

SB64, June 2026

Singapore's Climate Action & Preparing the BTR

Presented by Teng Chu Yu

National Climate Change Secretariat

Contents

1. National context
2. Approach to climate action and progress towards Nationally Determined Contribution (NDC)
3. Our BTR experience and capacity-building support



For Singapore, climate change is an **existential threat.**

**Small, densely
populated
city-state**

**1/3 of land
less than 5
metres above
mean sea level**

**Highly
urbanised
environment**

**Trade-exposed,
with limited
natural
resources**

We are already feeling the impacts of climate change, which will worsen without strong global action.

By the end of this century, Singapore is projected to see...



0.6°C to 5.0°C increase

in average daily mean air temperature



41 to 351 very hot days¹ annually

vs historical 21 very hot days annually



Up to 1.15m increase

in mean sea levels around Singapore



More extreme

rainfall and dry spells



Up to 10% increase

in daily maximum wind gusts²

Source: Singapore's Third National Climate Change Study (V3)

Notes:

¹ Very hot days are defined as days with daily maximum temperature exceeding 35°C, based on the 99th percentile of daily maximum temperature

² Strong wind gusts are often associated with thunderstorms and Sumatra squall lines and can potentially cause substantial damage to Singapore's infrastructure (buildings and roads), uprooting of trees, and threat to the safety of human beings

Our path to net zero is hard, as we are alternative energy disadvantaged



WIND?



Average wind speed in SG:
2 m/s

Minimum wind speed for commercial wind turbines:
4.5 m/s



HYDROPOWER?



Narrow tidal range

No river system with fast flowing water



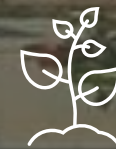
GEO THERMAL?



No adequate near-surface underground geothermal energy sources



NUCLEAR? BIOMASS?



Small land size requires careful consideration for safe deployment of nuclear energy

Also limits domestic biomass growth



SOLAR?



Our best option, but limited by land size

Technical potential for solar deployment by 2050: **<10% of total electricity demand**

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To respond holistically to climate change, we adopt a coordinated, whole-of-government approach.

Inter-Ministerial Committee on Climate Change (IMCCC)

Chaired by Deputy Prime Minister and Minister for Trade and Industry, with the Ministers of Sustainability and the Environment, Foreign Affairs, Manpower, National Development, Transport and the Prime Minister's Office as members

IMCCC Executive Committee

Chaired by Head of Civil Service

- Set national ambition for climate action, develop cross-cutting policies and levers, and manage trade-offs

Carbon & Energy Transition Working Group

Oversees the development and implementation of **mitigation** measures

Economic Transition Working Group

Oversees the transition to a **low-carbon economy**, and develops new green sectors and jobs

Resilience Working Group

Oversees Singapore's strategy to **adapt** to risks posed by physical climate impacts

Sustainability & Engagement Working Group

Promote resource circularity and a **culture of sustainability** within all sectors of society

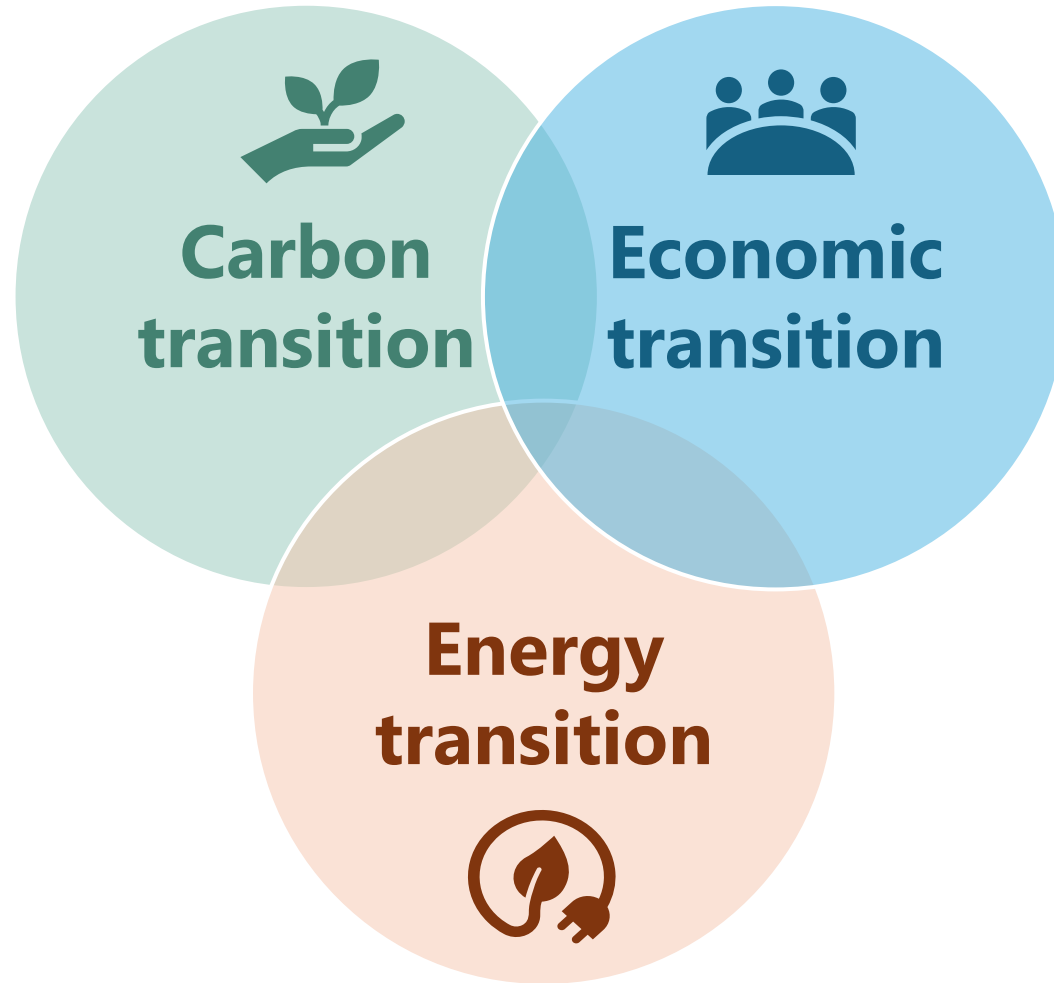
Measurement, Reporting & Verification (MRV) Task Force

Oversees the **Interagency Working Group (IAWG) on NC & BUR**



We need a triple transition to thrive in a low-carbon world.

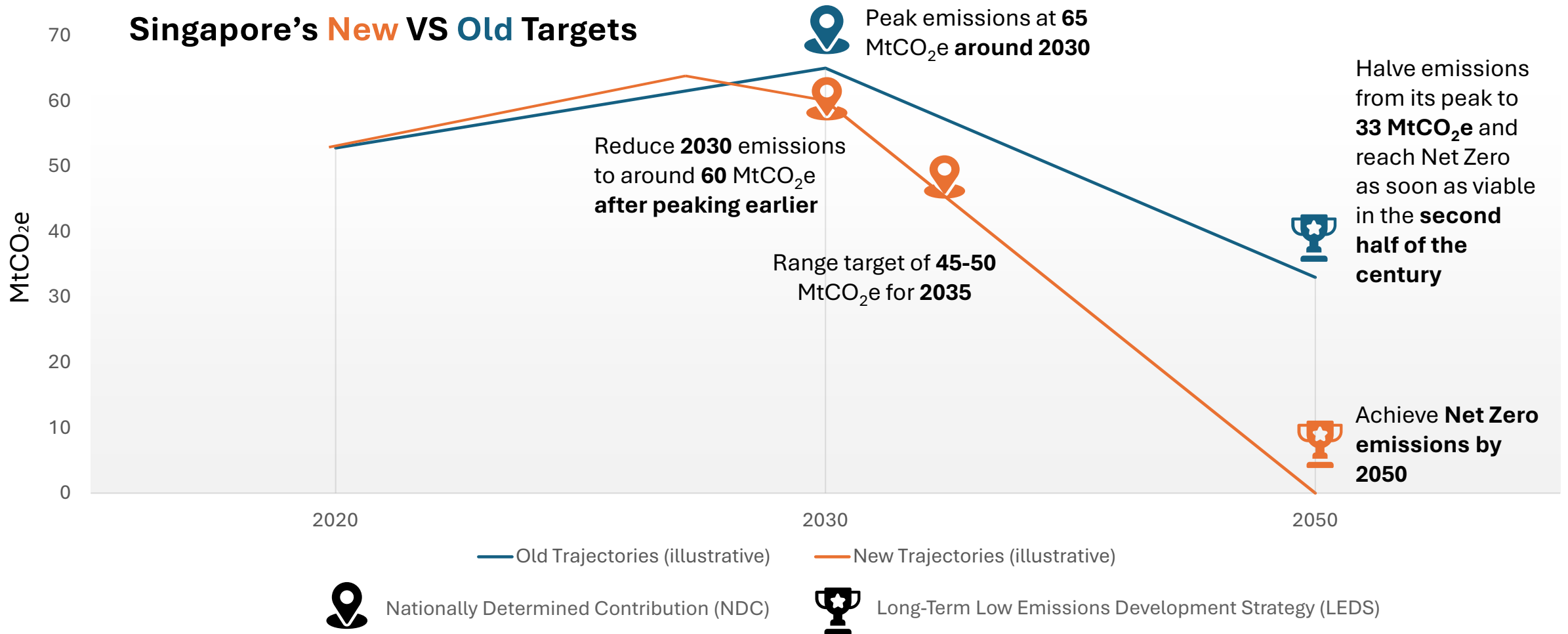
Reduce primary emissions to net zero across all sectors



Prepare for climate risks and opportunities and ensure that our economy remains competitive in a low-carbon future

Chart a pathway to a net zero grid while ensuring energy resilience

We raised our ambitions as part of our commitment to climate action.

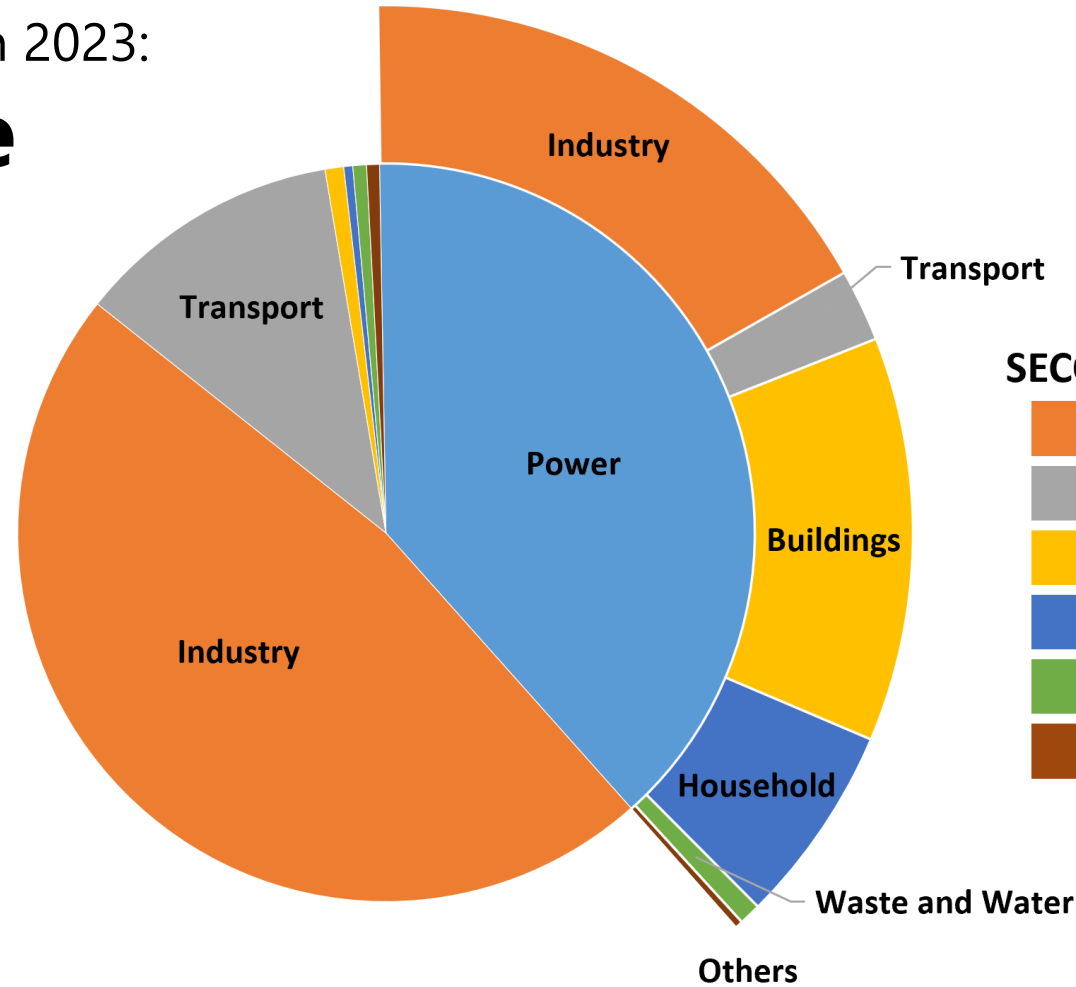
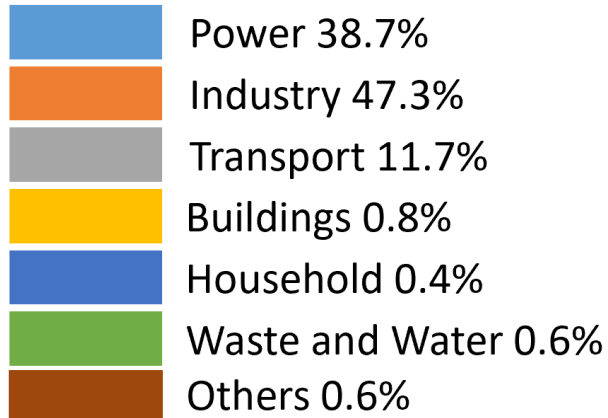


Achieving our target requires collective action.

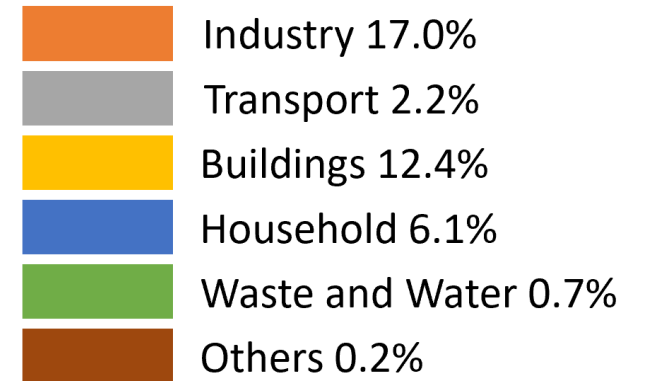
Singapore's total emissions in 2023:

55.5 MtCO₂e

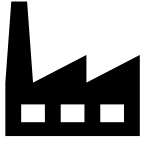
PRIMARY EMISSIONS



SECONDARY EMISSIONS

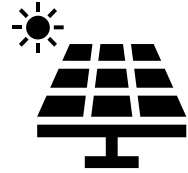


We are decarbonising all sectors of our economy and society



Industry

- Energy Efficiency Grant (Base Tier) extended from 2026 to 2028 and expanded to all sectors
- Introducing law that will require data centres and cloud service providers to meet power efficiency standards



Power

- Solar – 3GWp by 2030
- Electricity imports – 6GW by 2035



Buildings

- Green Building Masterplan – 80% green buildings by Gross Floor Area by 2030
- 66% green buildings as of 2025



Transport

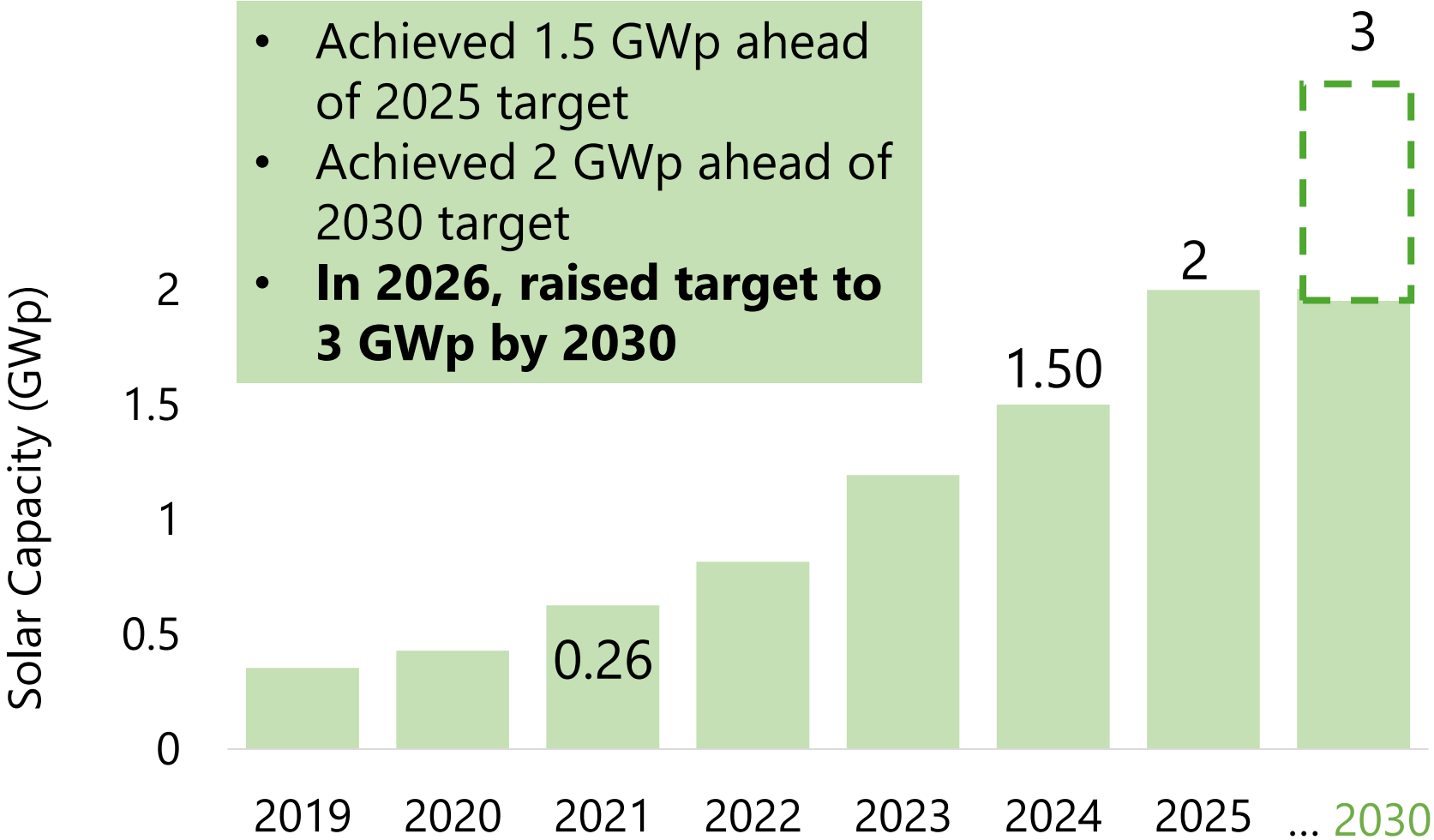
- 100% cleaner energy vehicles by 2040
- 60,000 EV chargers by 2030
- ~1,300 km of cycling paths islandwide by 2030



Households

- Mandatory Energy Labelling Scheme (MELS) & Minimum Energy Performance Standards (MEPS) for appliances

We have made good progress on key measures that we have greater control over, such as **Solar Energy** ...

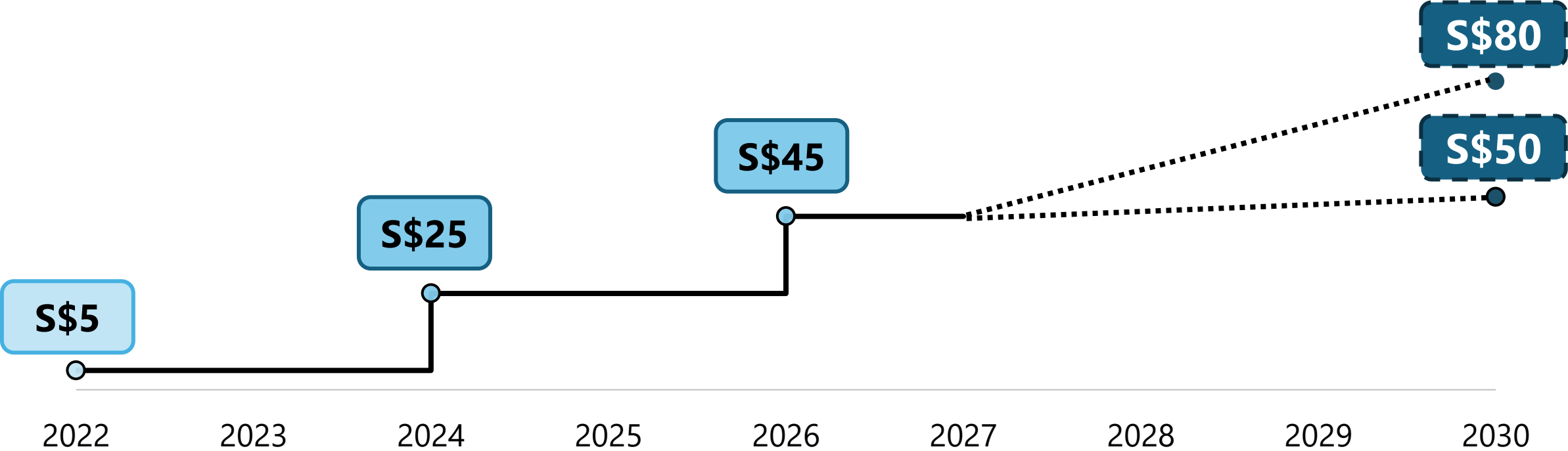


IN 2022...
Commissioned 285MWh energy storage system facility to address solar intermittency

TODAY...
One of the most solar-dense cities in the world

Source: EMA

We raised carbon tax to S\$45/tCO₂e in 2026, with a view to reach S\$50 – S\$80/tCO₂e by 2030.



First country in Southeast Asia to implement carbon tax in 2019

Currently covers ~70% of emissions*

Acts as price signal for economy-wide decarbonisation

*80% including fuel excise duties

We are casting our net wide and exploring all viable solutions, including those that are technologically nascent



Launched 300MW **biomethane** sandbox in 2025, to catalyse market development and test commercial viability and operational frameworks



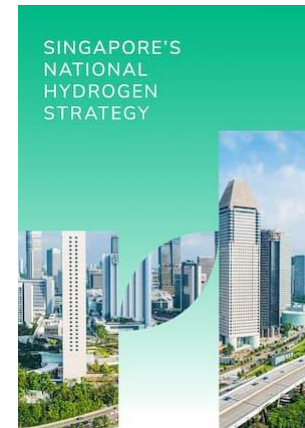
\$16m study commissioned on Singapore's **deep geothermal potential** for power generation



Signed 30-year "123 Agreement" with US to support capability development on **advanced nuclear energy technologies**



Exploring **CCUS** solutions (e.g., use of captured CO₂ to produce useful chemicals) under Low-Carbon Energy Research (LCER) Programme, CREATE Decarbonisation programme



Published Singapore's National **Hydrogen** Strategy in 2022; embarking on ammonia pathfinder project for power generation and marine bunkering

The green transition also presents opportunities for Singapore-based businesses, both domestically and in the region

~**US\$5 trillion** addressable market size for green businesses in Asia by 2030, in...



Transport
\$1 trillion



Power
\$650 billion



Water
\$500 billion



Buildings
\$500 billion



Hydrogen
\$400 billion



Consumer
\$300 billion

Source: McKinsey, 2022

Served by Singapore as a financial, trading and innovation hub...



Green Finance

>S\$164 billion (US\$128 billion) green, social, sustainability, and sustainability-linked loans issued by Singapore companies from 2020-2025



Carbon Services & Trading Hub

> 100 carbon services firms here; home to carbon exchanges such as AirCarbon Exchange and Climate Impact X



Green Innovation and R&D

Climate opportunities will be further explored through Singapore's **Council for a Competitive Climate Transition (C3T)**, a new **public-private platform** established in 2026 to help strengthen businesses' climate resilience and competitiveness.

Our pace of transition will need to account for uncertainties and trade-offs.

Stranded assets in a land scarce city-state

Impact on energy security

Unintended environmental consequences

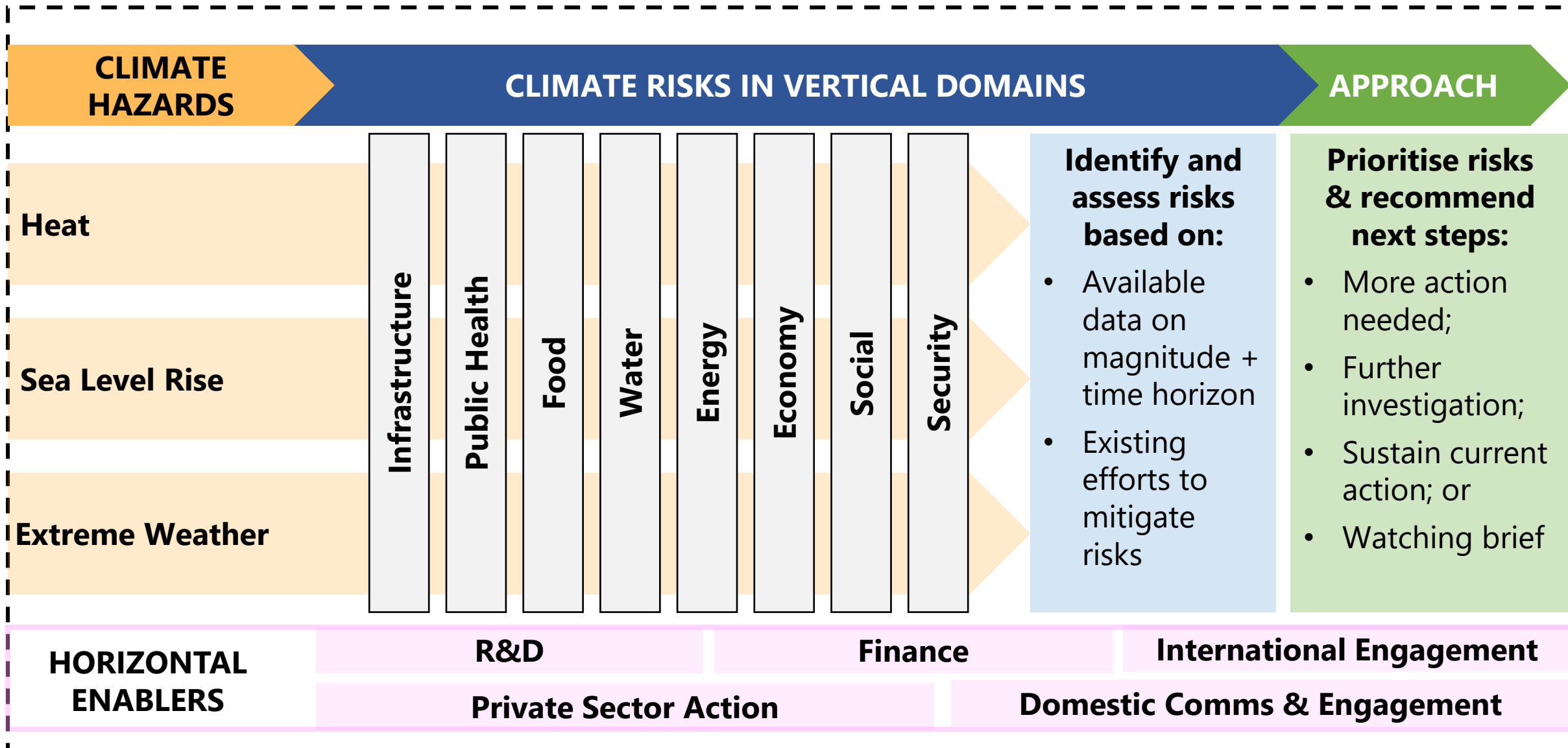
Cost of transition on population

Impact on businesses and workers

Pace of maturation of technology

Geopolitical climate and international cooperation

Even as we strive to bring down emissions, we must also prepare to adapt – addressing both domestic and transboundary risks.



Finally, we are galvanising a whole-of-society shift through the



Across 5 key pillars:



City in Nature



Energy Reset



Sustainable Living

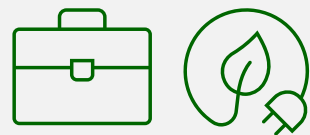


Green Economy



Resilient Future

and 3 key enablers: Green Government, Green Businesses, and **Green Citizenry**



We are developing new green jobs, and a cleaner and greener Singapore for future generations



We are also adjusting individual consumption habits and lifestyles

Beyond domestic action, we need to work with the global community to take decisive steps and avoid the worst impacts of climate change.

This means not only preparing **ourselves for a low-carbon, climate-impaired world...**



...But getting there with **rest of the world**



We forge win-win international collaborations to support not just our own decarbonisation needs, but also that of the region and the world



Global Carbon Markets

- Unlocking supply of high-integrity carbon credits to flow financing for mitigation and abate residual emissions
- Climate Action Data Trust initiative to enhance transparency and integrity of carbon markets



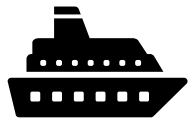
Green and Transition Finance

- Financing Asia's Transition Partnerships (FAST-P)



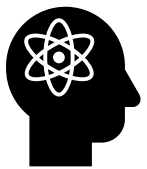
Energy

- ASEAN power grid
- Import trials (e.g., LTMS-PIP)
- International Energy Agency Regional Cooperation Centre in Singapore



International Transport

- Maritime Decarbonisation Blueprint (2022)
- Sustainable Airhub Blueprint (2024)
- Sustainable Aviation Fuel levy (from 2027)



Capabilities and Technical Asst

- Regional/international workshops to enhance Parties' MRV capabilities for accurate and transparent reporting
- Singapore Cooperation Programme
- Small Island Developing States (SIDS) for Change
- Share V3 data with region and international organisations

To scale **Low-Carbon Electricity Imports**, advancing win-win international partnerships and continued tech developments are key

In 2021...

Announced target of **up to 4GW** of low-carbon electricity **by 2035**

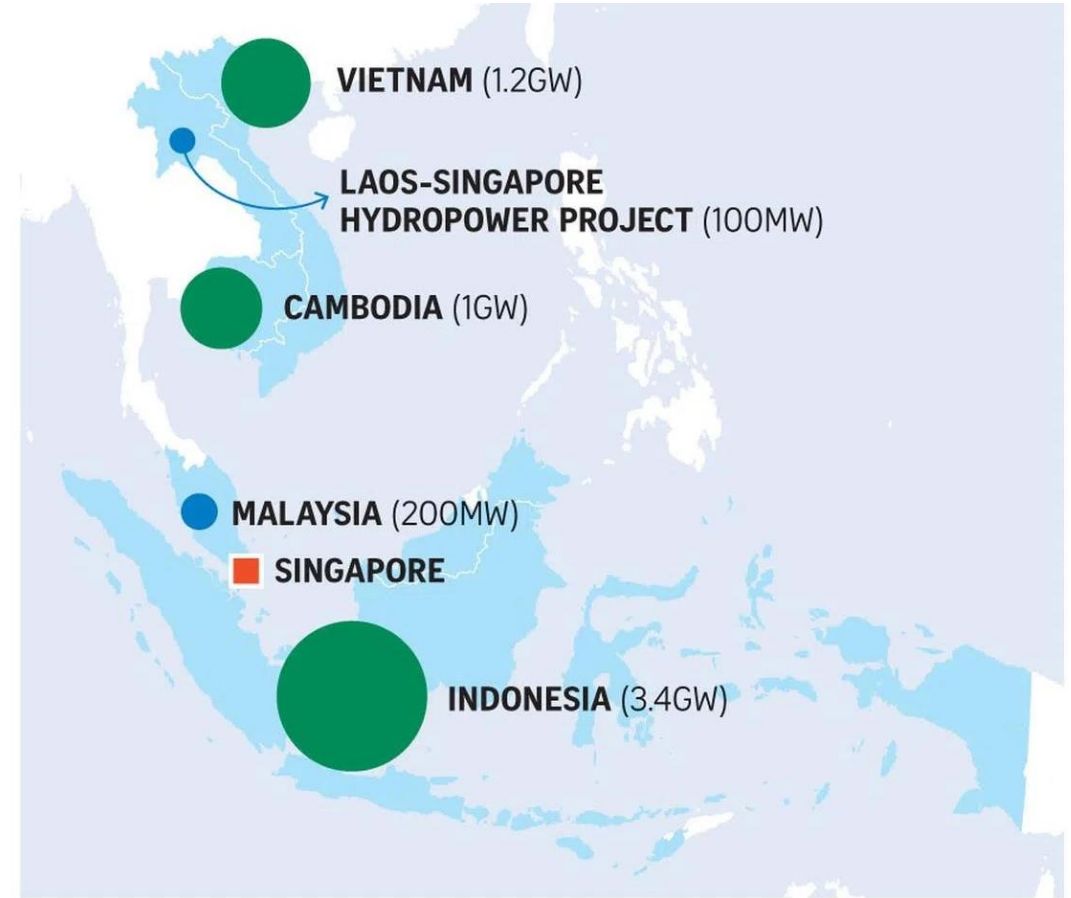


In 2024...

Raised target to **up to 6GW** of low-carbon electricity **by 2035**
(around one-third of our energy supply)

Currently...

8.35 GW of projects **granted conditional approval** to import from Australia, Cambodia, Indonesia, Sarawak (Malaysia) and Vietnam



Sources: ENERGY MARKET AUTHORITY, VENA ENERGY
STRAITS TIMES GRAPHICS

We strongly support the Enhanced Transparency Framework (ETF) as we need reliable, comparable data for multilateral climate action

We align our inventory mapping with the Intergovernmental Panel of Climate Change (IPCC) guidelines



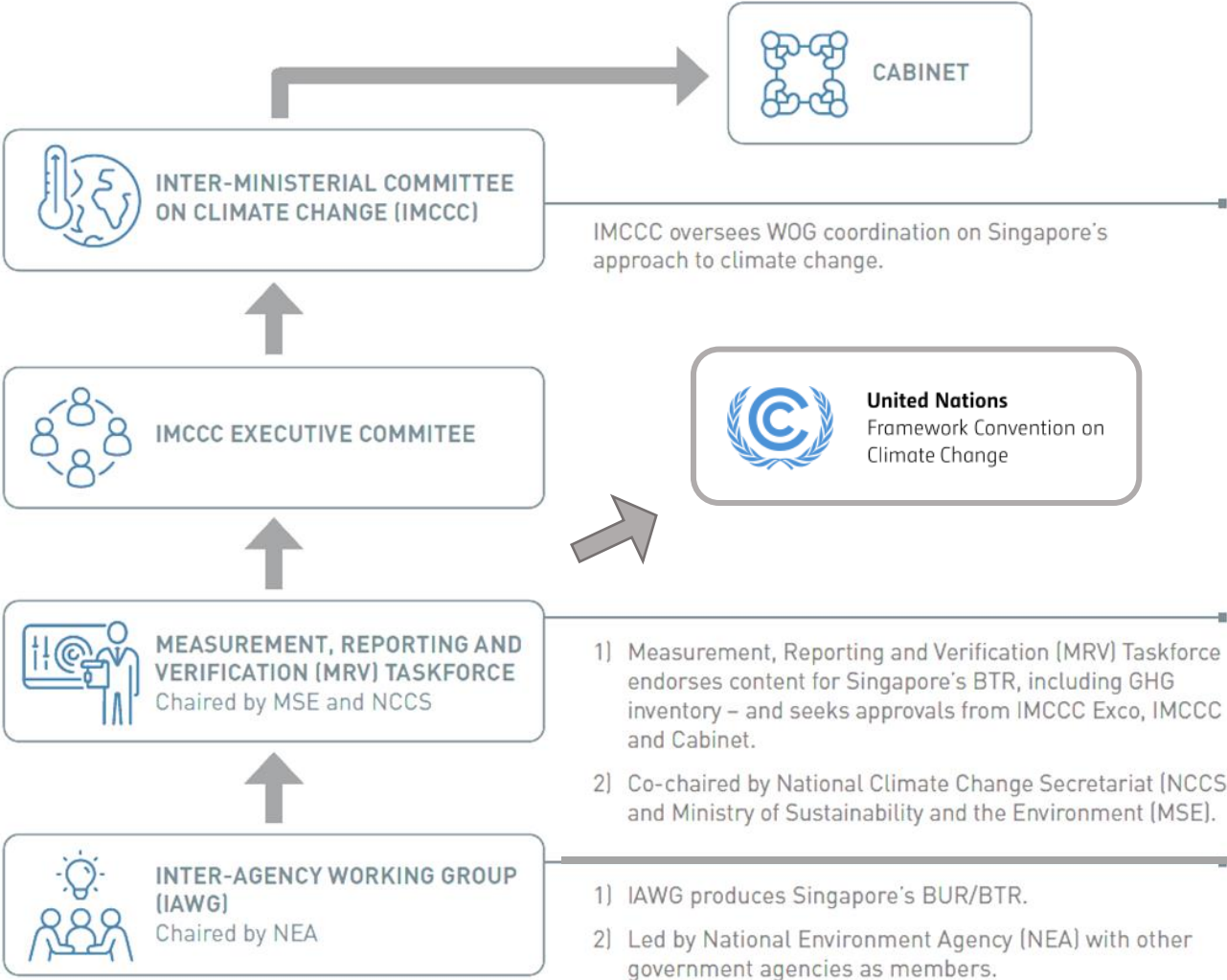
Our inventory is compiled across four key stages:



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The Inter-agency Working Group under the MRV Task Force prepares our climate reports.



IAWG Chair **National Environment Agency**
Safeguard • Nurture • Cherish

Chapter Leads

Ministry of Sustainability and the Environment SINGAPORE

NCCS NATIONAL CLIMATE CHANGE SECRETARIAT SINGAPORE | STRATEGY GROUP PRIME MINISTER'S OFFICE

MTI MINISTRY OF TRADE AND INDUSTRY SINGAPORE

MINISTRY OF FOREIGN AFFAIRS SINGAPORE

DEPARTMENT OF STATISTICS SINGAPORE — Empowering You with Trusted Data —

PUB SINGAPORE'S NATIONAL WATER AGENCY

MND SINGAPORE

MINISTRY OF TRANSPORT CONNECTING SINGAPORE

Singapore Food Agency

Land Transport Authority We Keep Your World Moving

M P A SINGAPORE

NATIONAL PARKS

ENERGY MARKET AUTHORITY Our Clean Energy Future

EDB SINGAPORE

BCA

We deeply appreciate the invaluable support from the UNFCCC Secretariat and TERT

We are working to address the areas of improvement as guided by the Technical Expert Review Team (TERT), including:

- Building capabilities to project emissions past 2030
- Providing clearer information, e.g.
 - That we plan to peak emissions by implementing mitigation measures before the planned use of ITMOs, and
 - Which methodological guidance we used in developing our quantitative uncertainty analysis
- Using the right notation keys



Singapore is committed to supporting fellow Parties in their climate transparency journey, building on our lessons learnt during implementation:



Whole-of-government effort

- Establish clear institutional arrangements
- Take a coordinated approach to consolidate and review inputs from agencies and ensure coherence in reporting
- Establish robust internal reporting systems to track targets annually



Learning by doing

- To improve familiarity with Measurement, Reporting and Verification (MRV) guidelines and processes
- Participate in International Consultation and Analysis/BUR process and addressing the team of experts' (TTE) suggestions
- Participate in technical workshops, training courses (including by UNFCCC), consult subject experts, think-tanks, academia and international organisations and conduct studies to enhance MRV processes and capabilities



Preparing for transition to Enhanced Transparency Framework

- Understand and map Enhanced Transparency Framework guidelines to existing MRV arrangements
- Bridge gaps in capacity / data
- Maintain sustainable institutional arrangements and systems

We continue to support capacity-building for global climate action.



**THAMSANQA
INNOCENT
NKAMBULE**

Planning Officer Ministry of
Natural Resources and Energy
Eswatini

“

The facilitators led interactive discussions that enhanced our learning. The classroom learning was complemented by our learning journey, where we observed the conservation efforts of mangroves.

Focus Area of Course :
Sustainability

Sustainability Action Package (SAP), April 2023 to March 2026

- Launched in October 2022 as a platform for developing countries to share challenges and best practices on tackling sustainability and climate issues, building on the Climate Action Package (CAP) which concluded in 2023.
- Brought together diverse knowledge partners from the public and private sectors. Conducted >90 courses for >2,300 government officials, collaborating with partners like Japan, the UK, and the UN Office for Disaster Risk Reduction.

Asia Regional Workshop: Taking Stock of First BTRs and Getting Ready for Second BTRs

- Held in Bangkok, Thailand in Feb 2026 and hosted by the Partnership on Transparency in the Paris Agreement (PATPA).
- Aimed to provide developing and developed country Parties with a space to reflect on and exchange key insights from the preparation of BTR1 and experiences from Technical Expert Reviews (TER).
- Singapore provided financial support and sent a technical expert to share our experiences.
- 55 technical transparency experts participated from 19 countries and 5 IOs.



Thank You!

For additional information,
please visit the following
websites:



**Singapore
Green Plan 2030**



**Singapore's Long-Term
Low-Emissions Development
Strategy (LEDS)**



**National Climate Change
Secretariat**