National Policy on Green Hydrogen in Sri Lanka

2026

Ministry of Energy

Sri Lanka Sustainable Energy Authority

Contents

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Effective date:

1.0 Introduction

1.1 Background

Achieving energy independency and security is fundamental to the economic growth in Sri Lanka. The country has tremendous potential to harness energy from renewable sources (e.g. solar, wind, hydro, biomass, biowaste). Hydro is a prevalent energy source with over 1,800 MW of installed capacity of large hydro & small hydro power plants, producing over 4.5 TWh annually (~ 40% electricity grid capacity).

In the recent developments in renewable-energy-based electricity generation, solar power and wind power have been in major focus. The medium-term policy target is to achieve 70% electricity generation from renewable energy sources by 2030. In the Nationally Determined Contributions (NDCs) including National Adaptation Plan and Climate Prosperity Plan with Carbon Net-zero 2050 Roadmap and Strategic Plan under the Paris Agreement obligations, renewable energy deployment is the key strategy. As of December 2025, the contribution from land-based solar and wind power plants in Sri Lanka is 550 MW, and there has been a tremendous rise in rooftop solar power with an aggregate capacity of more than 2,100 MW. Over the next 25 years, the country's power demand is projected to grow at an annual rate of ~5%, and Sri Lanka will need to add ~ 7,000 MW of additional fresh renewable energy, mainly solar power and wind power. As far as the electricity generation from solar power and wind power is concerned, the sporadic generation of solar energy and wind energy causes their power output to fluctuate depending on diurnal weather conditions, and energy storage is an essential feature to be introduced to address this issue. While battery energy storage and pump hydro storage have already been focused for energy storage, green hydrogen and its derivatives are the other storage pathways pursued globally.

As far as the resource availability of solar power and wind power are concerned, Sri Lanka has a significant renewable energy potential of these sources. According to the Renewable Energy Resource Development Plan published by Sri Lanka Sustainable Energy Authority, the developable land-based wind power potential is around 10 GW and the developable land-based solar power potential is around 30 GW. A study carried out by the World Bank Group shows an off-shore wind power potential of 56 GW, and the overall solar power potential becomes further high when rooftop solar power and floating solar power are taken into consideration. So, with the high renewable energy potential in the country, the resource availability would significantly overweigh the country's electrical energy demand. As such this abundantly available energy resource can be made use of to meet the energy

requirement of various sectors by converting renewable-energy-based electricity to hydrogen through the electrolysis process whereby electrical energy is converted to chemical energy. Thus, green hydrogen is a potential energy storage medium, which can be used as an energy carrier for various applications, significantly contributing to decarbonize different sectors using renewable energy sources.

By definition green hydrogen is the hydrogen generated using renewable energy sources. Hydrogen and its derivatives (ethanol, methanol, ammonia) can be thus integrated into the energy supply network as an energy carrier and a clean fuel for wide end-use sectors, such as shipping fuel, Sustainable Aviation Fuel (SAF), etc. Further, hydrogen is used as a feedstock in chemical sector, and it can also be used as a building block to produce ammonia, a widely used fertilizer, which is an essential commodity for Sri Lanka and the second largest chemical made in the world. Hydrogen is also an important commodity in plastic, metal, petroleum and pharma industries and fits well with the government's push for local industrial growth.

Hydrogen is a fuel which requires special care. Hydrogen technologies can be sustainably adopted through establishing a network of production and supply at a competitive cost for end-user needs across various sectors, addressing high temperature industries (e.g. transport, agriculture, high-temperature industries including steel, chemicals, fertilizer, cement, glass, ceramic, tiles). In Sri Lanka, the first movers for hydrogen off-take could be high-temperature industries - thermal applications in kilns and furnaces. Even a greater demand can be expected with hydrogen as an ingredient in SAF production, maritime ammonia, heavy-duty transport, chemical sector and power system resilience. Sri Lanka also has a substantial potential to convert bio-waste into bio-hydrogen (through biogas), further contributing to renewables and supporting the transition to a low-carbon economy.

Given its strategic geographical location and renewable energy capacity, Sri Lanka has the potential to emerge as a major hydrogen exporter, in a world where international shipping industry has ventured into hydrogen bunkering.

1.2 The Need

Renewable hydrogen or green hydrogen, i.e. basically hydrogen generated using solar energy and wind energy, provides a unique opportunity for both centralized and distributed production and usage - From Gigawatt scale to microgrid scale - helping to meet the decarbonization target of achieving carbon neutrality in electricity generation by 2050, while simultaneously supporting the country's economic growth and reducing dependence on oil, coal and gas imports. Locally-focused and interconnected green hydrogen production and supply network will play a crucial role in driving Sri Lanka's Net-zero agenda.

An integrated policy approach is vital for overcoming the initial constraints and reaching a minimum threshold for market penetration, resting on three central pillars:

(i) Identifying and enabling policy priorities

(ii) Establishing a governance system and enabling investment and partnerships together with policies

(iii) Building national hydrogen strategies and management plans

A national policy on green hydrogen and hydrogen derivatives envisages a smooth and systematic transition from fossil fuels to green energy at system level, including green hydrogen production, storage, supply, end-use and export, in a safe, transparent and sustainable manner, covering large-scale, small and medium -scale enterprises (SME) in deploying island-wide framework for green hydrogen production and utilization by 2050.

According to Clauses 5(b), 13, 16 and 21 of the Sri Lanka Sustainable Energy Authority Act, Sri Lanka Sustainable Energy Authority is the legally mandated authority for introducing renewable energy technologies into the national energy mix, in alignment with the National Energy Policy. Therefore, to make green hydrogen an available and affordable energy source in Sri Lanka, the Ministry of Energy, in collaboration with the Sustainable Energy Authority, Ceylon Petroleum Cooperation (CPC) should take the necessary steps to establish an appropriate legal framework by amending relevant Acts and introducing regulations to support the development of this sector.

1.3 Purpose and Context

The National Policy on Green Hydrogen in Sri Lanka sets out government strategies and regulations aimed at managing the hydrogen production, inter-conversion (to/from its derivatives), storage, safe distribution, end-use and export, focusing on achieving a balance between security of energy supply, affordability, environmental sustainability, economic prosperity, social and ethical acceptability. The Policy provides guidance on standards that should be adhered to attract local and overseas investment to build interconnected green hydrogen infrastructure and develop hydrogen markets. It also outlines the approval process that should be followed when equipment, components and products are imported or sourced locally to develop a green hydrogen ecosystem in Sri Lanka.

The Policy emphasizes the commitment of the Government, in ensuring management of safe handling of hydrogen and its derivatives, along-with the effective management of hydrogen infrastructure, by enforcing compliance with the latest international standards. This Policy mandates the integration of hydrogen-related safety, production, storage, distribution and end-use regulations into the national governance framework. It is designed to complement and align with existing national policies on energy, environmental protection, health & safety and equality, fostering a sustainable hydrogen economy in line with the United Nations Sustainable Development Goals (UN SDGs) and Nationally Determined Contributions.

The major policy objectives are:

(i) To Ensure the safe and sustainable management of hydrogen and its derivatives at every stage of their life cycle and optimize resource consumption;
(ii) To ensure rapid realization of a well-trained human resource pool within the country to support the growth of renewable hydrogen ecosystem and green economy;
(iii) To ensure the smart management system of hydrogen and its derivatives by deploying appropriate information management tools;
(iv) To enable Sri Lanka to achieve a Just Energy Transition while enabling a resilient national energy system.

1.4 Rationale

The rationale behind the National Policy on Green Hydrogen in Sri Lanka is to leverage hydrogen and its derivatives as clean energy carriers, primarily produced from renewable sources, to decarbonize sectors that are difficult to electrify, like heavy industries and long-haul transport, chemical and other industrial sectors, thus contributing significantly to achieve country's net-zero emissions goals by providing a low-carbon-fuel alternative to fossil fuels in areas where other options are limited. This is achieved by promoting necessary infrastructure development and market incentives to scale up the production and use of green hydrogen across various sectors and export to global markets. Through the introduction of the Policy, it is aimed at establishing a conducive environment for investment in the development of green hydrogen in Sri Lanka. Ultimately the techno-economics will play a key role in deciding the appropriate applications in Sri Lanka.

2.0 Scope

This Policy is targeted at providing legal and policy framework for the development of hydrogen using renewable energy sources. Accordingly, 'Green Hydrogen' is defined as hydrogen generated from renewable energy or biological sources, where the presence of carbon-dioxide will be less than 2%.

3.0 Guiding Principles

The National Policy on Renewable Hydrogen in Sri Lanka:

- Recognizes the economic potential of establishing a hydrogen ecosystem and a value chain for Sri Lanka
- Recognizes the importance of prosperity and wellbeing of people in Sri Lanka and its environment, while promoting sustainable development;

- Recognizes the importance of developing capacities, creating awareness and carrying out appropriate research by relevant authorities, in relation to renewable hydrogen ecosystem;
- Recognizes the risks that may be associated with the adoption of renewable hydrogen ecosystem;
- Reaffirms the commitment to the obligations of international conventions and international organizations, namely IEA, IRENA and UNFCCC, but not limited to them;
- Recognizes the importance of making compliance with personal health & safety and environment standards related to the use of hydrogen and its derivatives;
- Recognizes the importance of close coordination among stakeholder institutions in management of hydrogen and its derivatives, containing hazardous substances/chemicals, from production to final disposal ensuring circularity;
- Recognizes the importance of Equality, Equity, Diversity and Inclusivity at all levels of green hydrogen ecosystem in Sri Lanka.

4.0 Policy Statements

Policy statements are identified under the key aspects related to the introduction of hydrogen in the country - Energizing the Economy, Leveraging Knowledge, A Productive Ecosystem, Safety and Security, Technology Forefront, as:

4.1 Energizing the Economy

4.1.1 Sustained Economic Benefits

Development and implementation of entire green hydrogen ecosystem will be done assuring sustained economic benefits to the country in a broad national perspective, strictly at every stage, to achieve the sustainable economic development of Sri Lanka.

4.1.2 Energy Security, Emission Reduction and Circular Economy

Energy security by renewables as well as carbon emission reduction targets driven by circular economy theories will be considered as the underpinning objects in the development of green hydrogen ecosystem in the country.

4.2 Leveraging Knowledge

4.2.1 Research, Innovation, Knowledge Creation and dissemination

Priorities in research, innovation and knowledge creation with a special focus on developing green hydrogen ecosystem, risk assessment, management & communication at all levels including individual health & safety and sustainable environment shall be identified, and necessary steps shall be taken accordingly.

4.2.2 Development of Competencies

Acquisition and development of competencies in all aspects in management and safe handling of hydrogen, its derivatives and all components at whole system level will be taken as a priority. In this regard, the obligations made under the multilateral agreements in relation to management and safe handling of hydrogen and its derivatives in ecosystem, will be implemented.

National Credentialing: A tiered national credential will be established: T1 Awareness; T2 Operator/First Responder; T3 Designer/Inspector; T4 Regulator/Assessor. Each tier defines learning outcomes, minimum contact hours, practical drills and a 3‑year recertification cycle. Training providers will be accredited; cross‑recognition with international credentials may be granted.

4.2.3 Dissemination of Information

Dissemination of relevant information of green hydrogen ecosystem at all levels shall be guaranteed through the institutional structure to the maximum possible level within the national legal framework.

4.2.4 Stakeholder Participation

Public awareness, education, capacity building and technological cooperation and sharing knowledge & best practices will be enhanced to ensure stakeholder participation in the decision making and implementation levels.

4.3 A Productive Ecosystem

4.3.1 Implementation Entity

Sri Lanka Sustainable Energy Authority will be the designated entity for regulating the green hydrogen ecosystem in the country. Early interventions will be made to introduce any Amendments to the act, if necessary, in order that the Authority is duly empowered for accomplishing this. In that regard, the existing purview of the Authority for regulating renewable energy-based electricity as an energy carrier will be appropriately extended to green hydrogen as a new energy carrier regulated by the Authority.

Note: The above is in line with the Recommendation made by the National Planning Department in connection to the implementation process.

4.3.2 Steering Committee & Expert Committee

A Steering Committee or a governing body shall be established to oversee the adoption of this Policy, and an Expert Committee shall be convened whenever the Steering Committee requires expert input on the subject, in the process of adopting the Policy.

4.3.3 Legal & Institutional Frameworks

Effective enforcement and implementation of related laws, regulations, guidelines and standards will be ensured by clear allocation of responsibilities within the most appropriate legal and institutional frameworks, in consideration of the Acts related to the subject.

Special attention shall be given to ensuring compliance with Section 23 of the National Environmental Act, No. 47 of 1980 as amended by National Environmental (Amendment)Act No. 56 of 1988, National Environmental (Amendment) Act, No. 53 of 2000 and National Environmental (Amendment) Act, No. 15 of 2026.

- Regulation published under the Gazette Notification No. 772/22 dated 24.06.1993- Environmental Impact Assessment test (EIA)
- Gazette Notification No. 2264/18 dated 27.01.2022- Environment Protection License (EPL)
- Regulations published under the Gazette Notification No. 924/12 National Environmental (Noise Control). Regulations No.1 21-05-1996.
- The primary regulations published under the Gazette No. 1534/18 dated 01.02.2008 and Gazette No. 1627/19 dated 10.11.2009- Scheduled Waste Management Licenses (SWML).

Sri Lanka Sustainable Energy Authority will serve as the regulator of the hydrogen industry, responsible for issuing licenses and ensuring that production sites, storage facilities, and transportation infrastructure are maintained to high safety and quality standards.

Public Utilities Commission of Sri Lanka will serve as the regulator of public consumable hydrogen products and their by-products, overseeing safety, quality, and compliance with relevant standards and regulations.

4.3.4 Institutional Coordination

Effective coordination of all related government institutions and private organizations will be ensured to realize the effective implementation of this Policy.

4.3.5 Monitoring & Review

Regular monitoring of application of this Policy will be strengthened and institutionalized in line with the latest developments and standards, and this Policy will be reviewed at appropriate intervals. Assessment of policy implementation efficiency, regulatory compliance and identification of emerging risks, will be taken into serious consideration in the monitoring & review process.

4.4 Safety and Security

4.4.1 Personal Health & Safety

Strategies and actions regarding management and safe handling of hydrogen, its derivatives and hydrogen infrastructure will be strengthened in order to ensure personal health & safety and to protect the environment including biodiversity and ecosystems.

4.4.2 Standards & Regulations

Sri Lanka shall place utmost importance in enforcement of regulations and implementation of necessary measures in line with most up-to-date national and international standards, safety codes, blending quotas, etc. In that regard, clear allocation of tasks and responsibilities with appropriate authorities will be made as a high priority, especially with the following.

- **Safety Case Regime:** Class I/II hydrogen facilities shall submit an approved Safety Case comprising HAZID, QRA, and where appropriate validated CFD for dispersion/venting. The Safety Case shall be independently reviewed at start‑up and at least every 36 months.
- **Permitting Playbooks & Audit Cadence:** The Competent Authority shall publish asset‑class Playbooks for electrolyzes; storage (compressed/liquid); pipelines; refueling stations; and export terminals (including ammonia bunkering). Playbooks list required studies, setbacks, hazardous‑area classification, detection/ESD, ventilation, electrical, fire protection, commissioning and emergency drills. Inspection cadence: Class I: annual independent audit and 3-year Safety Case re‑validation; Class II: biennial audit and 5-year review.

4.4.3 Risk Management

Risk analysis, risk assessment, risk mitigation management and communication will be strengthened at all levels. In this regard, an emergency response network shall be established covering the whole country (including offshore facilities and export terminals) connected to the existing Disaster Management Centre, allocating appropriate trained staff and all other required resources.

4.5 Technology Forefront

4.5.1 Tools & Technologies

Sustainable adoption of hydrogen technologies shall be established through most up-to-date appropriate tools, equipment and technologies to establish green hydrogen ecosystem and its sustainable operation at all levels.

4.5.2 Data Management System

A National Hydrogen Data Platform will be operated hosting asset registry, permits & inspection status, production / generation, incident/near‑miss reporting, KPI dashboards and LCA/RFNBO ledger. Operators provide monthly operational data; the KPIs shall be published quarterly.

5.0 Policy Goals

The Policy Goal is to make green hydrogen the third energy carrier to complete the energy transition and make Sri Lanka a leading energy exporter.

6.0 Applicability

The National Policy on Green Hydrogen in Sri Lanka establishes a management framework to overcome barriers in transitioning green hydrogen and hydrogen derivatives from niche applications to widespread use while ensuring safety.

The Policy recommends a robust process of ensuring safe handling of hydrogen at each segment of energy system by strictly following national and international standards. It also emphasizes regular review of all hydrogen related safety protocols and risk assessments in line with up-to-date international best practices. It also proposes to incorporate new data, information and case studies arising from research & development, new findings/learnings from incidents and maintain an efficient communication pathway across the hydrogen sector, including all processes in the ecosystem in Sri Lanka.

The National Policy on Green Hydrogen in Sri Lanka compliments other national and sectoral policies and regulations including National Energy Policy, National Chemical Management Policy, National Occupational & Safety Policy, National Policy on

Climate Change and National Environment Policy. The Policy guides the development of downstream markets for green products that incorporate green hydrogen such as green-methanol, green-ammonia SAF and oxygen utilization. It also lays the legal basis for aligning hydrogen and associate sectors with other national policies, including those listed above.

Government is taking substantial measures to provide the necessary financial incentives and non-financial measures for the private sector investors to develop a green hydrogen value chain and infrastructure. These include, but not necessarily limited, to import tariff relief, favorable taxation, simplified procedures (e.g. a central entity for development coordination, process re-engineering), Special Economic Zone support focally coordinated approval process, subsidies for using locally manufactured components, etc.). Other measures include, but not necessarily limited to, introduction of the Geen Hydrogen Strategic Plan and Roadmap, establishment of necessary frameworks for ensuring environmental health and safety compliance. They require formulation of Multilateral Agreements (MAs) and Memorandums of Understanding (MoUs) involving local and overseas stakeholders and organizations. The Policy provides guidance for formulation of MAs and a robust process in implementing them.

7.0 Implementation Strategies

The National Green Hydrogen Policy in Sri Lanka outlines:

Strategies to scale-up production of green hydrogen and its derivatives and lay the foundations for a green hydrogen economy in Sri Lanka by 2030;

Pathways to stimulate investment to develop green hydrogen ecosystem in the country;

Strategies to foster technology partnerships with international partners/companies to ensure that cutting-edge equipment and components can be manufactured, and systems can be developed in Sri Lanka for local and overseas markets.

The Policy also provides strategies to capture and sustain the economic benefits of anticipated growing the hydrogen economy, supporting innovation, stimulating investment to develop the local supply chain, training required skilled workforce at all levels of value chain and export opportunities for Sri Lanka.

7.1 Compliance, capacity building and public acceptance

Strategies coming under the compliance, capacity building and public acceptance are, to:

1. Ensure conformity with national legislation and international conventions as well as other agreed policies, protocols and practices (e.g. share knowledge and best practice, sustainability) in production, storage, transport, inter-conversion, end-use, export and safe vent/disposal of hydrogen, derivatives and all associated components in green hydrogen ecosystem. In this context, the national regulations and standards shall be harmonized and streamlined with most up-to-date international regulations and standards, including but not limited to strictly follow health and safety practices (regular self-assessment practices, benchmarks and safety drills etc.). Wherever it is appropriate, international regulations would be adopted to suit local needs;

2. Identify key locations for the development of hydrogen production and derivatives, storage, distribution end-use hubs, particularly near renewable energy production sites, major industrial zones, and export terminals promoting industrial chemical symbiosis (in industrial cluster settings). These storage hubs/clusters will ensure that hydrogen is stored and distributed efficiently, meeting both domestic and export demand and ensuring that hydrogen supply chain meets the best international safety standards and minimize Scope 3 emissions;

3. Promote research & development, innovation and knowledge creation (through industry-university-government interactions/partnerships), human resource development such as required skills training at all levels, capacity building, competence building, sharing knowledge and best practices for all stakeholders in green hydrogen ecosystem;

4. Strengthen training institutions by providing infrastructure, facilities and expert staff to broaden the technical skills including health and safety training required at all levels as well as non-technical skills (e.g. green business models, supply chain management, life-cycle assessment, recycling and circularity, carbon offsetting) to develop the green hydrogen ecosystem;

5. Strengthen existing test facilities and establish new test facilities at distributed level including mobile test facilities for analysis and certification of quality of hydrogen (both gaseous and liquified hydrogen) and its derivatives to support rapid hydrogen technology penetration and adoption locally and export;

6. Promote, facilitate and support local manufacturing capabilities of equipment (e.g. gas chromatographs, electrochemical workstations), devices (e.g. electrolyzers, fuel cells, compressors), components (e.g. membranes, pipes, regulators, fittings, sensors) required for green hydrogen ecosystem;

7. Develop and introduce the Green Hydrogen Strategic Plan and the Roadmap.

8. Increase awareness of all stakeholders and general public on domestic use of hydrogen, its derivatives and associated products containing hazards, regardless of their race, socio-economic status, or gender and other characteristics;

9. Encourage and incentivize journalists/media personnel to disseminate information on safe adoption of hydrogen technologies, advantages and challenges, through mass media and all types of communication channels, to help public awareness and acceptance;

7.2 Management, responsibility and authority

Strategies coming under the management, responsibility and authority aspects are, to:

1. Empower Sri Lanka Sustainable Energy Authority to coordinate with all responsible institutions, public and private sector organizations and individuals at national and international levels, for the establishment of green hydrogen ecosystem in Sri Lanka;

2. Adopt most up-to-date appropriate tools and technologies (e.g. IT) to ensure implementation, management, all hazard identification, risk assessment compliance (of national & international standards), environmental sustainability, monitoring (e.g. operation, real time hydrogen flow), communication and reporting the updates related to the green hydrogen ecosystem;

3. Develop a strong mechanism to expedite decision making across all processes in order that Sri Lanka meets its energy security and carbon emission reduction targets.

4. Develop an appropriate mechanism to expedite the approval processes for investments in green hydrogen and derivatives production and storage sites, transportation, supply chain and export;

5. Intent to provide supportive fiscal and regulatory environment in accordance with broader national fiscal policy;

6. Assure of the necessity of obtaining an Energy Permit in accordance with section 18 of the Sri Lanka Sustainable Energy Authority Act, for utilizing renewable energy resources in the country, for implementing any green hydrogen project;

7. Facilitate the rapid deployment of green hydrogen production projects through public-private partnerships (PPPs) through appropriate business models. These models will ensure that both local and international private companies can participate in large-scale green hydrogen production, supply chain and end-use

projects in the country, while assuring the attainment of economic benefits to Sri Lanka;

8. Introduce waste management mechanisms for the production sites based on the 5R system, Circular Economy and the extended producer responsibility pay principle in the stages of construction, production, end use, repairing and maintenance and end-of-life machinery and equipment.

9. Ensure the responsible use of land and water resources by formulating and implementing the necessary rules and regulations through Sri Lanka Sustainable Energy Authority, without diverting from essential community and ecological needs.

7.3 Monitoring and Evaluation

Strategies coming under the monitoring and evaluation aspects are, to:

1. Establish a dynamic system for integrated asset inspection by a team of experts consisting necessary expertise to regularly inspect, support and ensure operators and users at all levels, comply with the most up-to-date procedures, protocols and practices;

2. Introduce a national dynamic database to monitor real-time hydrogen and its derivatives flow within the ecosystem through coordination with all stakeholders and develop a central mechanism to manage data with appropriate confidentiality;

3. Coordinate with all stakeholders in the country's green hydrogen ecosystem to stay up-to-date with international knowledge, best practices, awareness of incidents, learnings from incidents, knowledge exchange;

4. Strengthen the existing legal framework to impose legal actions and penalties for action of non-compliance and inappropriate sites and facilities in the green hydrogen value chain;

5. Publish and update the obligations of Sri Lanka under multilateral agreements and obligations of all stakeholders to comply them;

6. Establish an emergency response network covering the whole country (including offshore facilities) connected to the existing Disaster Management Centre, allocating appropriate trained staff and all other required resources;

7. Establish a dedicated section with trained staff in Sri Lanka Standards Institution on hydrogen national standards in line with international standards which will oversee compliance of whole value chain with national standards and support Sri

Lanka Accreditation Board to ensure international benchmarked accreditation across the value chain;

8. Establish a mechanism to ensure the quality and standards of equipment, devices, components required for green hydrogen ecosystem at their procurement stage. For example, it can be done through the evaluation and approval of an appropriate technical expert committee attached to Sri Lanka Sustainable Energy Authority. This committee may promote procurement of locally produced equipment, devices, components, if they meet necessary quality and standards.

8.0 Mode of Implementation

A Strategic Implementation Plan, Safety Regulations & Standards will be developed and updating the roadmap will be carried out within a period of one year of the effective date of the Policy. The Policy will be reviewed in every 5 years.

Glossary

Bio-Hydrogen – Hydrogen produced from biological processes, such as biogas from bio-waste.

Carbon Neutrality – Achieving net-zero carbon dioxide emissions by balancing /(off-setting) emissions with carbon removal or elimination / sequestration.

Circular Economy – A system aimed at eliminating waste and the continual use of resources through recycling and sustainable practices.

Control of Major Accident Hazards (COMAH) – A regulatory framework designed to prevent and mitigate the consequences of major industrial accidents involving hazardous substances, including hydrogen and its derivatives, by enforcing strict safety protocols and risk management measures.

Decarbonization – The process of reducing or eliminating carbon dioxide (CO_2) emissions from energy production and industrial activities.

Electrolyzer – A device that uses electricity to split water into hydrogen and oxygen through electrolysis.

Embodied Emission – The total greenhouse gas emissions associated with the production, processing, and transport of a product or service.

Energy Security – Ensuring a stable and affordable energy supply to meet the country's needs.

Green Hydrogen – Hydrogen produced using renewable energy sources such as solar or wind power without emitting carbon dioxide.

Hydrogen Ecosystem – The entire value chain of hydrogen production, storage, distribution, usage, and disposal.

Hydrogen Embrittlement – The weakening of metal due to absorption of hydrogen, making it brittle and prone to failure.

Hydrogen Fuel Cell – A device that generates electricity by combining hydrogen with oxygen, producing water as a by-product.

IEA - International Energy Agency

IRENA - International Renewable Energy Agency

Inter-conversion – The process of converting hydrogen into its derivatives (e.g., ammonia, methanol) and vice versa.

Just Energy Transition – A framework ensuring that energy transitions are fair and inclusive, protecting workers and communities.

Life Cycle Assessment (LCA) – The evaluation of environmental impacts associated with all stages of a product's life.

Multilateral Agreements (MAs) – International treaties or agreements involving multiple countries for cooperation on hydrogen and energy policies and environment.

Memorandum of Understanding (MOU) – An agreement between two or more parties expressing convergence of will, indicating an intended common line of action. It is often used either in cases where parties do not imply a legal commitment or in situations where the parties cannot create a legally enforceable agreement.

Net Zero Strategy – A national plan to achieve carbon neutrality by a specific target year.

Paris Agreement – An international treaty to limit global warming to well below 2°C, preferably 1.5°C, above pre-industrial levels by the end of the 21st century.

Personal Protective Equipment (PPE) – Safety gear used by workers handling hydrogen and its derivatives.

Renewable Energy – Energy derived from natural sources that replenish over time, such as solar, wind, hydro, and bioenergy.

Renewable Hydrogen – It is a clean fuel made by splitting water into hydrogen and oxygen using electricity from renewable sources like wind, solar, or water.

Risk Assessment – The systematic process of evaluating potential risks associated with hydrogen production, distribution, storage, and transportation.

Strategic Energy Hub – A designated location for the production, storage, and distribution of hydrogen to ensure energy security.

Sustainable Aviation Fuel (SAF) – Alternative jet fuel derived from renewable sources, including hydrogen-based fuels.

Supply Chain Management – The coordination of processes involved in producing and delivering hydrogen from source to end-user.

Venting – The controlled release of hydrogen gas into the atmosphere to ensure safety during storage or transport.

Annex 1: Related Acts, Policies and International Conventions

(a) Related Acts

- Sri Lanka Sustainable Energy Authority Act, No.35 of 2007
- National Transport Commission Act, No. 37 of 1991
- National Environmental Act, No. 47 of 1980
- Coast Conservation Act, No. 57 of 1981
- Fisheries and Aquatic Resources Act, No. 2 of 1996
- Ceylon Petroleum Corporation Act, No. 28 of 1961
- Sri Lanka Electricity Act, No.36 of 2024
- Land Acquisition Act, No. 9 of 1950
- Land Development Ordinance and Amended Act
- Marine Pollution Prevention Act, No. 35 of 2008

(b) Related Policies

The National Policy on Green Hydrogen in Sri Lanka supports other related national policies (some of them are listed below) and is intended to be complementary.

- National Energy Policy & Strategies of Sri Lanka https://www.energy.gov.lk/images/resources/downloads/national-energy-policy-2019-en.pdf

- National Policy on Chemicals Management Policyhttp://www.env.gov.lk/web/images/downloads/policies/Chemical_Mgt_Policy.pdf
- National Policy on Waste Management, Ministry of Environment https://env.gov.lk/web/images/pdf/policies/National_Policy_on_Waste_Management_English.pdf
- National Occupational Health and Safety Policy https://www.niosh.gov.lk/images/2020/OSH_Policy_2014.pdf
- National Environment Policy http://www.env.gov.lk/web/images/pdf/policies/National_Environment_Policy_-_English.pdf
- National Policy on Climate Change https://www.climatechange.lk/CCS2023/NPCC_2023_ENGLISH.pdf
- National Decent Work Policy https://www.ilo.org/sites/default/files/wcmsp5/groups/public/@asia/@ro-bangkok/@ilo-colombo/documents/publication/wcms_114045.pdf

(c) Related International conventions and bonds

- Paris Agreement of United Nations Framework Convention on Climate Change
- Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal
- The Stockholm Convention on Persistent Organic Pollutants (POPs)
- Vienna Convention for the Protection of the Ozone Layer
- Minamata Convention on Mercury
- Rotterdam Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade
- United Nations Framework Convention on Climate Change (UNFCCC)
- The Global Framework on Chemicals (GFC)
- Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES)
- United Nations Convention on Biological Diversity
- Convention on Wetlands of International Importance especially as Waterfowl Habitat

- United Nations Convention on the Law of the Sea (UNCLOS) and the related BBNJ (Biodiversity Beyond National Jurisdiction) agreement