



MEDIA FACTSHEET

New Singapore Standard launch to support management and use of Renewable Energy Certificates

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1. With growing environmental awareness, Renewable Energy Certificates (RECs) have become a common means for energy users, including businesses, to fulfil their sustainability commitments. Through the purchase of RECs¹, users can make claims that the energy they use comes from a renewable source. To facilitate consistency for the transaction and management of RECs, the Singapore Standards Council and Enterprise Singapore, together with the National Environment Agency, and Energy Market Authority have launched the new Singapore Standard (SS) 673: Code of Practice for Renewable Energy Certificates (RECs).
2. Jointly developed with industry players and the Sustainable Energy Association of Singapore (SEAS), SS 673 is intended to provide a clear framework to improve the integrity of measurement, reporting and verification (MRV) requirements for the issuance and management of RECs. It covers guidelines across the lifecycle of RECs – from production, tracking, management, to the usage of the certificates for renewable energy claims in Singapore:
 - a. For renewable energy installation owners, SS 673 has requirements that define the types of renewable energy sources² that may qualify to generate RECs tracked in registries. It also specifies that renewable energy installations be connected to a grid operated by a regulator or a regulator-appointed party, and that energy output must be in the form of electricity delivered to a grid or grid-connected load.

¹ One REC represents proof that one megawatt-hour (MWh) of electricity was generated from a renewable energy source, such as solar photovoltaics (PVs), and delivered to the grid.

² Such as solar, biomass and wind energy.

- b. For REC registries and verifiers, SS 673 sets out guidelines on how renewable energy installations should be registered and verified, including validating the metering data of every installation. For instance, the standard specifies that registries ensure that the installation is not concurrently registered as an active installation with other REC registries. It also provides guidance on proper issuance, transference, and retirement of RECs, as well as how errors should be managed.
 - c. For end-users, there are recommendations on how they can make renewable energy consumption claims, such as stating the origin, type of renewable energy, mode of renewable electricity procurement and verification of claims. The standard also highlights the best practice for users to make renewable energy claims, such as using RECs produced in the same market boundary in which they operate and consume electricity.
3. With the transparency of MRV requirements, the industry will be able to provide greater assurance on the credibility of RECs available in the marketplace. The framework provided by SS 673, which also applies to energy imports, will enable the renewable energy industry to access a wider selection of trusted sources in the region to engage in the trading of RECs, which end-users can use to meet their sustainability goals. This supports Singapore's energy transition efforts to tap low-carbon electricity imports from regional power grids.
4. Following the launch, SEAS will conduct training workshops to raise awareness of RECs and to promote the standard. The first run of the workshop will be held on 16 November 2021. The standard can be purchased from the Singapore Standards eShop at www.singaporestandardseshop.sg.

Annex A: Details of SS 673

Annex B: Quotes from co-convenors and working group composition

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About the Singapore Standards Council

The Singapore Standards Council (SSC) facilitates the development, promotion and review of Standards and Technical References in Singapore. This work is done through partnerships with the industry, academia and government organisations, under the national standardisation programme overseen by Enterprise Singapore.

About Enterprise Singapore

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About the National Environment Agency

The National Environment Agency (NEA) is the leading public organisation responsible for ensuring a clean and sustainable environment for Singapore. Its key roles are to improve and sustain a clean environment, promote sustainability and resource efficiency, maintain high public health standards, provide timely and reliable meteorological information, and encourage a vibrant hawker culture. NEA works closely with its partners and the community to develop and spearhead environmental and public health initiatives and programmes. It is committed to motivating every individual to care for the environment as a way of life, in order to build a liveable and sustainable Singapore for present and future generations.

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About Energy Market Authority

The Energy Market Authority (EMA) is a statutory board under the Singapore Ministry of Trade and Industry. Through our work, we seek to forge a progressive energy landscape for sustained growth. We aim to ensure a reliable and secure energy supply, promote effective competition in the energy market and develop a dynamic energy sector in Singapore. Visit www.ema.gov.sg for more information.

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Details of SS 673

SS 673 was developed by the Singapore Standards Council and Enterprise Singapore, together with the Energy Market Authority, and the National Environment Agency, in partnership with the Sustainable Energy Association of Singapore and other industry stakeholders³.

SS 673 has been developed as a voluntary standard to improve the overall integrity of measurement, reporting and verification (MRV) requirements for the issuance and management of RECs. The SS is applicable to renewable energy installation owners, REC registries, REC intermediaries, traders, brokers, third-party verifiers, issuers, and end-users. The primary users are intended to be REC registries that track RECs that are sold to Singaporean electricity consumers.

SS 673 provides specific information on RECs with the aim of improving accounting, traceability, and transparency. It covers the following:

1. Eligible types of renewable energy sources
 - It defines the types of renewable energy sources that may generate RECs tracked in compliant registries, such as solar, biomass, wind, hydro, geothermal energy, and hydrogen fuel cells using renewable inputs.
2. Roles of stakeholders in the REC ecosystem
 - It defines the roles of installation owner, REC registry, REC intermediary, third-party verifier, issuer, and end-user in various processes.
3. REC procurement models
 - It defines unbundled RECs and bundled RECs.
4. Registration of renewable energy installations
 - It specifies that any installation that generate RECs for use in Singapore shall be registered with a REC registry that complies with SS 673. The REC registry shall:
 - Ensure that the installation is tagged to an installation owner/responsible party
 - Ensure no double registration or issuance
 - It provides guidance on multi-fuel installations and their fuel allocation, as well as on metering arrangements
 - It also specifies regular reviews of registered installations to ensure that all records are up to date.
5. Management of RECs
 - It provides guidance on the issuance, transfer, and retirement of RECs, as well as how errors should be managed.

³ The Working Group (WG) on Renewable Energy Certificates under the Technical Committee on Energy which was responsible for the development of the SS 673 comprises 20 industry experts.

6. Verification of renewable energy installations and renewable energy generation
 - It specifies the requirement of supporting documents, a verification report by an independent auditor or a site inspection.
 - Evidence of renewable energy generation
7. Public reports on installations, issuance, and retirement of RECs from REC registries
 - It includes public reports on the aggregated issuance and retirement volume of RECs
8. Recommendations on the use of RECs and claims on environmental attributes
 - It defines the forms of renewable energy consumption claim, recommended approach in making claims, full attribute ownership of renewable energy, and verification of claims.

The SS guides companies with best practice on the use of renewable power to support enterprises achieve their environmental sustainability goals. It is best practice for users to make renewable energy claims using RECs produced in the same market boundary in which they operate and consume electricity. RECs produced by renewable energy installations in another jurisdiction but contractually supplying electricity generated from such installations via a physical interconnection to the Singapore power grid falls under this same market boundary. However, where sourcing from within the same geographical or market boundary is not possible, the SS recommends that Singapore companies source their RECs using the United Nations geoscheme for Southeast Asia, such as Brunei Darussalam, Cambodia, Indonesia, Lao PDR, Malaysia, Myanmar, Philippines, Singapore, Thailand, Timor-Leste, and Vietnam.

SS 673 encourages consumption of green energy through purchase of renewable energy certificates, which contributes to the United Nations Sustainable Development Goal 7 – Affordable and Clean Energy. To further assist companies on their sustainability journey, Enterprise Singapore has recently launched the “Standards Mapping Tool for Sustainable Business Practices”, referencing the UN SDG framework. The tool is available on the Singapore Standards eShop.

Quotes from Co-convenors of Working Group on Renewable Energy Certificates

1. Mr Ang Kok Kiat, Director, Radiation Protection & Nuclear Science Division, National Environment Agency and Co-convenor of Workgroup on Renewable Energy Certificates said, "The SS 673 is a milestone achievement that will strengthen the REC market in Singapore and place it on a solid foundation for future growth."
2. Ms Kavita Gandhi, Executive Director, Sustainable Energy Association of Singapore (SEAS) and Co-convenor of Working Group on Renewable Energy Certificates said: "SS 673 will help build up the Renewable Energy Certificate ecosystem including renewable energy startups and SMEs as well as testing, inspection and certification services providers. This facilitates a trustworthy marketplace for Renewable Energy Certificates and promotes the use of certified renewable electricity. We also look forward to providing SS 673 training to build up the local expertise related to the use of Renewable Energy Certificates."

Organisations of the Working Group Members under the Singapore Standards Council and Enterprise Singapore:

- Building and Construction Authority
- Center for Resource Solutions
- City Developments Limited
- Economic Development Board
- Energetix Pte Ltd
- Energy Market Authority
- Energy Market Company Pte Ltd
- Kyoto Energy Pte Ltd
- National Climate Change Secretariat
- National Environment Agency
- National University of Singapore
- Sembcorp Industries Ltd
- Solar Energy Research Institute of Singapore
- SP Group
- Sunseap Group Pte Ltd
- Susca Group
- Sustainable Energy Association of Singapore
- The International REC Standard
- T-RECs.ai Pte Ltd