GREENGOV.SG: PUBLIC SECTOR LEADS THE WAY TOWARDS A LOW-CARBON AND SUSTAINABLE FUTURE

MEDIA FACTSHEET

PUBLIC SECTOR LEADS THE WAY WITH BOLD TARGETS UNDER SINGAPORE GREEN PLAN 2030

4 March 2021 – At the Joint Segment on Sustainability under the Ministry of Sustainability and the Environment (MSE)'s Committee of Supply 2021, Senior Minister and Coordinating Minister for National Security, Mr Teo Chee Hean, who is also the Chairman of the Inter-Ministerial Committee on Climate Change, outlined the thinking and guiding principles behind Singapore's considered, committed and collective approach to climate change. Ministers spearheading the Singapore Green Plan 2030 spoke on the initiatives of their respective Ministries to drive the national agenda on sustainable development over the next 10 years.

2 Ms Grace Fu, Minister for Sustainability and the Environment, announced that the public sector will lead by example, and target to peak its carbon emissions around 2025, ahead of the national target. It will also use tools and levers at its disposal, including procurement, to influence those within and outside of the public service towards sustainability practices and awareness. [See Minister Fu's speech in the Joint Segment ("The Singapore Green Plan: A Pledge to Our Children and Future Generations") and MSE's media release on GreenGov.SG.]

3 Mr Desmond Lee, Minister for National Development, announced that the Ministry will continue to realise the vision of transforming Singapore into a City in Nature by developing over 130 hectares of new parks and enhancing about 170 hectares of existing parks with more lush vegetation and natural landscapes, between now and 2026. The Ministry of National Development (MND) will also step up efforts to make Singapore's buildings, HDB towns, and districts more sustainable. The Building and Construction Authority (BCA) is launching the next edition of the Singapore Green Building Masterplan, which will set three targets — "80-80-80 in 2030". In addition to the existing target of greening 80 per cent of our buildings by Gross Floor Area, the Government will target for 80 per cent of new buildings (by Gross Floor Area) to be Super Low Energy (SLE) buildings from 2030, and for best-in-class green buildings to see an 80 per cent improvement in energy efficiency (over 2005 levels) by 2030. Additionally, under MND's Cities of Tomorrow R&D programme, a new City in Nature research pillar will be introduced to help leverage our natural capital to achieve sustainability goals. [See Minister Lee's speech in the Joint Segment.]

4 Mr Lawrence Wong, Minister for Education, announced that the Ministry of Education (MOE) will work with schools and education institutions to strengthen green efforts. MOE will introduce an Eco Stewardship Programme to enhance environmental education in all schools, and pilot sustainability features and related concepts in selected schools. In addition, the new Science Centre will champion public education on sustainability, and Institutes of Higher Learning will build on existing sustainability efforts. [See Minister Wong's speech in the Joint Segment and MOE's media release.]

5 Mr Ong Ye Kung, Minister for Transport, announced that new diesel car and taxi registrations will cease from 2025, with all new car and taxi registrations to be of cleaner-energy models from 2030. To encourage adoption of electric vehicles (EVs), the Land Transport Authority (LTA) will lower the Additional Registration Fee floor for electric cars from $5,000 to $0, and further revise the road tax structure to bring down the road tax for mass-market electric cars (90-230kW). The Government will also target for 60,000 EV charging points to be installed nationwide by 2030, and eight EV-Ready Towns to have chargers at all HDB carparks by 2025. All new HDB carparks will cater sufficient electrical capacity to support EV slow charging in 15 per cent of their car parking lots, with a minimum number of chargers installed in these lots. This requirement will also be imposed on new private buildings, and existing buildings undergoing major redevelopment, in due course. Existing non-landed private residences will also get some support through the EV Common Charger Grant. [See Minister Ong's speech in the Joint Segment and LTA's factsheets.]

6 Dr Tan See Leng, Second Minister for Trade and Industry, announced that the Energy Market Authority (EMA) and Shell have jointly awarded a grant to a consortium led by Eigen Energy, a local small- and medium-sized enterprise (SME), to pilot Singapore's first smart and clean-energy powered service stations. These stations, located at Tampines, Pasir Ris and Lakeview will have a smart energy management system to integrate solar energy, energy storage and EV chargers to help power their operations. When ready in the first quarter of 2022, they will provide one of the fastest public EV charging in Singapore. This project is also supported by Enterprise Singapore under the Open Innovation initiative leveraging lead demand from government agencies and corporates. [See Minister Tan's speech in the Joint Segment and EMA's media release.]

7 Mr Chan Chun Sing, Minister for Trade and Industry, announced that the Enterprise Sustainability Programme will be launched later this year to support local enterprises to develop capabilities in sustainability, and capture new opportunities in the green economy. As we pace our transition to the green economy, Minister Chan also announced that the Investment Allowance for Emissions Reduction (previously known as the Investment Allowance for Energy Efficiency scheme) will be expanded to support emissions reduction projects, beyond those that improve energy efficiency. [See Minister Chan's speech in the Joint Segment.]

8 The Green Plan is a national sustainability movement to rally bold and collective action to tackle climate change. It aims to ensure that Singapore will remain a green and liveable home for current and future generations. As a living document, the Green Plan will continue to evolve as we take into account technological developments and incorporate the views and proposals of Singaporeans and partners from the Public, Private and People sectors. Everyone has a part to play in this whole-of-nation effort to make Singapore a global city of sustainability.

9 The table below summarises the key initiatives and targets announced by the Government so far, in support of our enhanced Nationally Determined Contribution, our Long-Term Low-Emissions Development Strategy, and the Green Plan.

S/n	Initiatives	Targets
City in Nature		

a	**City in Nature** i. More green spaces and park connectors ● Add 1000ha of green spaces, of which 200ha will be new nature parks. Our new nature parks will provide more recreational options (e.g. hiking and birdwatching), and protect nature reserves from urbanisation ● Add 160km of park connectors ii. More naturalised parks and urban infrastructure to provide shade, cool the environment, improve air quality, and beautify our city ● Restore and enhance 30ha of forest, marine, and coastal habitats ● Add 80ha of skyrise greenery ● Have 300km of Nature Ways along our roads	**[New]** 2026 target: ● Develop over 130 ha of new parks, and enhance around 170 ha of existing parks with more lush vegetation and natural landscapes. 2030 targets: ● Double our annual tree planting rate between 2020 and 2030, to plant 1 million more trees across Singapore ● Increase nature parks' land area by over 50% from 2020 baseline ● Every household will be within a 10-minute walk from a park 2035 target: ● Add 1000ha of green spaces
Sustainable Living		
a	**A Green Citizenry that Consumes and Wastes Less** i. Encourage water conservation and water efficient practices for households and industries ● Shower Fittings Replacement under the Climate-Friendly Household Programme ● **[New]** New minimum water efficiency standards from 1 January 2022 for water-closet flush valves, washer extractors, dishwashers and high-pressure washers (See PUB's media release on new efficiency standards to drive water conservation in non-domestic sector.) ii. "Reduce, Reuse and Recycle" as a norm for citizens and businesses, with a national strategy to address e-waste, packaging waste and food waste	2026 target: Reduce the amount of waste to landfill per capita per day by 20% 2030 targets: ● Reduce household water consumption to 130 litres per capita per day ● Reduce the amount of waste to landfill per capita per day by 30%

	• Introduce legislative framework for a Deposit Refund Scheme (DRS) by 2022 (See National Environment Agency's factsheet on measures to close the packaging and plastic waste loop.) • **[New]** Explore a framework for large industrial and commercial premises to measure and report the amount of food waste to be segregated for treatment (See NEA's factsheet on updates to Singapore's food waste management system)	
b	**Green Commutes** i. Expand our rail network with new stations or lines opening almost every year over this decade ii. Purchase only cleaner-energy public buses going forward iii. Encourage walking and cycling, by expanding the cycling network and repurposing roads for active mobility uses where possible iv. Develop new town concepts (e.g. Tengah to have the first car-free HDB town centre)	2030 targets: • Achieve 75% mass public transport (i.e. rail and bus) peak-period modal share • Expand rail network from around 230km today to 360km by early 2030s • Triple cycling paths to 1,320km from 460km in 2020
c	**Strengthen Green Efforts in Schools** **i.** Enhance the integration of environmental sustainability in schools, and strengthen the development of informed, responsible and sustainability-conscious mindset and habits in students through the Eco Stewardship Programme ii. **[New]** Pilot sustainability features and related concepts in selected schools iii. **[New]** Champion public education on sustainability through the new Science Centre iv. **[New]** Build on existing sustainability efforts by Institutes of Higher Learning	2030 Targets: • Achieve a two-thirds reduction of net carbon emissions from the schools sector • At least 20% of schools to be carbon neutral

Energy Reset		
a	**Green Energy** i. Promote sustainable fuels for international trade and travel ii. Increase solar deployment in Singapore together with the deployment of energy storage to address solar intermittency, enhance grid resilience, and support the transition towards a greener energy mix iii. Increase efficiency with each new generation of gas-fired power plant to reduce carbon emissions (e.g. adopting new, advanced combined-cycle gas turbines) **iv.** Green Singapore's electricity supply by tapping on the low-carbon potential of clean electricity imports	• Play active and important roles in fulfilling two international goals o The International Civil Aviation Organisation's aspirational goals of 2% annual fuel efficiency improvement from now to 2050 and carbon neutral growth from 2020 o The International Maritime Organisations' target to reduce greenhouse gas (GHG) emissions from international shipping by at least 50% by 2050 compared to 2008 levels, and to phase out such GHG emissions in this century 2030 targets: • Increase solar energy deployment by five-fold to at least 2 GWp, which can meet around 3% of our 2030 projected electricity demand and generate enough electricity to power more than 350,000 households a year (1.5 GWp by 2025, which can meet around 2% of our 2025 projected electricity demand and generate enough electricity to power more than 260,000 households a year) • 200 MW of energy storage systems deployment beyond 2025, which can power more than 16,000 households a day • Best-in-class generation

		technology that meets heat-rate/emissions standards and reduces carbon emissions • Diversified electricity supply with clean electricity imports
b	**Greener Infrastructure and Buildings** i. Raise the sustainability standards of our buildings through the Singapore Green Building Masterplan, to pave the way for a low-carbon built environment • Raise minimum energy performance requirements • Review the Green Mark scheme • Push for the adoption of Super-Low Energy (SLE) Buildings • Support the development of energy-efficient and cost-effective green technologies ii. Improve energy efficiency of water treatment through research and development • Investment in desalination and used water treatment technologies such as electrochemical desalination and step-feed membrane bioreactor iii. Reduce carbon footprint of water production through adoption of renewables (e.g. solar energy) iv. Improve energy and resource efficiency of used water treatment plants	2030 targets: • Green 80% of Singapore's buildings (by Gross Floor Area) by 2030 • **[New]** 80% of new buildings (by Gross Floor Area) to be SLE buildings from 2030 • **[New]** Best-in-class green buildings to see an 80% improvement in energy efficiency (over 2005 levels) by 2030 2021 target: PUB to generate sufficient solar energy from their floating solar panels to power 100% of Singapore's waterworks. 2025 targets: • Reduce energy consumption of desalination process from current 3.5kWh/m^3 to 2kWh/m^3 • Singapore's first integrated waste and used water treatment facility to be 100% energy self-sufficient (Tuas Nexus) Long-term target: Reduce desalination energy further to 1kWh/m^3
c	**Sustainable Towns and Districts** i. Under the 10-year HDB Green Towns Programme, we will: • Introduce smart LED lighting that can	2030 target: Reduce energy consumption in existing HDB towns by 15%

	use 60% less energy than normal LED lighting • Double total solar capacity on HDB rooftops from 220 megawatt-peak (MWp) today to 540 MWp by 2030 by increasing number of HDB rooftops with solar panels from 50% to 70% by 2030 • Pilot the Urban Water Harvesting System (UWHS) to recycle rainwater for non-potable uses and help mitigate flood risk by releasing stormwater at a slower rate • Pilot test the effectiveness of "Cool Paint" in reducing ambient temperatures • Convert top decks of suitable multi-storey carparks into urban farms, community gardens and extensive greenery to increase green cover and enhance liveability ii. Make new HDB towns greener and more sustainable (e.g. Tengah town will have a centralised cooling system) iii. Develop Jurong Lake District as a model sustainable mixed-use district, with district cooling, solar power deployment, and super low-energy buildings	
d	**Cleaner-energy Vehicles** i. **[New]** New registrations of diesel cars and taxis to cease from 2025, with all new car and taxi registrations to be of cleaner-energy models from 2030 ii. **[New]** Lower Additional Registration Fee floor from $5,000 to $0, and further revise road tax structure to bring down road tax for mass-market electric cars **iii.** **[New]** All new HDB carparks will cater sufficient electrical capacity to support EV slow charging in 15% of their car	**[New]** 2025 targets: • New registrations of diesel cars and taxis to cease from 2025 • 8 EV-Ready Towns with chargers at all HDB carparks by 2025 **[New]** 2030 targets: • All new car and taxi registrations to be of cleaner-energy models from

	parking lots, with a minimum number of chargers installed in these lots. This requirement will also be imposed on new private buildings, and existing buildings undergoing major redevelopment, in due course. **iv.** **[New]** Provide some support for existing non-landed private residences through EV Common Charger Grant **v.** **[NEW]** Pilot smart and clean-energy powered service stations by 1Q2022 with energy management system to integrate solar energy, energy storage and EV chargers to help power their operations	2030 • Target 60,000 charging points nationwide by 2030, including 40,000 in public carparks and 20,000 in private premises
Green Economy		
a	**New Investments to be Among the Best-in-Class** i. Ensure that new carbon-intensive investments brought into Singapore are among the best-in-class in terms of carbon and/or energy efficiency, for carbon-intensive sectors. ii. Review carbon tax by 2023	Seek new investments to be among the best-in-class in energy/ carbon efficiency
b	**Sustainability as a New Engine for Jobs and Growth** i. Green our industries' production processes and energy usage, such as transforming Jurong Island into a sustainable energy and chemicals park, and improving industries' energy efficiency ii. Develop Singapore into a sustainable tourism destination. iii. Develop Singapore as a carbon services hub, with the requisite capabilities and networks across the value chain iv. Develop Singapore as a leading centre for green finance in Asia and globally, to	2030 targets: • Jurong Island to be a sustainable energy and chemicals park • Singapore as a sustainable tourism destination • Singapore as a leading centre for green finance and services to facilitate Asia's transition to a low-carbon and sustainable future • Singapore as a carbon services hub in Asia • Singapore as a leading

	support a sustainable Singapore and facilitate Asia's transition to a sustainable future v. Strengthen Singapore as a vibrant location for global and local companies to develop new sustainability solutions for Asia, with R&D as an enabler, in areas such as sustainable packaging, decarbonisation, waste upcycling, urban farming, and water treatment vi. Develop and trial new technologies for carbon capture, utilisation and storage vii. Study the potential of low-carbon hydrogen and other emerging technology pathways for decarbonisation[1]. viii. Support local enterprises to adopt sustainability practices/ solutions/ standards, enhance their resource (including energy) efficiency, and capture new business opportunities in sustainability • **[NEW]** Enterprise Sustainability Programme to be launched in 2021	regional centre for developing new sustainability solutions • Groom a strong pool of local enterprises to capture sustainability opportunities
Resilient Future		
a	**Adapt to Sea-level Rise and Enhance Flood Resilience** i. **[New]** Studies to explore measures to protect the coastlines of City-East Coast and Jurong Island will commence in 2021 (See PUB's factsheet on strengthening our coastal defence) ii. **[New]** Develop a purpose-built model capable of analysing the combined effects of extreme sea levels and intense rainfall-induced inland floods (See PUB's factsheet on strengthening our coastal defence)	2030 target: Complete formulation of coastal protection plans for City-East Coast, North-West Coast (Lim Chu Kang and Sungei Kadut) and Jurong Island

[1] Please refer to "Green Energy" for low carbon solutions and applications in industry and power generation.

	iii. Sustainable and reliable funding pool for coastal and flood protection	
b	**Keep Singapore Cool** i. **[New]** Mitigate Urban Heat Island (UHI) effect through 3-pronged strategy: ● Understand the UHI effect better by deploying an island-wide network of climate sensors to collect data ● Conduct research and modelling on UHI effects; and ● Partner the industry and public to implement a UHI mitigation action plan, including piloting the use of cool materials and reducing human-generated heat. (See MSE and the Urban Redevelopment Authority's joint factsheet on efforts to mitigate the UHI effect.)	2030 target: To be determined from studies
c	**Grow Local** i. Avail space and infrastructure for agriculture and aquaculture; enhance funding support to incentivise agri-food industry to adopt highly productive, climate-resilient, and resource-efficient farming technologies; and develop a local pipeline of skilled workers for agri-food sector ● **[New]** $60 million Agri-Food Cluster Transformation (ACT) Fund (See Singapore Food Agency's media release on the new Fund) ● **[New]** Tender out new sea sites on leases and encourage farms to adopt technology for higher productivity and review fish farming practices to enhance business resilience and sustainability (See SFA's media release on uplifting Singapore's	2030 target: Meet 30% of Singapore's nutritional needs through locally produced food

	aquaculture sector) ii. Conduct R&D under the Singapore Food Story R&D Programme to promote research innovation and plug existing technological gaps in three themes: ● Theme 1: Sustainable Urban Food Production ● Theme 2: Future Foods: Advanced Biotech-based Protein Production ● Theme 3: Food Safety Science and Innovation	
Green Government		
a	**[New] Public sector to lead the way towards sustainable development with refreshed GreenGov.SG initiative** i. More ambitious targets, including a carbon emissions target for the first time ii. Expand scope to include public sector infrastructure and operations, such as transport infrastructure and healthcare facilities iii. Embed environmental sustainability in public service's core business areas, including procurement. iv. Build a culture of sustainability amongst public servants (See MSE's media release on GreenGov.SG)	2025 target: Peak the public service's carbon emissions around 2025, ahead of the national target

Ministry of Education
Ministry of National Development
Ministry of Sustainability and the Environment
Ministry of Trade and Industry
Ministry of Transport
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