

GreenGov.SG

Launch of GreenGov.SG

Introduced in 2006 and enhanced in 2014, the Public Sector Taking the Lead in Environmental Sustainability (PSTLES) initiative encouraged agencies to focus on sustainability outcomes and put in place organisational processes to manage resource use. Agencies have made good progress over the years, improving our energy efficiency, water consumption and putting in place resource management plans to institute sustainability elements in resource utilisation.

The public sector will continue to lead the way in sustainable development with the GreenGov.SG initiative, the public sector's new sustainability movement. Launched on 12 July 2021 at the Partners for the Environment (PFE) Forum held during Climate Action Week, GreenGov.SG, is a key component of the Singapore Green Plan 2030. Under this initiative, the public sector will strive to attain ambitious sustainability targets in carbon abatement and resource efficiency, and be a positive influence and enabler of green efforts. Every public officer will also be encouraged and supported to embrace sustainable practices.

GreenGov.SG has three pillars:

1) Excel with new and more ambitious targets:

- The public sector aims to peak its carbon emissions around 2025, ahead of the national target.
- By 2030, the public sector aims to reduce energy [\[1\]](#) and water [\[2\]](#) use by 10 per cent from the average of 2018 - 2020 levels, and to reduce the amount of waste [\[3\]](#) disposed by 30 per cent from 2022 level.
- The public sector will set targets for buildings, information technology, transport, and solar deployment that are more ambitious than the national targets
- For all the above, the scope of GreenGov.SG will be expanded to include public sector infrastructure and operations, such as public transport infrastructure and healthcare facilities.

2) Enable a sustainable economy and green citizenry, by embedding sustainability in our core business:

- The public sector will take the lead in purchasing products that meet high efficiency or sustainability standards. This will apply to electrical appliances, as well as water fittings, building materials for interior use, and electric vehicles.
- The public sector will factor in companies' sustainability-related policies and practices when evaluating government tenders, starting with event venue and accommodation, and public waste collection contracts. Sustainability will be incorporated as a consideration in government agencies' procurement decisions.
- The public sector will incorporate sustainability features at public spaces such as hawker centres and community clubs to raise public awareness. The public sector will also educate our community on sustainability issues through our school curriculum and community programmes.

3) Excite public officers to contribute actively to sustainability in Singapore:

- There will be regular sharing sessions organised within the public sector to promote the exchange of ideas, best practices, and the latest technological solutions, to inspire and support public officers to champion ground-up initiatives.
- The public sector will organise campaigns to raise awareness and encourage public officers to take simple steps to lead a more sustainable lifestyle.

[\[1\]](#) Energy used per unit area

[\[2\]](#) Water used per person per day

[\[3\]](#) Waste disposed of per person per day

GreenGov.SG Sustainability Targets and Measures

To ensure that the GreenGov.SG targets are realised, public sector agencies will be adopting a set of measures. These targets and measures are as detailed below.

Peak the public sector’s carbon emissions around 2025

- All premises will deploy solar photovoltaics where feasible, and the public sector will increase solar deployment to 1.5GWp by 2030.
- All cars newly procured and registered by the public sector will be clean energy vehicles with zero tailpipe emissions from 2023 onwards, and all public sector cars will run on cleaner energy by 2035.
- All agencies will pursue efficiency improvements in their operations and buildings.

Improve the Energy Utilisation Index[1] by 10 per cent by 2030 from average of 2018 to 2020 levels

- All new and existing buildings (upon major retrofit) are to achieve Green Mark Platinum Super Low Energy (SLE) standards or equivalent, where feasible.
- Government data centres will achieve the Green Mark Platinum standard by 2025
- Existing public sector buildings will adopt the Guaranteed Energy Savings Performance (GESP) contracting model when embarking on chilled-water plant (including air distribution system) retrofits.

Improve the Water Efficiency Index[2] by 10 per cent by 2030 from average of 2018 to 2020 levels

- All premises will install 3-ticks Water Efficiency Labelling Scheme (WELS) fittings upon replacement.
- All premises that are undergoing Addition and Alteration (A&A) are to achieve a minimum number of Cycles of Concentration (COC) for their cooling towers.
- All premises will adopt SS ISO 46001: 2019 Water efficiency management systems, if the water consumption is at least 36,000 m3/year.

Improve the Waste Disposal[3] Index by 30 per cent by 2030 from 2022 levels

- Public sector buildings with food and beverage (F&B) establishments will segregate the food waste for either on-site or off-site treatment from 2024.
- Agencies will not provide bottled water for meetings organised within public sector premises.

Green Procurement

Products	Requirements
Air-conditioners	<ul style="list-style-type: none"> • Minimum 5-ticks and using refrigerant with Global Warming Potential (GWP) ≤ 750 for split unit air-conditioner models (up to 10kW cooling capacity) • Minimum 3-ticks and using refrigerant with GWP ≤ 750 (if available) for split unit air-conditioner models above 10kW cooling capacity • Minimum 3-ticks and using refrigerant with GWP ≤ 750 (when available) for 3-phase Variable Refrigerant Flow models
Refrigerators	<ul style="list-style-type: none"> • Minimum 3-ticks and using refrigerant with GWP ≤ 15
Televisions	<ul style="list-style-type: none"> • Minimum 4-ticks for all sizes
Lamps	<ul style="list-style-type: none"> • Minimum 3-ticks for integrated Compact Fluorescent Lamps (CFLi) and Light Emitting Diode (LED) bulbs (Bayonet, Edison base) • Minimum 2-ticks for Compact Fluorescent Lamps (CFLni) and LED bulbs (G24 base) • Minimum 2-ticks for tubular lamps (G13 base)
Water fittings and equipment	<ul style="list-style-type: none"> • Minimum 3-ticks for basin taps, shower taps, urinals, and dual-flush low capacity flushing cisterns • Maximum 6L/min for high pressure washer jets • Maximum 7.8L/kg for top/front load and 12L/kg for side load washer extractors

	<ul style="list-style-type: none"> • Maximum 2L/rack for dishwashers of undercounter/hood type, 1L/rack for single tank conveyor, 0.66L/rack for multi-tank conveyor, and 0.59L/rack for flight type
Building products	<ul style="list-style-type: none"> • Relevant building products for interior use (e.g. wall and ceiling finishes) that are accredited with the Singapore Green Labelling Scheme by the Singapore Environment Council, or Singapore Green Building Product Certification scheme by the Singapore Green Building Council, where available
Printing paper	<ul style="list-style-type: none"> • White printing paper that is accredited with the Enhanced Singapore Green Labelling Scheme by the Singapore Environment Council
ICT equipment	<ul style="list-style-type: none"> • ICT equipment that meet the latest ENERGY STAR standards, where available
Vehicles	<ul style="list-style-type: none"> • All cars procured and registered are to be clean energy vehicles with zero tailpipe emissions, starting from 2023

[1] Energy Utilisation Index is defined as the annual energy consumption per unit area.

[2] Water Efficiency Index is defined as the amount of water used per person per day.

[3] Waste Disposal Index is defined as the amount of waste disposed of per person per day.

Guaranteed Energy Savings Performance (GESP) Contracts

Current Situation

Building owners often carry out a 1-for-1 replacement when their equipment reaches the end of their life spans. By not considering life cycle cost, energy and cost savings cannot be maximized. Even if a life cycle approach is taken in making investment decisions, the current procurement contracts may not be able to deliver the expected improvements because:

1. There is no assurance of improved energy performance after the retrofits
2. There is a lack of accountability as different parties are involved in the selection, specification, and the installation of equipment.
3. Performance of the new equipment is not verified and tracked over the long term.

GESP Contracts in Public Sector

Public sector agencies are encouraged to adopt the Guaranteed Energy Savings Performance (GESP) contracting model when undertaking building retrofit projects. Under the GESP contracting model, an accredited Energy Services Company (ESCO) is engaged to:

1. Carry out an energy audit and identify energy savings measures
2. Implement the recommended energy savings measures
3. Guarantee the chilled water plant or air-conditioning system efficiency, and the annual energy savings from the implementation of other energy savings measures over the contract term (i.e. typically 5 years)
4. Provide comprehensive maintenance to the retrofitted equipment during the contract term for better accountability

The ESCO is responsible for the entire project from audit to post-implementation monitoring and maintenance. With ESCO guaranteeing the performance of systems, building and facility owners are thereby assured of the guaranteed energy performance savings during the contract term. A permanent monitoring system with specific accuracy requirements is also installed for long term and continuous monitoring of the performance. An overview of what [GESP contracting entails can be found here](#) (PDF, 1.11MB).

Benefits to Public Sector

As of 2020's end, 42 public sector buildings have been retrofitted or are undergoing retrofitting using the GESP contracting model for retrofit works. On average, these GESP contracts help building owners save 20% of their total electricity use, which translates to \$13.8 million annually for the public sector.