

## Initiatives and Targets under the Singapore Green Plan 2030

S/n	Initiatives	Targets
<b>City in Nature</b>		
a	<p><b>City in Nature</b></p> <p>i. More nature parks and park connectors</p> <ul style="list-style-type: none"> <li>● Add 200ha of nature parks, to provide more recreational options (e.g. hiking and birdwatching), and protect nature reserves from urbanisation</li> <li>● Add 160km of park connectors</li> </ul> <p>ii. More naturalised parks and urban infrastructure to provide shade, cool the environment, improve air quality, and beautify our city</p> <ul style="list-style-type: none"> <li>● Incorporate natural designs and planting in 140ha of parks and gardens, and restore and enhance 30ha of forest, marine, and coastal habitats</li> <li>● Add 80ha of skyrise greenery</li> <li>● Have 300km of Nature Ways along our roads</li> </ul>	<p>2030 targets:</p> <ul style="list-style-type: none"> <li>● Double our annual tree planting rate between 2020 and 2030, to plant 1 million more trees across Singapore</li> <li>● Increase nature parks' land area by over 50% from 2020 baseline</li> <li>● Every household will be within a 10-minute walk from a park</li> </ul>
<b>Energy Reset</b>		
a	<p><b>Green energy</b></p> <p>i. Promote sustainable fuels for international trade and travel</p> <p>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</p> <p>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)</p> <p>iv. Green Singapore's electricity supply by tapping on the low-carbon potential of clean electricity imports</p>	<ul style="list-style-type: none"> <li>● Play active and important roles in fulfilling two international goals <ul style="list-style-type: none"> <li>○ The International Civil Aviation Organisation's aspirational goals of 2% annual fuel efficiency improvement from now to 2050 and carbon neutral growth from 2020</li> <li>○ The International Maritime Organisations' target to reduce greenhouse gas (GHG) emissions from international shipping by at least 50% by 2050 compared to 2008 levels,</li> </ul> </li> </ul>

		<p>and to phase out such GHG emissions in this century</p> <p>2030 targets:</p> <ul style="list-style-type: none"> <li>● 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)</li> <li>● 200 MW of energy storage systems deployment beyond 2025, which can power more than 16,000 households a day</li> <li>● Best-in-class generation technology that meets heat-rate/emissions standards and reduces carbon emissions</li> <li>● Diversified electricity supply with clean electricity imports</li> </ul>
b	<p><b>Greener Infrastructure and Buildings</b></p> <p>i. Raise the sustainability standards of our buildings through the Singapore Green Building Masterplan , to pave the way for a low-carbon built environment</p> <p>a. Raise minimum energy performance requirements</p> <p>b. Review the Green Mark scheme</p> <p>c. Push for the adoption of Super-Low Energy Buildings (SLEB)</p> <p>d. Support the development of energy-efficient and cost-effective green technologies</p>	<p>2030 target:</p> <ul style="list-style-type: none"> <li>● Green 80% of Singapore’s buildings (by Gross Floor Area) by 2030</li> </ul> <p>2021 target: PUB to generate sufficient solar energy from their floating solar panels to power 100% of Singapore’s waterworks.</p> <p>2025 targets:</p> <ul style="list-style-type: none"> <li>● Reduce energy consumption of desalination process from current 3.5kWh/m<sup>3</sup> to 2kWh/m<sup>3</sup></li> <li>● Singapore’s first integrated waste and used water treatment facility to be 100%</li> </ul>

	<p>ii. Improve energy efficiency of water treatment through research and development</p> <p style="padding-left: 40px;">a. Investment in desalination and used water treatment technologies such as electrochemical desalination and step-feed membrane bioreactor</p> <p>iii. Reduce carbon footprint of water production through adoption of renewables (e.g. solar energy)</p> <p>iv. Improve energy and resource efficiency of used water treatment plants</p>	<p>energy self-sufficient (Tuas Nexus)</p> <p>Long-term target: Reduce desalination energy further to 1kWh/m<sup>3</sup></p>
c	<p><b>Sustainable towns and districts</b></p> <p>i. Under the 10-year HDB Green Towns Programme, we will:</p> <ul style="list-style-type: none"> <li>● Introduce smart LED lighting that can use 60% less energy than normal LED lighting</li> <li>● 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</li> <li>● 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</li> <li>● Pilot test the effectiveness of “Cool Paint” in reducing ambient temperatures</li> <li>● Convert top decks of suitable multi-storey carparks into urban farms, community gardens and extensive greenery to increase green cover and enhance liveability</li> </ul> <p>ii. Make new HDB towns greener and more sustainable (e.g. Tengah town will have a centralised cooling system)</p> <p>iii. Develop Jurong Lake District as a model sustainable mixed-use district, with district cooling, solar power deployment,</p>	<p>2030 target: Reduce energy consumption in existing HDB towns by 15%</p> <p>2030 target: Develop zero-waste food district in Jurong Lake District, with food waste segregation and treatment for new developments.</p>

	and super low-energy buildings	
d	<b>Cleaner-energy vehicles</b> <ol style="list-style-type: none"> <li>i. Require all new registrations to be of cleaner-energy models by 2030</li> <li>ii. Build up the EV charging infrastructure to support the growth of EVs</li> <li>iii. Revise the vehicle tax structure to make it easier to buy and own EVs.</li> </ol>	2030 targets: <ul style="list-style-type: none"> <li>• All new car registrations will be of cleaner-energy models</li> <li>• More than double our national EV charging point targets from 28,000 to 60,000 charging points</li> </ul>
<b>Sustainable Living</b>		
a	<b>A green citizenry that consumes and wastes less</b> <ol style="list-style-type: none"> <li>i. Encourage water conservation and water efficient practices for households and industries <ol style="list-style-type: none"> <li>a. Shower Fittings Replacement under the Climate-Friendly Household Programme</li> <li>b. Mandatory water efficiency labelling scheme</li> </ol> </li> <li>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</li> </ol>	2026 target: Reduce the amount of waste to landfill per capita per day by 20%  2030 targets: <ul style="list-style-type: none"> <li>• Reduce household water consumption to 130 litres per capita per day</li> <li>• Reduce the amount of waste to landfill per capita per day by 30%</li> </ul>
b	<b>Green commutes</b> <ol style="list-style-type: none"> <li>i. Expand our rail network with new stations or lines opening almost every year over the next decade</li> <li>ii. Purchase only cleaner-energy public buses going forward</li> <li>iii. Encourage walking and cycling, by expanding the cycling network and repurposing roads for active mobility uses where possible</li> <li>iv. Develop new town concepts (e.g. Tengah to have the first car-free HDB town centre)</li> </ol>	2030 targets: <ul style="list-style-type: none"> <li>• Achieve 75% mass public transport (i.e. rail and bus) modal share</li> <li>• Expand rail network from around 230km today to 360km by early 2030</li> <li>• Triple cycling paths to 1,320km from 460km in 2020</li> </ul>
c	<b>Strengthen Green Efforts in Schools</b> <ol style="list-style-type: none"> <li>i. Enhance the integration of environmental sustainability in schools,</li> </ol>	2030 Targets: <ul style="list-style-type: none"> <li>• Achieve a two-thirds reduction of net carbon emissions from</li> </ul>

	<p>and strengthen the building of informed, responsible and sustainability-conscious mindset and habits in students through the Eco Stewardship Programme</p> <p>ii. Reduce net carbon emissions for the schools sector</p> <p>iii. Start with some of our schools achieving carbon neutrality by 2030, with the rest to follow thereafter</p>	<p>the schools sector</p> <ul style="list-style-type: none"> <li>At least 20% of schools to be carbon neutral</li> </ul>
<b>Green Economy</b>		
a	<p><b>New investments to be among the best-in-class</b></p> <p>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.</p> <p>ii. Review carbon tax by 2023</p>	<ul style="list-style-type: none"> <li>2030 target: Peak emissions at 65 MtCO<sub>2</sub>e</li> <li>2050 aspiration: Halve emissions from its peak to 33 MtCO<sub>2</sub>e and achieve net-zero emissions as soon as viable in the second half of the century</li> </ul>
b	<p><b>Sustainability as a new engine for jobs and growth</b></p> <p>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</p> <p>ii. Develop Singapore into a sustainable tourism destination.</p> <p>iii. Develop Singapore as a carbon services hub, with the requisite capabilities and networks across the value chain</p> <p>iv. Develop Singapore as a leading centre for green finance in Asia and globally, to support a sustainable Singapore and facilitate Asia's transition to a sustainable future</p> <p>v. Strengthen Singapore as a vibrant location for global and local companies to develop new sustainability solutions for Asia, with R&amp;D as an enabler, in areas such as sustainable packaging, decarbonisation, waste upcycling, urban farming, and water treatment</p> <p>vi. Develop and trial new technologies for</p>	<p>2030 targets:</p> <ul style="list-style-type: none"> <li>Jurong Island to be a sustainable energy and chemicals park</li> <li>Achieve National Air Quality Target for SO<sub>2</sub></li> <li>Singapore as a sustainable tourism destination</li> <li>Singapore as a leading centre for green finance and services to facilitate Asia's transition to a low-carbon and sustainable future</li> <li>Singapore as a carbon services hub in Asia</li> <li>Singapore as a leading regional centre for developing new sustainability solutions</li> <li>Groom a strong pool of local enterprises to capture sustainability opportunities</li> </ul>

	<p>carbon capture, utilisation and storage</p> <p>vii. Study the potential of low-carbon hydrogen and other emerging technology pathways for decarbonisation<sup>1</sup>.</p> <p>viii. Support local enterprises to adopt sustainability practices/ solutions/ standards, enhance their resource (including energy) efficiency, and capture new business opportunities in sustainability</p>	
<b>Resilient Future</b>		
a	<p><b>Adapt to sea-level rise and enhance flood resilience</b></p> <p>i. R&amp;D to better understand sea level rise projections and technology/modelling to manage inland and coastal flood risks holistically</p> <p>ii. Site-specific studies to assess and provide details of coastal adaptation measures to be implemented</p> <p>iii. Sustainable and reliable funding pool for coastal and flood protection</p>	2030 target: Complete formulation of engineering design and implementation plans for coastal adaptation measures at City-East Coast, Northwestern Coast (Lim Chu Kang and Sungei Kadut) and Jurong Island
b	<p><b>Keep Singapore cool</b></p> <p>i. Deploy sensors to understand urban heat island effect on Singapore and implement UHI mitigation measures</p>	2030 target: To be determined from studies
c	<p><b>Grow local</b></p> <p>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</p> <p>ii. Conduct R&amp;D under the Singapore Food Story R&amp;D Programme to promote research innovation and plug existing technological gaps in three themes:</p>	2030 target: Meet 30% of Singapore's nutritional needs through locally produced food

<sup>1</sup> Please refer to “Green Energy” for low carbon solutions and applications in industry and power generation.

	<ul style="list-style-type: none"><li>• Theme 1: Sustainable Urban Food Production</li><li>• Theme 2: Future Foods: Advanced Biotech-based Protein Production</li><li>• Theme 3: Food Safety Science and Innovation</li></ul>	
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