Version 6.0

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Government of Rajasthan

Rajasthan Hydrogen Policy 2021

150 YEARS OF CELEBRATING THE MAHATMA

1. Introduction

The world is facing a major challenge of climate change. In 2015 the global community committed for taking action to keep global temperature rise this century well below 2°C above pre-industrial levels. A growing number of countries are pledging to reach net-zero carbon dioxide (CO2) emissions by mid-century with the goal of limiting temperature rise to 1.5°C. Achieving the deep or full decarbonization of economies will require concerted and wide-ranging action across all economic sectors.

It has been estimated that 8.8% less CO_2 was emitted in the first six months of 2020 as compared to first six months of 2019, following the COVID-19 pandemic and the consequent lockdowns (Liu et al., 2020). But for continuing long-term reduction, the need for structural and transformational changes in our global energy production, consumption and underlying socio-economic systems cannot be understated.

The energy transformation requires a major shift in electricity generation from fossil fuels to renewable sources like solar and wind, greater energy efficiency and the widespread electrification of energy uses from vehicles to heating / cooling in buildings. Still, all sectors or industries cannot easily make the switch from fossil fuels to electricity such as like steel, cement, chemicals, long-haul road transport, maritime shipping, and aviation.

Green Hydrogen can provide a link between growing and sustainable renewable electricity generation and the hard-to-electrify sectors. Hydrogen in general is a suitable energy carrier for applications remote from electricity grids or that require a high energy density, and it can serve as a feedstock for chemical reactions to produce a range of synthetic fuels and feedstocks. Additional benefits of green Hydrogen include the potential for additional system flexibility and storage, which support further deployment of variable renewable energy (VRE), contribution to energy security, reduced air pollution and other socio-economic benefits such as economic growth, job creation and industrial competitiveness.

Overcoming the barriers and transitioning green Hydrogen from a niche player to a widespread energy carrier will require dedicated policy in each of the stages of technology readiness, market penetration and market growth. An integrated policy approach is needed to overcome the initial resistance and reach a minimum threshold for market penetration, resting on four central pillars: building national Hydrogen strategies,

identifying policy priorities, establishing a governance system, enabling policies and creating a system for guarantee of origin for green Hydrogen.

Government of India has announced the launch of National Hydrogen Mission (NHM) in August 2021 which aims at making the country a global hub for the production and export of green Hydrogen.

In Line with the Government of India agenda, Government of Rajasthan is keen on becoming the first state in India to introduce the Green Hydrogen Policy which will be a trend setter for rest of the economy and help in promoting and achieving the green economy agenda of the country.

This Policy aims at providing required support to enterprises engaged in Green Hydrogen production as well as its applications.

2. Title and Commencement

The Policy shall be called “Rajasthan Hydrogen Policy 2021” and shall come into effect from the date of its notification in the Official Gazette. The policy shall remain in force until it is amended or superseded by the State Government.

3. Vision & Mission

3.1. Vision

To make Rajasthan the most preferred investment destination for Green Hydrogen production in India with conducive eco-system for inclusive, balanced and sustainable industrial development.

3.2. Mission

3.2.1. To promote green production of Hydrogen gas and its utilization in the state

3.2.2. To develop various innovative manufacturing capacities of Hydrogen, such as steam methane reforming, electrolysis of water, Hydrogen fuel blending, etc. and promote its downstream manufacturing and usage such as fuel cell, Hydrogen turbine, etc. in Rajasthan.

3.2.3. To develop and maximize the utilization of potential of the human capital of the State for the Hydrogen gas sector

3.2.4. To support research and technological up-gradation of Industry and usher in the new era of Industry 4.0 to develop a potential for Hydrogen gas

production and its use.

3.2.5. To promote ease of manufacturing by introducing new / innovative fiscal incentives and augmenting the existing ones for the industry to make Green Hydrogen manufacturing in Rajasthan globally competitive.

3.2.6. To promote Research & Development for pollution-free production system, innovative products, including associated design and creation of Intellectual Properties, for the domestic as well as global markets.

4. Industrial infrastructure development

4.1. The policy aims to establish Green Hydrogen production ecosystem and promote the Hydrogen as pollution free green energy in various segment of the commercial and industries usage.

4.2. Western Rajasthan has emerged as hub of renewable energy production. Several solar, wind and hybrid energy production units are operational in the region and many are under implementation or in planning phase. Rajasthan Government shall leverage potential of its Renewable Energy resources to promote production of the green Hydrogen in the State through domestic as well as foreign investment.

4.3. The State Government shall facilitate establishment of Hydrogen production units. The State Government shall also ensure effective utilization of production capacity by allocating adequate amount of water and other utilities required for the production and operations of Hydrogen Industry.

4.4. The policy envisages for creating world-class infrastructure in the form of the Centres of Excellence (CoE) with cutting-edge technology to promote research, innovation and entrepreneurship in the Hydrogen gas production sector. The policy aims to establish a CoE in collaboration with the Government of India / Research Institutions / Industry Associations/ Large Scale Manufacturers. The proposed CoE shall focus on safe transportation and usage of the Hydrogen.

4.5. The State Government shall conduct survey to identify the possible alternatives for storage and transportation of the Hydrogen to the different consumption centres such as pipeline supply, cylinder transportation, transportation after blending with natural gas etc.

5. Ease of Doing Business

The Government of Rajasthan has taken various initiatives to boost the business environment in the State by bringing in regulatory reforms and simplifying the procedures of registrations, to intensify the development & promotion of Industries in the State. Govt.

5.1. Under the Rajasthan Micro, Small and Medium Enterprises (Facilitation of Establishment and Operation) Act 2019 all inspections for permission, NOC, clearance, consent, approvals, registration, license etc. are exempted under any State law in connection with establishment or operation of enterprise for a period of 3 years.

5.2. The State Government has established one stop shop facility with IT application 'RAJNIVESH' for all investment related matters such as business information to investor, investor queries, expediting regulatory approvals, facilitating meetings with relevant Government departments, hand-holding support for matters related to fiscal incentives and investor's feedback.

6. Ecosystem for Hydrogen Sector and Sustainable Development

Hydrogen has been considered effective source of energy which is currently used for fertilizer (ammonia) production, as a chemical feedstock and catalyst, as Hydrogenating agent and in petrochemical and refinery processing etc. Now a days, Hydrogen is emerging as low-carbon fuel option for transportation, electricity generation and manufacturing application. Hydrogen has highest energy content of any common fuel per unit of weight and it can be produced easily with use of green energy. This makes Hydrogen environment friendly energy source for sustainable development.

6.1. The State Government shall support exploration of new methodologies and technologies for safe and effective production as well as utilization of green Hydrogen through combustion or in form of fuel cells. The State Government shall also support the research and usage of byproducts / allied products such as oxygen produced in the electrolysis process etc.

6.2. To encourage green Hydrogen production, the State Government shall provide adequate land near by the renewable energy production units at competitive rates and necessary regulatory support shall be provided to Hydrogen producing units.

6.3. To promote consumption of Hydrogen gas in effective and safe manner, the State Government shall also promote establishment of Hydrogen consuming units near

the Hydrogen production centres.

6.4. Adoption of green Hydrogen gas shall be encouraged and to promote use of Hydrogen in Industrial, Commercial and Transport activities, awareness programmes shall be organized.

6.5. The State Government shall provide attractive fiscal incentives for the adoption of the Hydrogen as a source of energy instead of fossil fuels. The State Government shall also promote use of Hydrogen directly or with natural gas as a fuel for thermal power generation.

6.6. To promote use of green energy in production of Hydrogen, the State Government shall promote collaboration of renewable energy producer with Hydrogen production units. The State Government shall formulate guidelines for such collaboration.

7. Research & Development(R&D) and Innovations

7.1. To facilitate the industries with the robust ecosystem for Hydrogen manufacturing and to provide a cost-effective manufacturing environment, Research and Development (R&D) Centres with testing, skilling and incubation facilities shall be established. The State Government shall provide a one-time grant / State contribution of upto 30% of the cost incurred in the establishment of R&D Centres subject to a maximum of INR 5 Crores to the industries / industry associations.

7.2. The State Government shall promote technology acquisition, skill development, and R&D with increasing industrial engagement in the development of products and storage for the Hydrogen gas.

7.3. R&D centres focusing on Hydrogen gas production and processes shall be established in collaboration with universities/ technical institutions/ research organizations in the State for bringing together researchers, industry, and academia.

7.4. A new skilling programme shall be introduced in emerging sub-sectors of Hydrogen gas.

7.5. Industry shall be encouraged to set up in-factory skilling centres in collaboration with leading Universities, Government Approved/ Affiliated/ Recognized Educational Institutions, and ITIs.

7.6. To encourage Research & Development (R&D) and innovation across the sub-

sectors, an Innovation Award shall be introduced by the State Government.

8. Competitive fiscal incentives

Government of Rajasthan offers an enhanced package of incentives for manufacturing and services enterprises comprising of investment support on SGST, employment subsidy, electricity duty exemption, rebate in power tariff, stamp duty exemption, mandi fee exemption, rebate in land conversion charges, and support for water conservation / green measures are envisaged under the incentive scheme.

Under RIPS-2019 below mentioned benefits have been provided to eligible manufacturing enterprises.

8.1. Investment Subsidy of 75% of State tax due and deposited, for seven years.

8.2. Employment Generation Subsidy in the form of reimbursement of 50% of employer's contribution towards employees EPF and ESI, for seven years:

Provided that the Employment Generation Subsidy in the form of reimbursement of 75% of employer's contribution towards EPF and ESI shall be granted

a) For employees belonging to Women, Schedule Caste (SC), Schedule Tribe (ST), Person with disability (PwD); and

b) For all employees, if the enterprise is providing more than 75% direct employment to persons domiciled in Rajasthan.

Provided further that the Employment Generation Subsidy shall not be granted for those employees for which employer is receiving reimbursement under any other scheme of Government of India or Government of Rajasthan;

8.3. Exemption from payment of 100% of Electricity Duty for seven years;

8.4. Exemption from payment of 100% of Land Tax for seven years;

8.5. Exemption from payment of 100% of Market Fee (Mandi Fee) for seven years;

8.6. Exemption from payment of 100% of Stamp Duty:

a) On purchase or lease/sub-lease of land and construction or improvement on such land;

8.6.1. sExemption from payment of 100% of conversion charges payable for change of land use and conversion of land.

8.7. Special Incentives for Green Hydrogen Production Units

A) First 5 Units / companies investing equal to or above INR 50 Crores in Green Hydrogen gas manufacturing or Hydrogen based power generating units or Hydrogen fuel cell manufacturer shall be granted the following benefits: -

a) 5% Interest Subsidy on term loan taken by enterprise from Financial Institutions or State Financial Institutions or Banks recognized by Reserve Bank of India, for investing in plant & machinery, for a period of five years subject to a maximum of INR 10 Crores per year;

or

b) Capital Subsidy equivalent to 20% of the investment made on the plant & machinery, subject to a maximum of INR 50 Crores.

B) Eligible enterprises shall also be eligible for a one-time reimbursement of 50% of the cost incurred to acquire advanced technology from premier national institutes – Indian Institute of Science (IISc), Indian Institute of Technology (IITs), National Institute of Technology (NITs), National Institute of Design (NIDs), The Council of Scientific and Industrial Research (CSIR), Defense Research and Development Organization (DRDO) or any other institute set up by Government of India, subject to a maximum of INR 2 Crores for Hydrogen gas production units.

C) Electricity Subsidy: The Hydrogen manufacturing units shall be exempted from the payment of open access charges, wheeling charges, transfer charges, electricity duty and banking charges for the use of renewable energy for 14 years from the date of commencement of commercial production.

The process of availing incentives shall be simplified, transparent, and time-bound for approval, sanction, and disbursement under the incentive scheme.

9. Rajasthan Hydrogen Gas Policy Monitoring Committee

9.1. Rajasthan Hydrogen Policy Monitoring Committee shall be constituted under the Administrative Secretary - Industries & Commerce, Government of Rajasthan to periodically review (at least once in every quarter) implementation as well as assessment of the impact of this policy.

9.2. The Committee shall be empowered to take all necessary decisions for the smooth implementation of policy such as:

a. To monitor the progress of all institutions involved in the process
b. To assign roles and targets to institutions involved and monitoring of work being performed
c. To interpret and/or relax any provision of the Policy
d. To frame and/or amend any guidelines or schemes under the Policy
e. To review various measures for the favorable business environment in the State for the Hydrogen Gas industry

10. Policy Implementation

The Department of Industries and Commerce shall act as the nodal coordinating, monitoring, and implementing department. Any matter pertaining to interpretation of any clause of the policy shall be referred to the Department of Industries & Commerce, Government of Rajasthan and the decision of the Department of Industries & Commerce, Government of Rajasthan shall be considered final in this regard.

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