SINGAPORE'S CARBON TAX

PMR Technical Workshop
26 September 2018

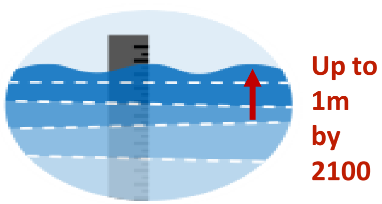
Jansen Toh
National Climate Change Secretariat
Strategy Group, Prime Minister's Office

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

Projected impacts of climate change in Singapore

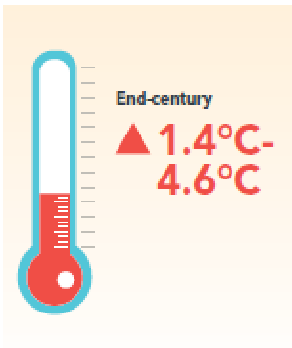
As a small, low-lying island city-state, Singapore is vulnerable to the effects of climate change

SEA LEVEL RISE



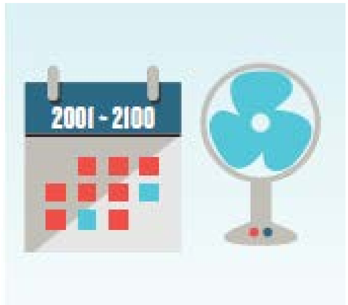
Projected increase in mean sea level rise of up to 1m by 2100.

DAILY TEMPERATURE



Increase in daily mean temperatures by 1.4 – 4.6°C.

HOT & HUMID WEATHER



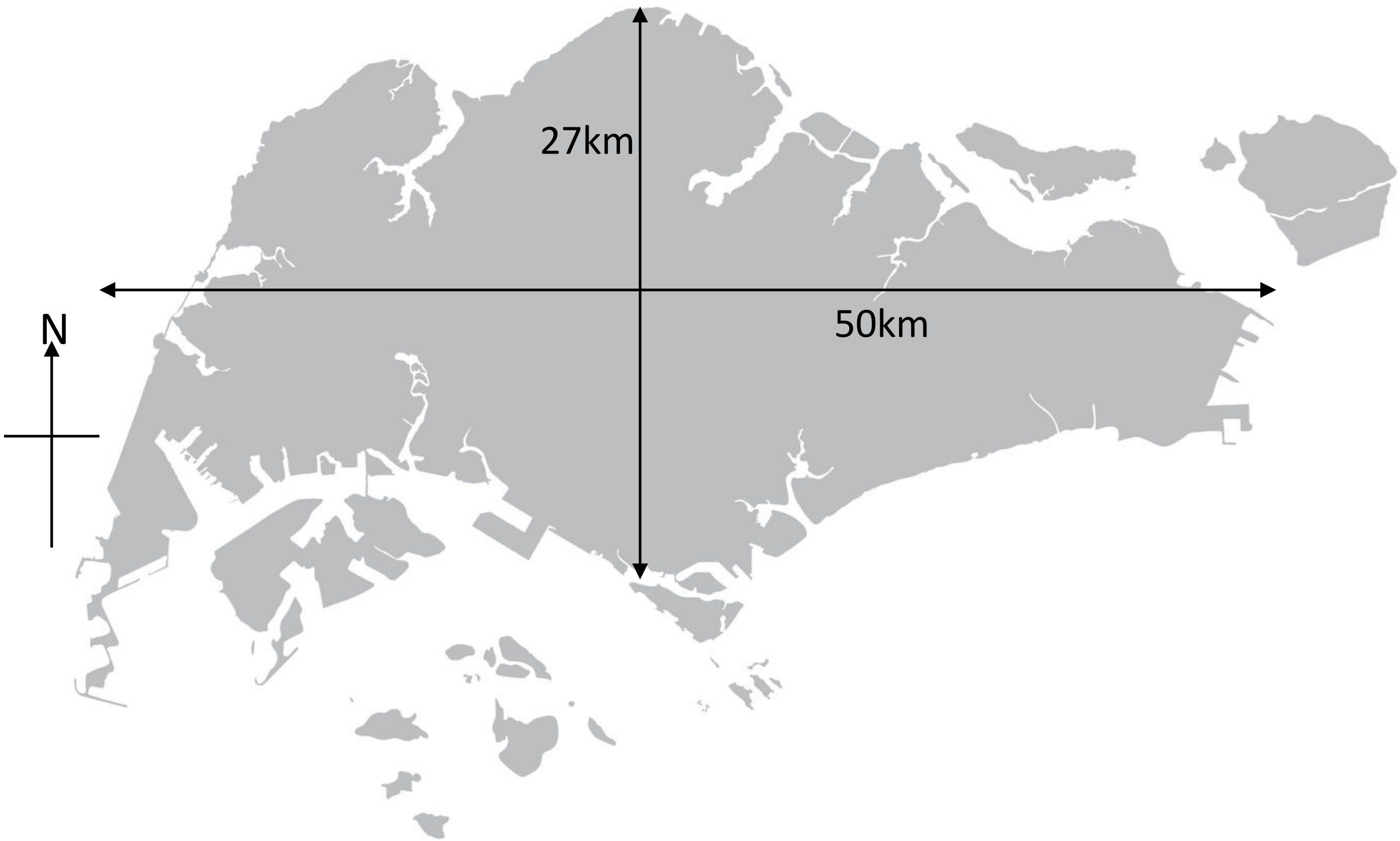
Approx. 300 days of hot and humid weather annually compared to 30 days now.

RAINFALL

Increase in both intensity and frequency of heavy rainfall. More pronounced contrast between the wet months and dry months.

Based on Second National Climate Change Study (2015); for the period of 2070 – 2099 (relative to 1980-2009)

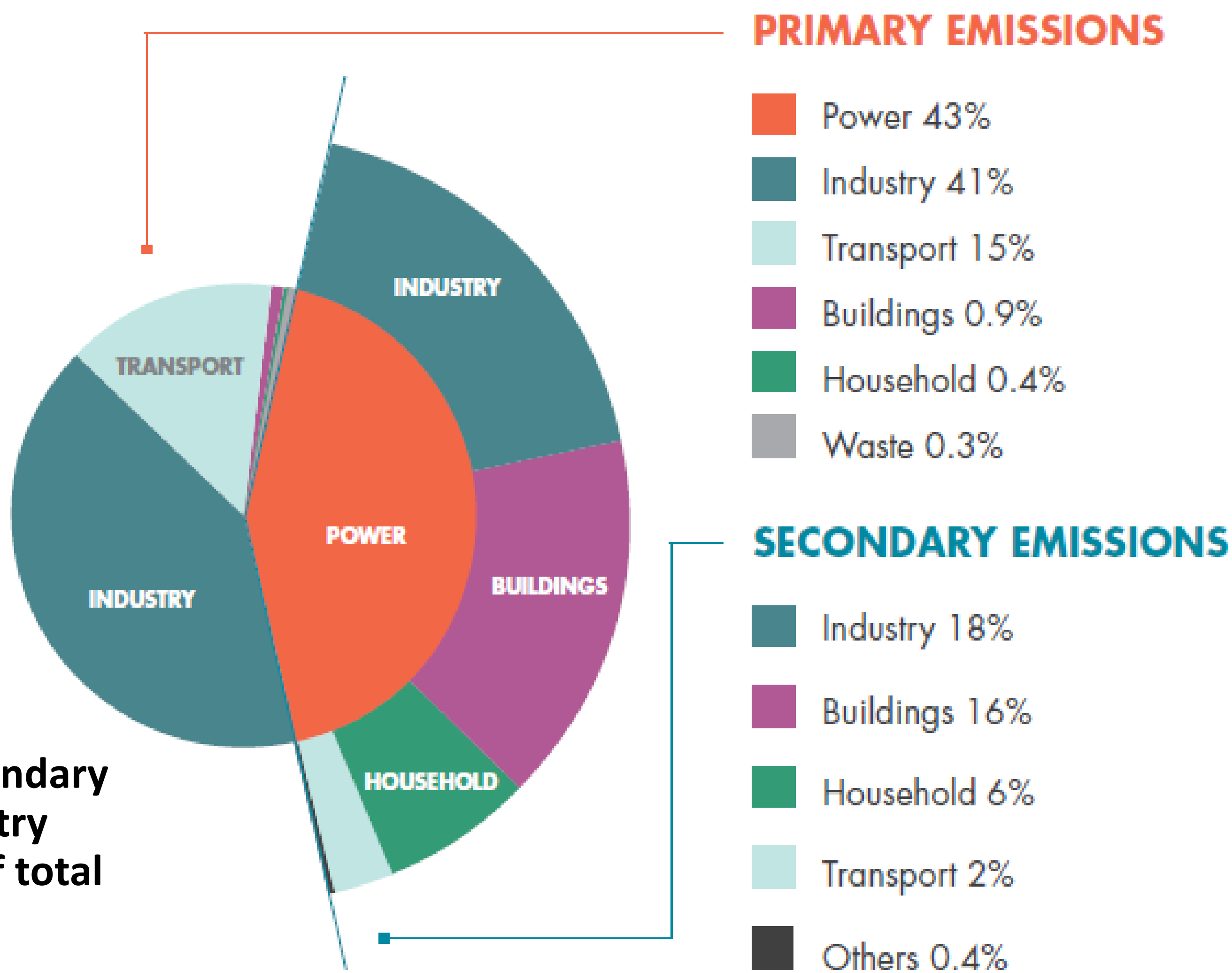
Singapore's National Circumstances



- Lack of Access to Alternative Energy Options
- Export-oriented and Open Economy

Singapore’s Emissions Profile

49 MT GHG emissions in 2012 (0.1% of global)



Factoring in secondary emissions, industry makes up 59% of total emissions

Institutional Structure

Inter-Ministerial Committee on Climate Change (IMCCC)

Chair: Deputy Prime Minister Teo Chee Hean

IMCCC Executive Committee

International Negotiations Working Group	Long-Term Emissions & Mitigation Working Group	Resilience Working Group

Singapore’s Climate Pledges

2020: Reduction of GHG emissions by 16% below Business-as-Usual (BAU) levels in 2020

2030: Reduce emissions intensity* (EI) by 36% below 2005 levels by 2030 and stabilise our emissions with the aim of peaking around 2030

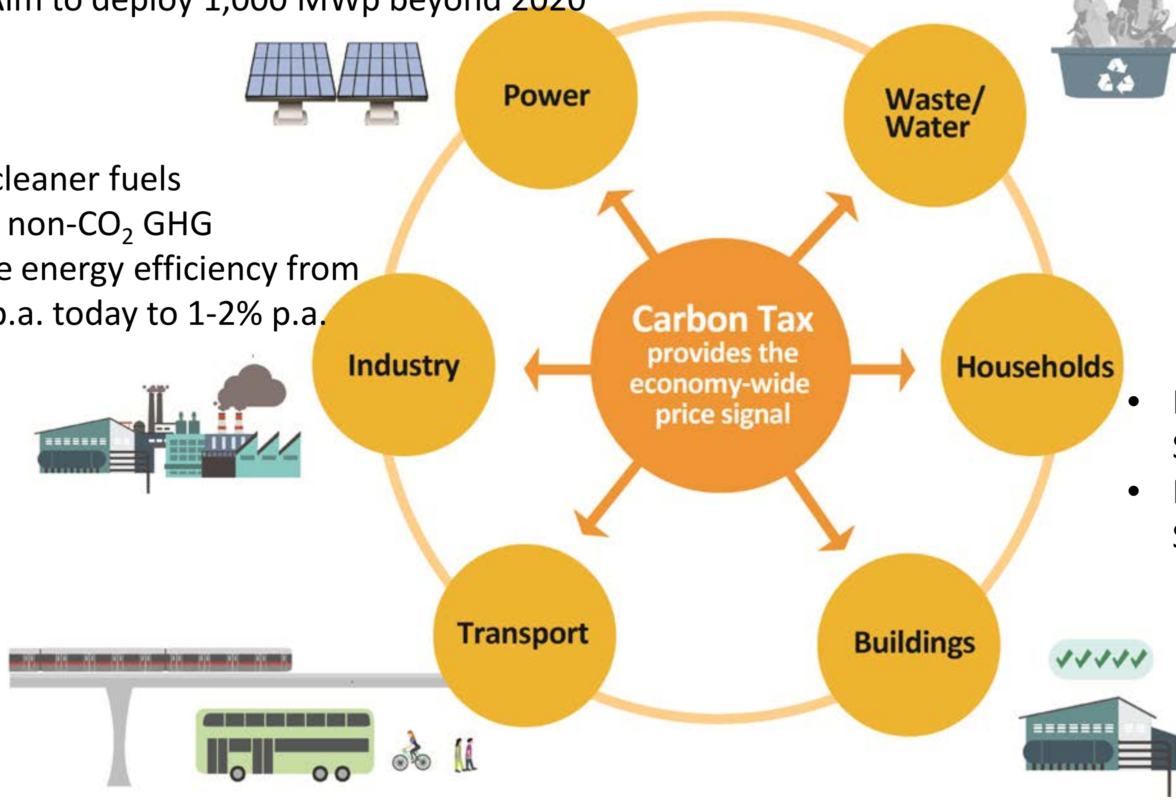
*Emissions Intensity refers to the amount of GHG emitted per dollar of GDP

Singapore’s Suite of Mitigation Measures

- Increase deployment of solar photovoltaics (PVs)
  - 162 MWp installed capacity (Q1 2018)
  - Aim to deploy 1,000 MWp beyond 2020

- Improve efficiency of desalination and used water treatment
- Increase overall recycling rate from 61% to 70% by 2030
- Reduce plastics incineration

- Adopt cleaner fuels
- Reduce non-CO_2 GHG
- Improve energy efficiency from ~0.8% p.a. today to 1-2% p.a.



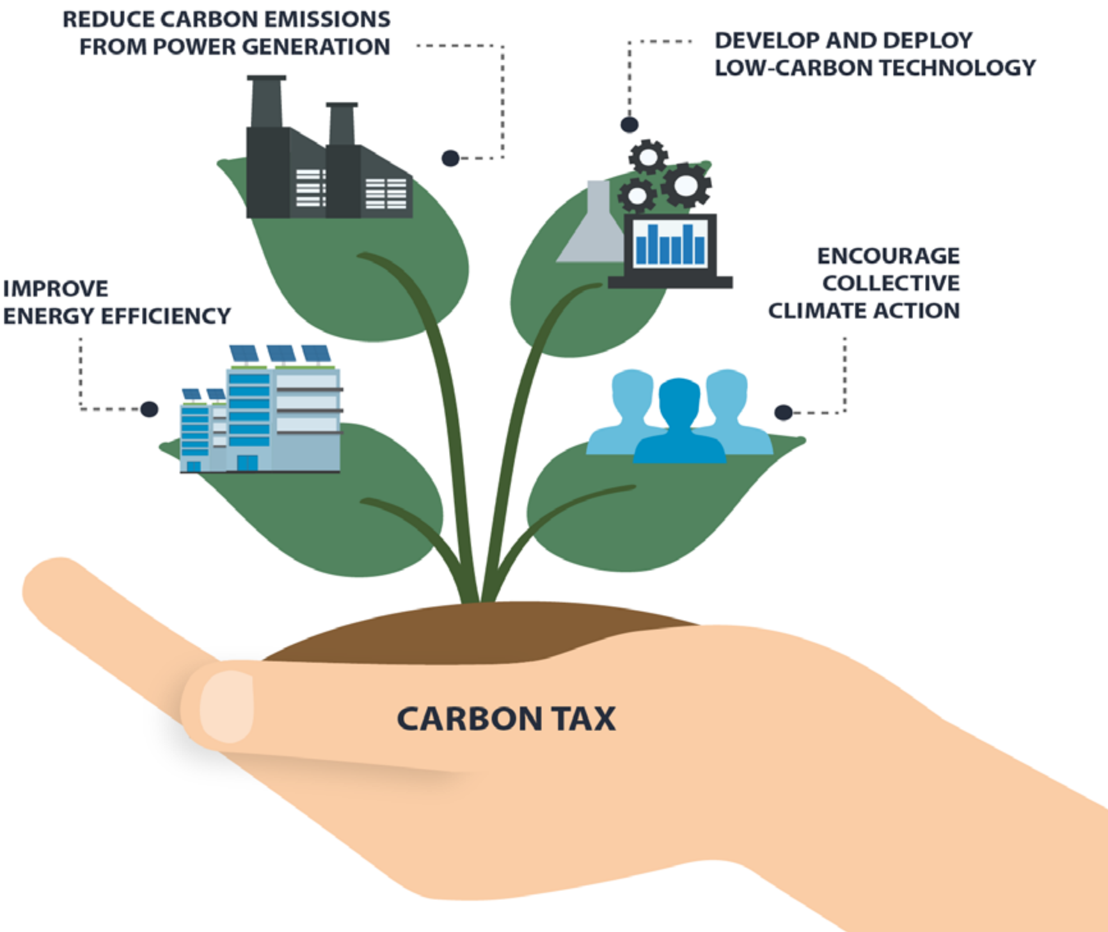
- Mandatory Energy Labelling Scheme
- Minimum Energy Performance Standards

- Increase public transport mode share from 67% today to 75% by 2030
- Doubling of rail network to 360 km by 2030
- Increase cycling path from 240 km to 700 km by 2030
- Quadrupled sheltered walkway network to 200km

- Green Mark Certification for 80% of buildings by 2030
- Long-term aspiration of Positive Low-rise, Zero-Energy Medium-rise, Super-low Energy High-rise buildings for the tropics

Singapore’s Carbon Tax

SINGAPORE’S CLIMATE ACTION PLAN



HOW A CARBON TAX WORKS

1 INTRODUCE A TAX ON EMISSIONS

- Carbon tax will generally be applied upstream, for example, on power stations and other large direct emitters.
- Businesses can choose to reduce emissions or pay a carbon tax.

2 ENCOURAGE ENERGY EFFICIENCY & SUPPORT MORE GREEN ACTIONS

- Businesses are motivated to improve their energy efficiency.
- Consumers are encouraged to use less electricity and save energy.
- Carbon tax revenue will help to fund measures by industry to reduce emissions and provide appropriate measures to ease the transition.

3 LOWER CARBON, GREENER ECONOMY

- Lower emissions lead to a greener planet.
- Businesses become more resource-efficient and sustainable.
- More opportunities in green growth sectors, such as clean technology.

Carbon Tax

Carbon Tax Rate

- S$5/t$CO_2$e (~US$3.70/tCO_2e) in the first instance (2019-2023), as a transition period for companies to adopt energy efficiency projects
  - Tax rate to be reviewed by 2023
  - With the intent of increasing it to between S$10-15/t$CO_2$e (~US$7.40-11.10/tCO_2e) by 2030
  - The review will take into consideration international climate change developments, the progress of our domestic emissions mitigation effort and our economic competitiveness.
- Applied uniformly without exemption, for a transparent and fair price signal across the economy

Carbon Tax

Coverage and Threshold

- 25 ktCO_2e threshold covers around 40 companies, ~80% emissions coverage
  - Balance between maximising coverage and affecting only large emitters
- Existing excise duties for transport fuels equivalent to implicit tax of S$37-281/t$CO_2$e, effective coverage ~95%

Carbon Tax Revenue Recycling

- Revenue will be used to help industry reduce emissions
  - Funds set aside to enhance support for energy efficiency through existing grants
  - Prepared to spend more than the revenue collected from the industry in the first five years to support worthwhile projects

Carbon Tax

Fixed-Price Credit-Based (FPCB) Mechanism

- A sensible approach while the rules and framework of international carbon market is being finalised and established
  - Open to explore linking our carbon tax framework to external carbon markets will be considered when the rules and framework are established
- Flexibility in the mechanism by putting in place key building blocks to facilitate international linkage and offsets in the future
  - E.g. Credit registry infrastructure
- Participate actively in international carbon market platforms
  - Asia Pacific Carbon Market Roundtable (APCMR)
  - World Bank's Partnership for Market Readiness (PMR)
  - Carbon Pricing Leadership Coalition (CPLC)
  - Ministerial Declaration on Carbon Markets.

Learning from other Jurisdictions

- Understand the policy considerations and rationale behind the design details

- Adopt the best practices and learn from others' experiences
  - Balance between policy objectives and complexity
  - Took reference from relevant overseas legislations in developing our own Act

- Actively keeping up with international developments and engaging the international community

- Need to better understand not just the explicit carbon prices, but implicit cost of carbon and energy policies e.g. regulations, standards, renewable energy targets, energy efficiency targets and voluntary agreements

THANK YOU

"Our vision for Singapore is a climate resilient global city that is well positioned for green growth... Together, we can ensure that Singapore remains a vibrant and liveable nation for our future generations."

— Deputy Prime Minister Teo Chee Hean