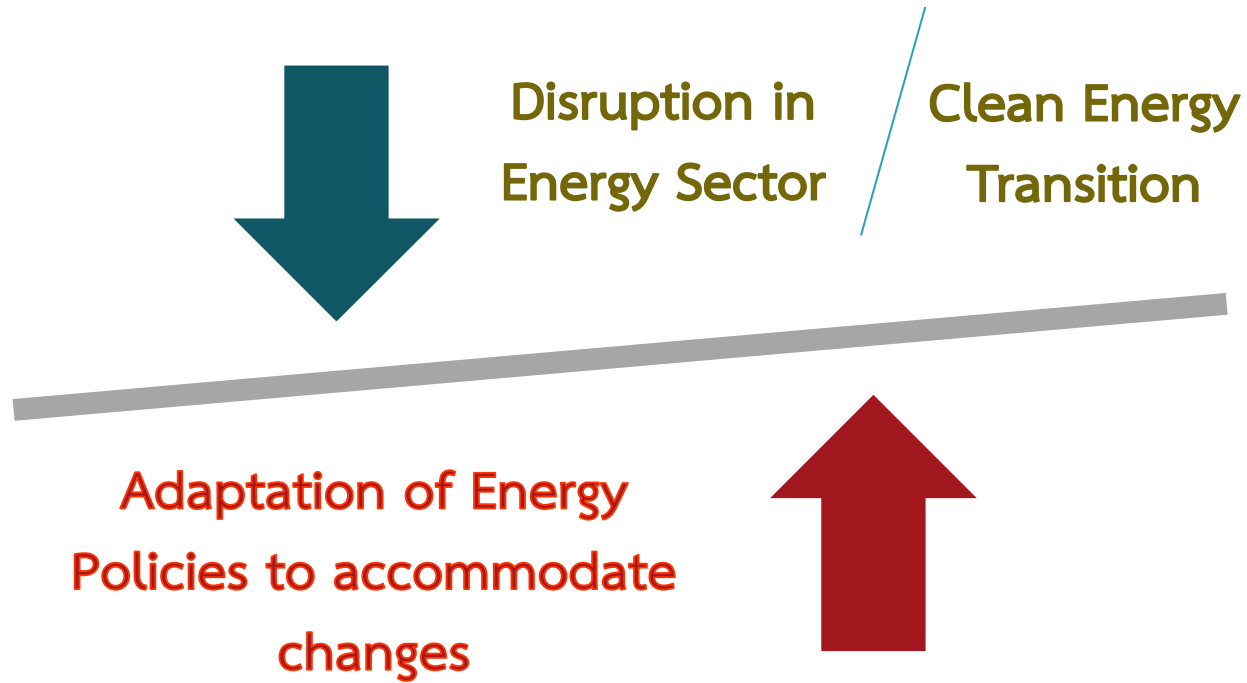
Clean-technology and energy-tech trends



ที่มา : BloombergNEF, 2020

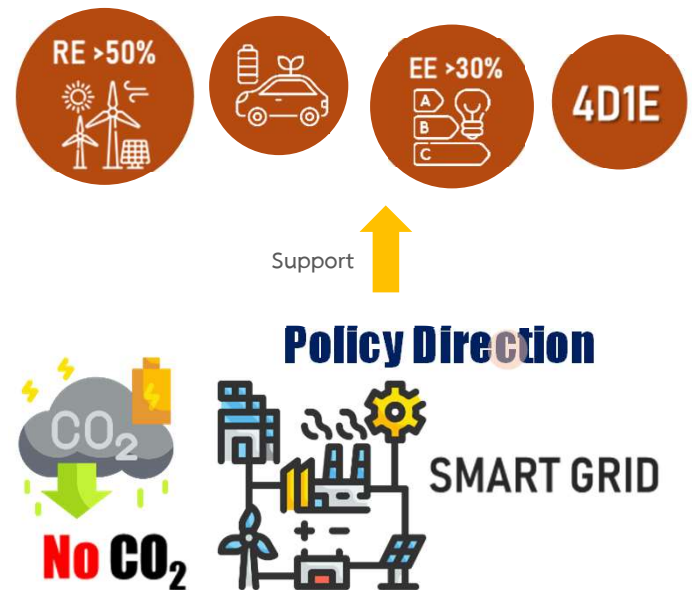
RE trend continue to increase at 2050
: RE Share 86% & VRE Share 61%





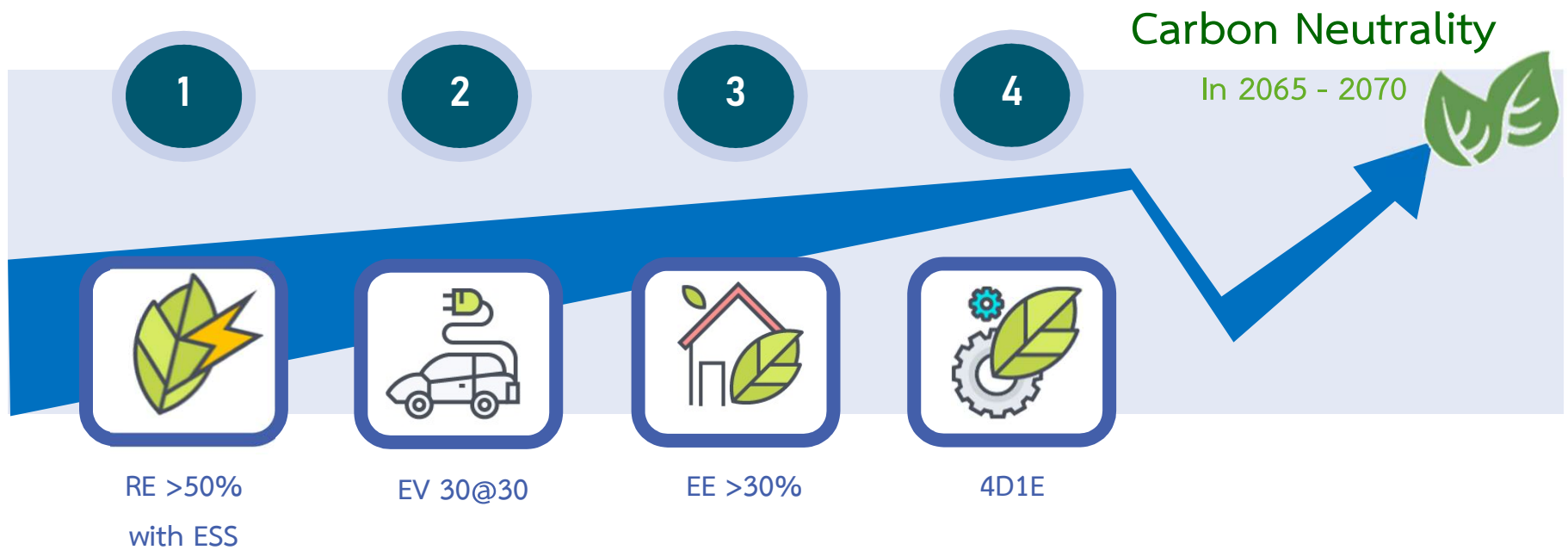
■ ■ ■ National Energy Plan Framework

The National Energy Policy Council (NEPC) has approved the Framework of the National Energy Plan with the goal of supporting Thailand towards clean energy use and reduce carbon emission to net zero carbon emission or carbon neutrality in 2065-2070

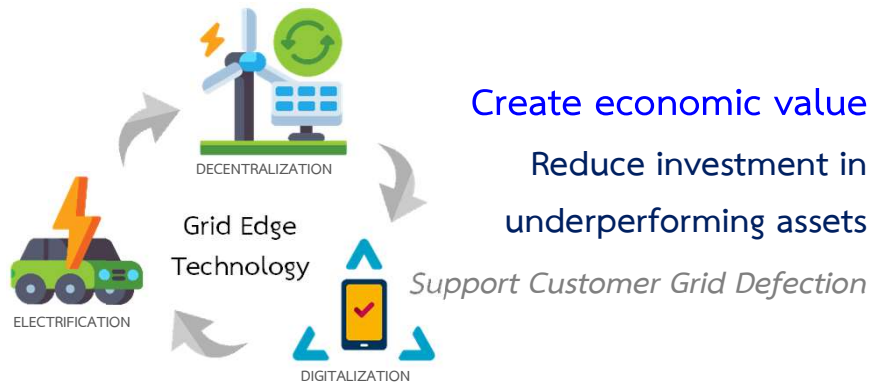


■ ■ ■ National Energy Plan Framework

Policy Direction to National Energy Plan



Benefits of Adapting the Energy Plan to Low Carbon Economy



Create economic value
Reduce investment in
underperforming assets

Increase the competitiveness
of Thai entrepreneurs

Supporting a trade mechanism
through a carbon tax



Increase investment and
employment in the national
economy through the promotion
of clean energy.



Reduce PM2.5

Recover the
economy after
the COVID-19
crisis



Policy and Plan related to Smart Grid

Thailand Smart Grid Development Plans.

2015



Thailand Smart Grid Development Master Plan (2015 – 2036)

2016



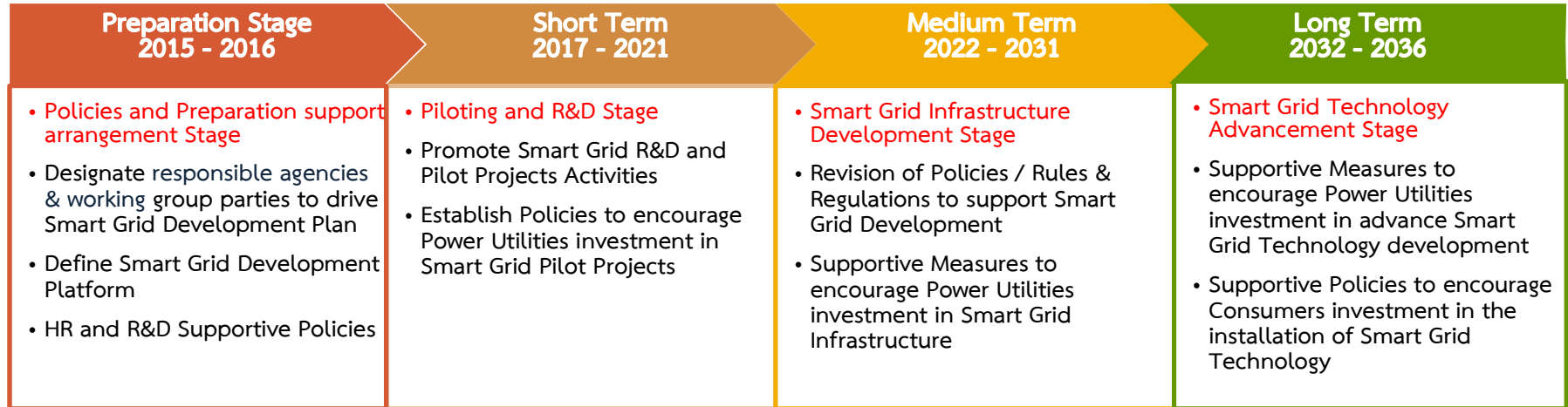
Thailand Smart Grid Action Plan (2017 – 2021)

2022



(Draft) Thailand Smart Grid Action Plan (2022 – 2031)

Thailand National Smart Grid Development Master Plan 2015 - 2036



Current Progress

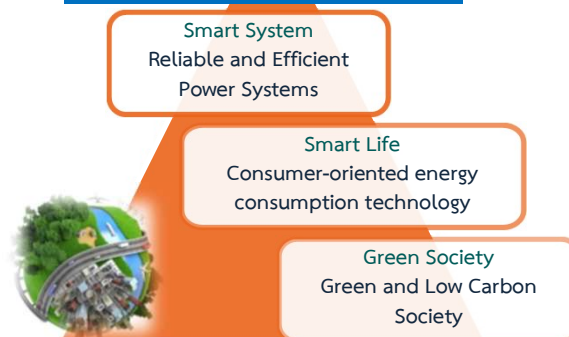


National Smart Grid Development Master Plan 2015 - 2036



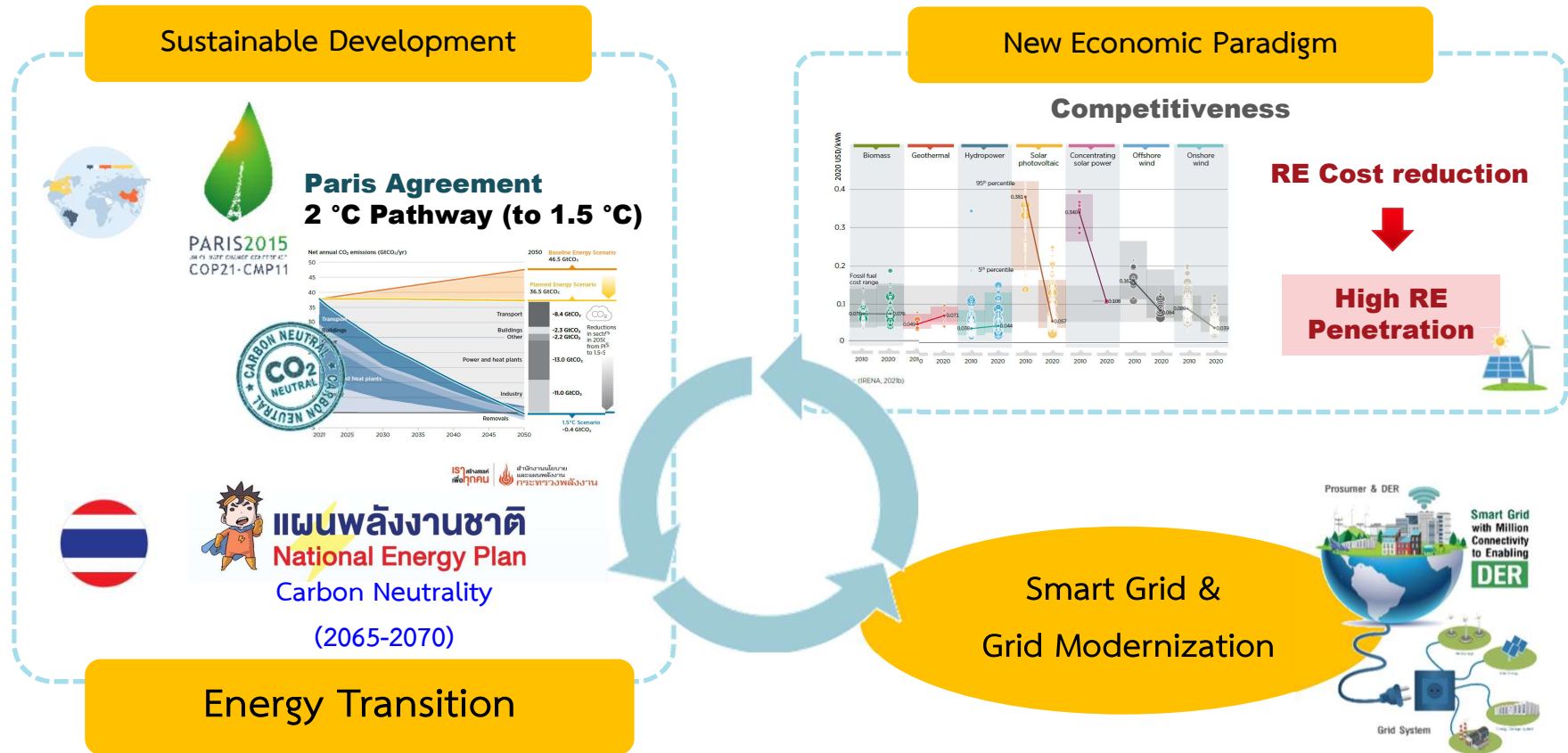
Smart Grid Development Action Plan : Short term 2017-2021

Piloting and R&D Stage

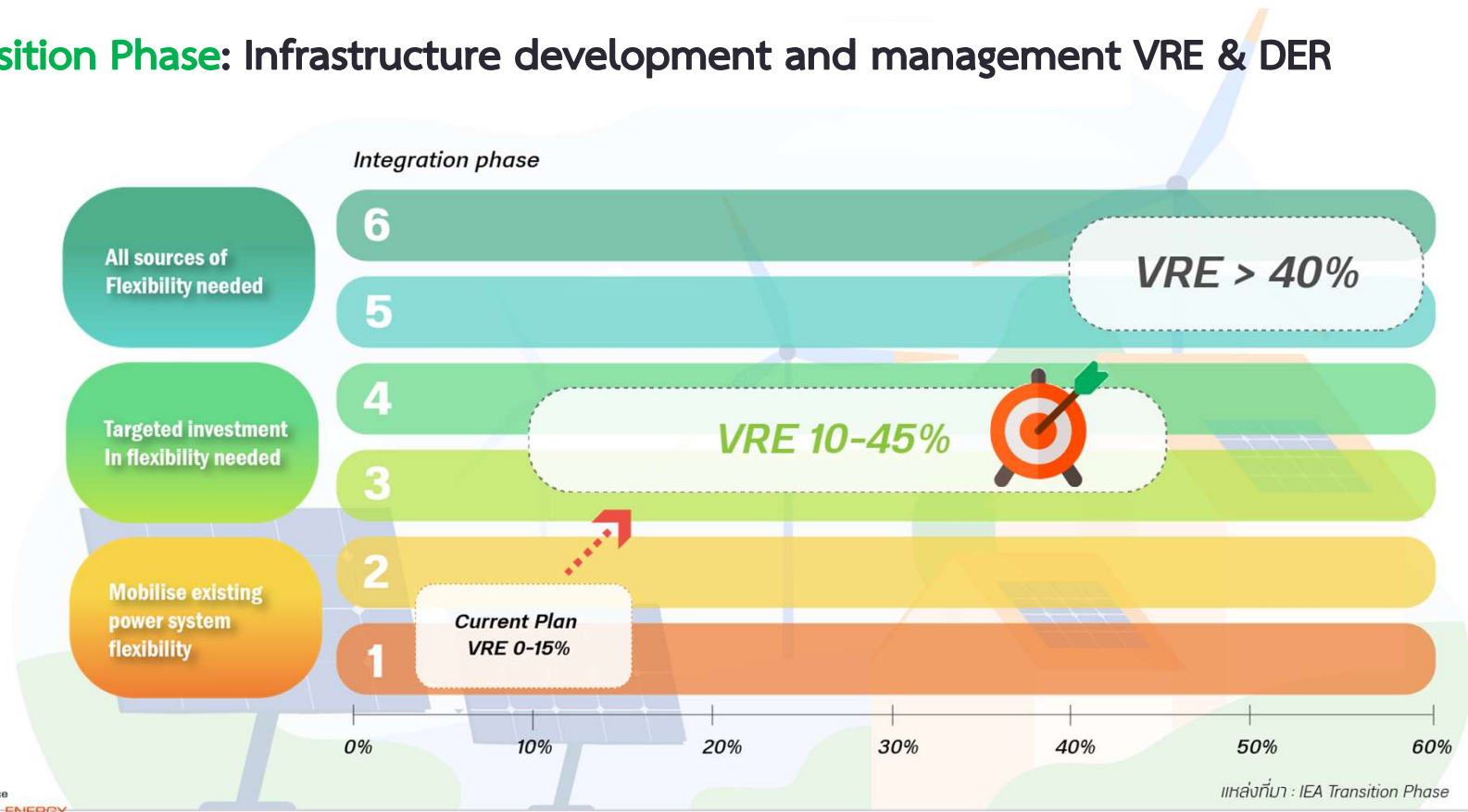


- ▶ Demand Response and Energy Management System
Peak Load Reduction by 350 MW
- ▶ RE Forecast
Able to operate RE Forecast system
- ▶ Micro Grid and Energy Storage
Micro Grid 3-5 locations

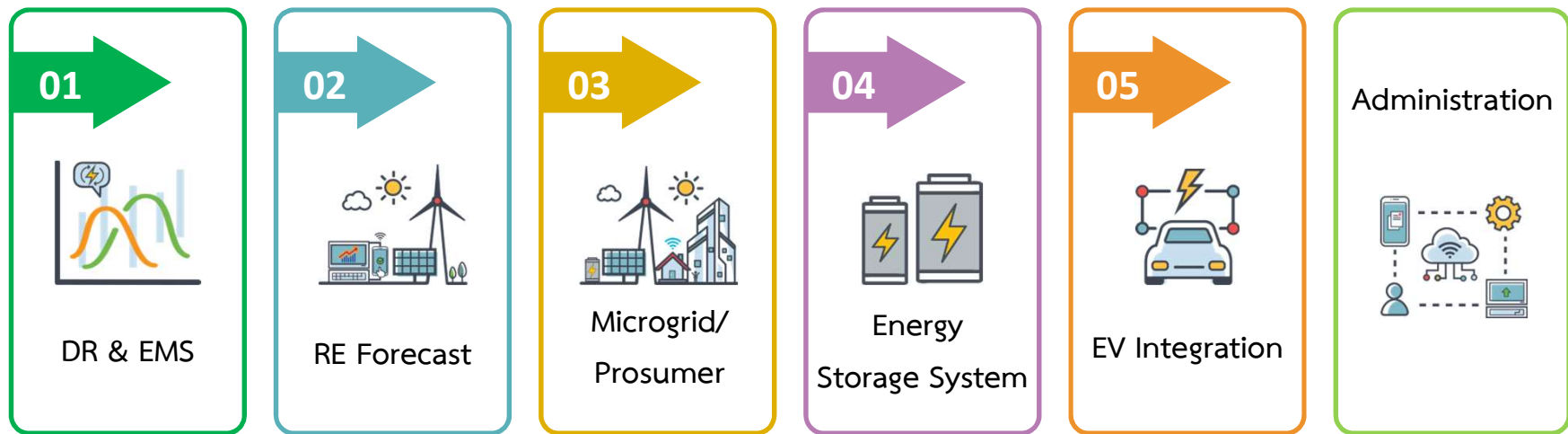
Smart Grid Development Action Plan : Medium Term (2022 – 2031)



Transition Phase: Infrastructure development and management VRE & DER



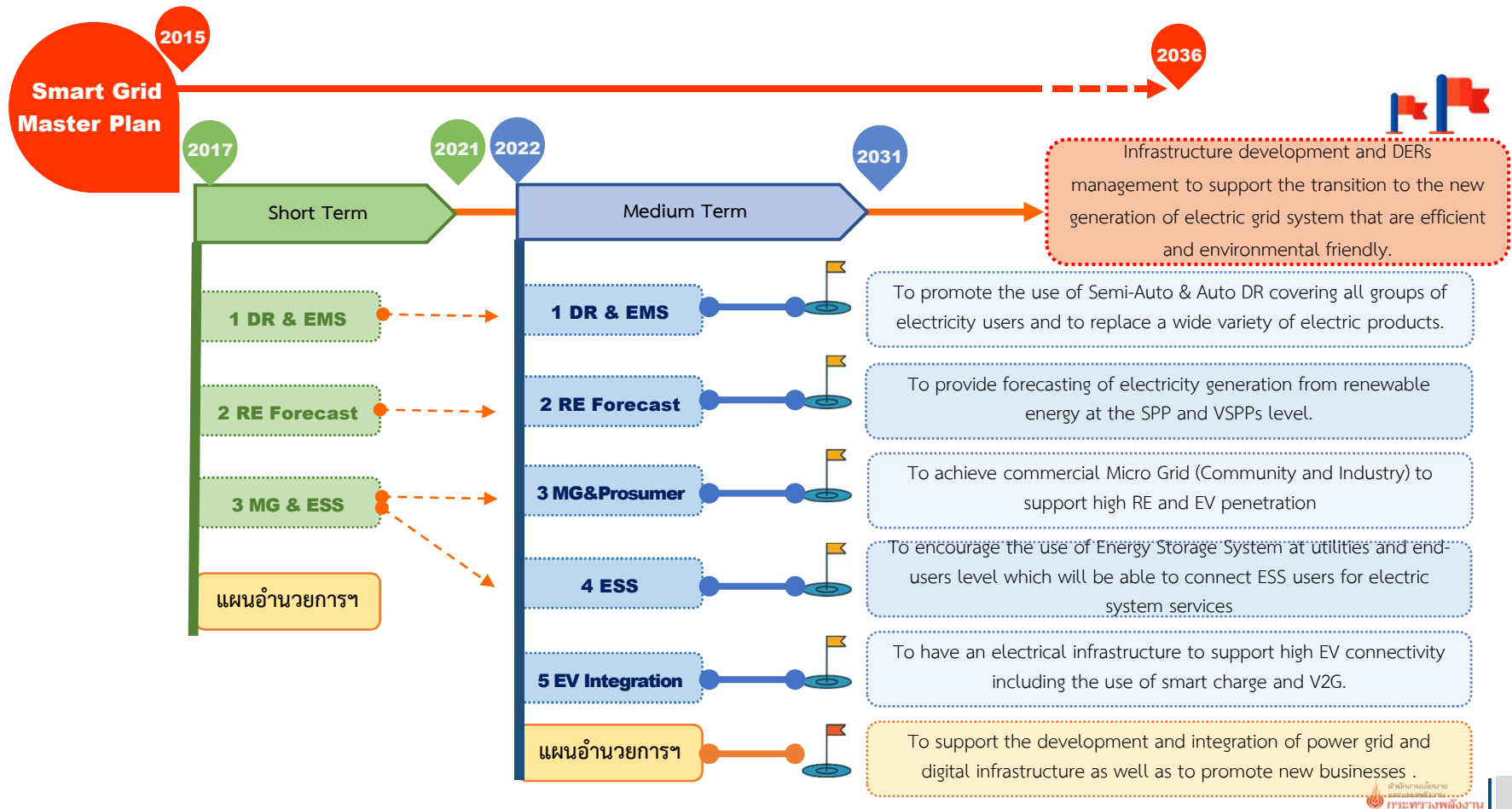
Smart Grid Development Action Plan : Medium Term (2022 – 2031)



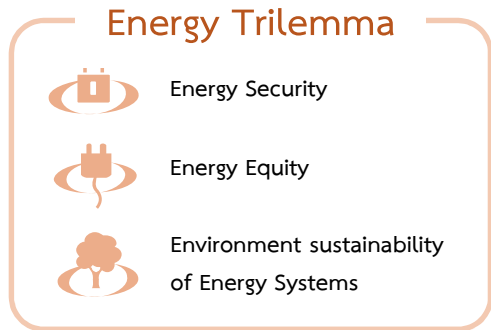
Smart Grid Development Action Plan : Medium Term (2022 – 2031)



Smart Grid Development Action Plan : Medium Term (2022 – 2031)

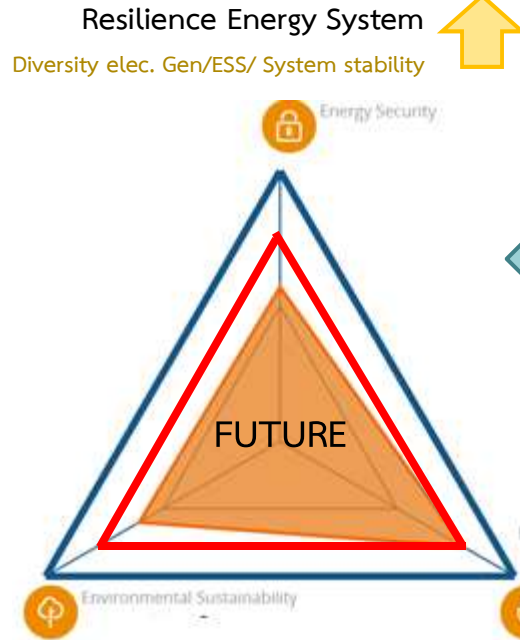


Benefits of Smart Grid Development Action Plan: Medium Term (2022 – 2031)



Decarbonization

- Renewable Energy
- Efficiency of power G, T&D



- Increased Flexibility in Power System
- Energy independence
- Overall Electricity Price Decrease
- Avoid Stranded Asset
- Consumer Energy Bill Saving & Increase Income
- Consumer Empowerment
- Access to “modern” energy
- Affordability of electricity for residents



THANK YOU
FOR YOUR KIND ATTENTION



Energy Policy
and Planning Office

MINISTRY OF ENERGY