

353/40/2023-NT
Government of India
Ministry of New and Renewable Energy
(Hydrogen Division)

Atal Akshay Urja Bhawan,
Lodhi Road, New Delhi 110003
Date: 28/06/2023

To

The Pay & Accounts Officer,
Ministry of New and Renewable Energy,
New Delhi- 110003

Sub: Scheme Guidelines for implementation of "Strategic Interventions for Green Hydrogen Transition (SIGHT) Programme – Component II: Incentive Scheme for Green Hydrogen Production (under Mode 1)" of the National Green Hydrogen Mission

Sir/Madam,

I am directed to convey the sanction of the President of India for the implementation of the "Strategic Interventions for Green Hydrogen Transition (SIGHT) Programme – Component II: Incentive Scheme for Green Hydrogen Production (under Mode 1)" of the National Green Hydrogen Mission for the period from FY 2025-26 to FY 2029-30 with a total outlay of Rs. 13050 crore for all modes under this component.

2. Objectives:

- i. To maximize production of Green Hydrogen and its derivatives in India.
- ii. Enhance cost-competitiveness of Green Hydrogen and its derivatives vis-à-vis fossil-based alternatives.
- iii. Encourage large scale utilization of Green Hydrogen and its derivatives.

3. Implementation Methodology: The Scheme will be implemented as per the detailed Scheme Guidelines at **Annex**.

4. The expenditure on this scheme will be met from the budget provisions given under the Hydrogen Mission Head.

5. Solar Energy Corporation of India (SECI) shall be the implementing agency for implementation of this scheme.

6. This issues in exercise of the powers conferred on this Ministry and with the concurrence of IFD vide their Diary. No. 129 dated 28/06/2023



7. This has the approval of Hon'ble Minister of Power and New and Renewable Energy

Yours faithfully,



(Dr. Prasad Chaphekar)
Deputy Secretary
Email: prasad.chaphekar@gov.in

Enclosed: **Annex**

Copy to:

1. All Central Government Ministries and Departments
2. All Members of the Empowered Group under the Mission
3. All Members of the Advisory Group under the Mission
4. CEO, NITI Aayog, Sansad Marg, New Delhi
5. State Nodal Agencies (SNAs) of all States/UTs
6. Major Public Sector Enterprises operating in Renewable Energy/Power Sector
7. Principal Director of Audit, Scientific Audit-II, DGCAR, I.P. Estate, Delhi-11002
8. Director General (Local Bodies), Office of the Comptroller & Auditor General, Deendayal Upadhyay Marg, New Delhi
9. Solar Energy Corporation of India (SECI), 6th floor, Plate-B, NBCC office, Block tower-2, East Kidwai Nagar, New Delhi. 110023
10. Indian Renewable Energy Development Agency Limited (IREDA), 3rd floor, August Kranti Bhavan, Bhikaji Cama place, New Delhi-110066

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Scheme Guidelines for implementation of “Strategic Interventions for Green Hydrogen Transition (SIGHT) Programme – Component II: Incentive Scheme for Green Hydrogen Production (under Mode 1)” of the National Green Hydrogen Mission

1. Introduction

The Union Cabinet has approved the National Green Hydrogen Mission with an outlay of ₹19,744 crore up to FY 2029-30. The Strategic Interventions for Green Hydrogen Transition (SIGHT) programme is a major financial measure under the Mission, with an outlay of ₹17,490 crore. The programme proposes two distinct financial incentive mechanisms to support domestic manufacturing of electrolyzers and production of Green Hydrogen. These incentives are aimed at enabling rapid scale-up, technology development and cost reduction.

There could be several modes for implementation of “Incentive Scheme for Green Hydrogen Production”. Two of them are presently identified as follows:

Mode 1: Bidding on least incentive demanded over the three-year period, through a competitive selection process.

Mode 2: The implementing agency shall aggregate demand and will call for bids for procurement of Green Hydrogen and its derivatives at the lowest cost through a competitive selection process.

This document lays down the framework for the proposed incentives for production of Green Hydrogen under Mode I.

2. Title of Scheme: Incentive Scheme for Green Hydrogen Production (under Mode 1)

3. Outlay for Incentive Scheme for Green Hydrogen Production (all modes): ₹ 13,050 crore

4. Objectives:

- i. To maximize production of Green Hydrogen and its derivatives in India.
- ii. Enhance cost-competitiveness of Green Hydrogen and its derivatives vis-à-vis fossil-based alternatives.
- iii. Encourage large scale utilization of Green Hydrogen and its derivatives.

5. Implementation Methodology:

The scheme will be implemented through a transparent selection process for award of incentives, details of which are furnished in this Section.

5.1. Implementing Agency

- i. The Scheme will be implemented by Ministry of New and Renewable Energy (MNRE) through Solar Energy Corporation of India Limited (SECI) as the Implementing Agency. SECI will be responsible for providing secretarial, managerial and implementation support and carrying out other responsibilities as assigned by MNRE from time to time. The responsibilities of SECI, inter alia, include receipt of applications, examination and appraisal of applications as per the provisions of the scheme, issuing acknowledgements and letters of award to applicants, examination of claims of beneficiaries for disbursement of incentives, verification and reconciliation of disbursement claims with prescribed documents, compilation of data regarding progress and performance of the scheme through Quarterly Review Reports and other information / documents. SECI will also submit progress to MNRE on a quarterly basis along with details of disbursement claims received for Incentives, amount disbursed, reasons for delay in disbursement of the incentives etc. SECI will be eligible to get 0.5% of the incentive amount disbursed as administrative charges on annual basis.
- ii. SECI will have the right to carry out physical inspection of an applicant's production plants. It may take help from third-party agencies for verification of technical parameters. If required, MNRE may also designate National Accreditation Board for Testing and Calibration Laboratories (NABL) accredited labs or other third-party certification agencies, etc. for such verification.

5.2. Green Hydrogen

To be eligible for incentives under the scheme, the bidder must ensure Green Hydrogen production in accordance with the detailed criteria laid down in the "National Green Hydrogen Standard" as notified by the Ministry of New and Renewable Energy.

In cases where the end-product is a derivative of Green Hydrogen such as Green Ammonia, the incentive would be made available based on the amount of Green Hydrogen (in kg) utilized to produce the given amount of the derivative.

The following equivalence factor would be applicable for Green Ammonia:

Derivative	Equivalent amount of Green Hydrogen
Green Ammonia	0.1765 kg Green Hydrogen per kg of Green Ammonia

In case of any other derivative, MNRE shall declare an equivalence factor based on amount of Green Hydrogen (in kg) utilized to produce the given amount of the derivative.

5.3. Guiding Principles:

- i. Under the scheme, a direct incentive in terms of ₹/kg of Green Hydrogen production will be provided for a period of 3 years from the date of commencement of Green Hydrogen production.
- ii. Beneficiaries under the scheme will be selected through a competitive selection process.
- iii. The incentives will be capped at ₹50/kg in the first year of production, ₹40/kg during the second year of production and ₹30/kg during the third year of production.

5.4. Selection of Bidders for award of Incentives

The details of selection process of bidders for award of incentives under Mode 1 is outlined in this section.

5.4.1 Bid Process

MNRE, through SECI, will invite bids for competitive selection under this mode. The bidders will be required to quote the following:

- a. Annual production capacity of Green Hydrogen and/or its derivatives for which incentive is sought. The capacity quoted should be constant over first three years from start of commercial production (in Thousand Metric Tonnes {MT}); and
- b. Incentive demanded in ₹/kg for each of the first three years of production with an upper cap of ₹50/kg, ₹40/kg & ₹30/kg for Green Hydrogen for first, second and third year of production respectively.

5.4.2. Selection Process:

- a. Qualified bidder(s) will be allocated capacities in the order of the **Least Average Incentive** demanded (in ₹/kg), taken as a simple average of the incentive demanded (in ₹/kg) for each of the three years.
- b. For each bucket, the bidder quoting the Least Average Incentive shall be first allocated its admissible capacity. Thereafter, the Bidder quoting the next lowest average incentive will be allocated its admissible capacity, and so on, until the total capacity in the bucket is exhausted.
- c. In case two or more bidders quote the exact same Least Average Incentive demanded, such tied bids would be prioritized based on who has quoted higher quantum of bid capacity and if bid capacities are also equal, then the bidders would be given the same ranking and allotted equal capacities.

Illustration

1. If a bidder quotes ₹ 48/kg for the first year, ₹ 37/kg for the second year and ₹ 29/kg for the third year, then

Least Average Incentive will be calculated as simple average of incentives demanded over three years i.e

$$\text{Least Average Incentive demanded} = ₹ (48+37+29)/3 = ₹ 38/\text{kg}$$

If the Least Average Incentive demanded by bidder 1 comes out to be ₹ 38/kg of Green Hydrogen; and the Least Average Incentive demanded by bidder 2 comes out to be ₹ 36/kg of Green Hydrogen, then Bidder 2 will be first allocated the quoted bid capacity, which should not be higher than the maximum allowed bid capacity i.e. 90,000 MT and also not lower than 10,000 MT (as in Para 5.4.5)

2. In case of tie between two bidders with same Least Average Incentive demanded (e.g. ₹ 37/kg) and same bid capacities (eg 50,000 MT); then they will be awarded equal capacities depending on the quantum of unallocated capacity, upto a maximum of 50,000 MT each, as bidded.

5.4.3. Separate Buckets for different pathways:

Capacities available for bidding during Tranche I, under different pathways is as under:

	Technology Agnostic Pathways (Bucket I)	Biomass Based Pathways (Bucket II)
Total capacity available for bidding	410,000 MT/annum of Green Hydrogen	40,000 MT/annum of Green Hydrogen

5.4.4. Eligibility for Bidding

- i. The Net Worth of the Bidder under "Technology Agnostic Pathways", as on the last date of previous Financial Year, as specified in the tender document should be equal to or greater than ₹15 crore per thousand MT per annum of quoted production capacity of Green Hydrogen.
- ii. The Net Worth of the Bidder under "Biomass Based Pathways", as on the last date of previous Financial Year as specified in the tender document should be equal to or greater than ₹ 1.5 crore per thousand MT per annum of quoted production capacity of Green Hydrogen.
- iii. The bidder can be a single company or a Joint Venture/ Consortium of more than one company. The Bidder may seek qualification on the basis of financial capability of its Affiliate(s) for the purpose of meeting the qualification requirements.

5.4.5. Capacity Allocation

- i. The capacity available for bidding under the Tranche I of Mode I is 450,000 MT per annum of Green Hydrogen.
- ii. Under "Technology Agnostic Pathways", the maximum capacity that can be allotted to a single bidder will be 90,000 MT per annum. The minimum capacity that can be bid for shall not be less than 10,000 MT per annum.
- iii. Under "Biomass Based Pathways", the maximum capacity that can be allotted to a single bidder will be 4,000 MT per annum. The minimum capacity that can be bid for shall not be less than 500 MT per annum.
- iv. Any unallocated capacity during the Tranche I would be carried over to the subsequent tranche. In case biomass-based capacity is left over after receiving bids for Tranche II, the balance capacity may be carried over to the technology agnostic pathways bucket, for further tranches.
- v. The bidder can bid either for Bucket I or Bucket II or both of them.
- vi. Bids under Bucket I will be decided first followed by Bids for Bucket II.
- vii. The maximum allocation to a single bidder under Tranche I will be 90,000 MT per annum.

5.5. Payment of incentives to successful bidders

The incentive payout for successful bidders will be calculated as follows:

Incentive payout in a given year = (Incentive quoted for that year in Rs/kg) × (Allocated capacity or Actual Production in the year, in kg, whichever is lower)

Allocated capacity will remain constant over a period of three years.

Incentive shall be disbursed to each successful bidder on an annual basis, after the requisite claim is received from the successful bidder, and duly verified by MNRE, through SECI.

5.6. Timelines for Commissioning

The successful bidders allotted capacities under the scheme must commence manufacturing in accordance with the timelines mentioned in the tender document.

5.7. Penalties

- i. Bidders will have to submit, at the time of bid submission, Earnest Money Deposit (EMD) as prescribed in the tender document. The tender document will inter-alia, contain provisions regarding forfeiture of EMD in case of selected bidder refusing to submit the requisite documents/Performance Bank Guarantees (PBG)/or other similar Performance Guarantee instruments as per tender document/ extant

guidelines or the selected bidder not meeting eligibility criteria upon submission of documents.

- ii. Successful Bidders will have to submit Performance Bank Guarantees (PBG)/ other similar Performance Guarantee Instruments, at the time of accepting the award as prescribed in the tender document. In case of default or delay in commissioning, commensurate bank guarantees will be forfeited by SECI, as penalty. Detailed modalities in this regard will be given in tender documents. Encashment of EMD, bank/other guarantees, accrued interest or other charges collected by SECI will be remitted to the Consolidated Fund of India by SECI as per rule-230 (8) of GFRs 2017 after deducting the legal expenditure (if any).

5.8. Monitoring

A Scheme Monitoring Committee (SMC) under the chairmanship of Secretary, MNRE, and comprising representatives from MNRE, SECI and experts from other organizations as may be required for the purpose, shall periodically review of the status of implementation/ performance of Green Hydrogen manufacturing capacities awarded/ set up under the scheme. The Committee will also facilitate / recommend measures to resolve difficulties, if any.