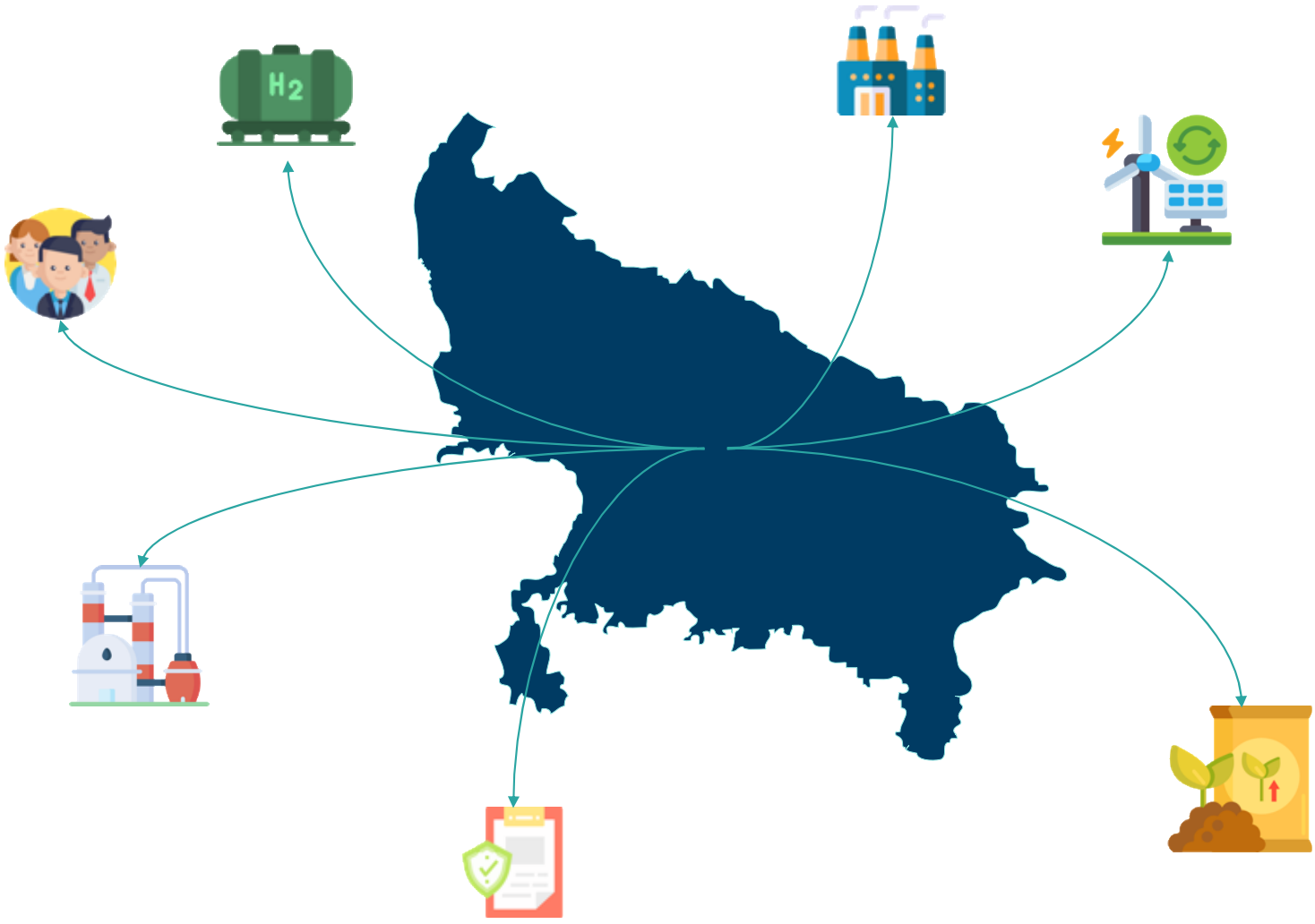
Uttar Pradesh Green Hydrogen Policy 2024



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1. Preamble

Growing concerns of global warming and climate change require emphasis on clean and green energy. The Government of Uttar Pradesh recognizes the current and potential impact of Climate Change and is committed to encouraging the promotion of clean energy sources. Green hydrogen being a clean and industrial fuel will prove helpful in achieving the goal of Net-Zero target. At present, the production cost of Green Hydrogen is not economical as compared to Grey Hydrogen produced using Natural Gas. Hence to give impetus to Green Hydrogen projects in the state, it is essential to provide various incentives in the initial stage. The 'National Green Hydrogen Policy 2022' and 'National Green Hydrogen Mission 2023' announced by the Government of India are very useful from the point of view of making India a Global Hub of Green Hydrogen in the coming decade.

'Uttar Pradesh Green Hydrogen Policy 2024' prepared by the Government of Uttar Pradesh will promote growth and employment in the state while prioritising decarbonisation and the state's contribution to India's climate goals. The policy shall also promote Green Hydrogen/Ammonia production, market creation, and boost demand aggregation. The policy shall ensure a conducive and favourable ecosystem to fulfil the ambition of establishing a Green Hydrogen/Ammonia economy in the state.

2. Policy Overview

2.1. Title of the policy and operative period

This policy shall be known as the **'Uttar Pradesh Green Hydrogen Policy 2024'** (hereinafter 'Policy'). It shall remain valid and operational for the next five years ('Operative Period') or until the State government amends this policy or notifies a new policy.

2.2. Scope of the policy

The policy will create production, consumption, market creation, and other elements in the entire value chain of Green Hydrogen/Ammonia units. Green hydrogen has immense potential for consumption in sectors like nitrogenous fertilizers, chemicals, refineries, heavy vehicles, energy storage, iron and steel, city gas distribution (CGD), glass manufacturing etc. In the direction of Green Hydrogen economy in Uttar Pradesh, the initial emphasis will be given on use of hydrogen in nitrogenous fertilizer and refinery industries of the state. Subsequently, the policy will cover applications of Green Hydrogen in other emerging industries in line with the National Green Hydrogen Mission and the policies of the Government of India.

2.3. Vision and Objectives

1. To implement the Green Hydrogen Mission and Green Hydrogen related policies of the Government of India and provide support accordingly.

2. To promote Green Hydrogen/ Ammonia market creation by providing fiscal and non-fiscal incentives to facilitate ease of doing business and to promote investment in establishing Green Hydrogen/Ammonia production facilities and Green Hydrogen based product manufacturing units.
3. To encourage research and innovation in Green Hydrogen/Ammonia production and consumption technologies to reduce the cost of Green Hydrogen/Ammonia.
4. To pursue development of infrastructure like pipeline network, renewable energy (RE) capacity etc. in the Green Hydrogen/Ammonia value chain to promote creation of new manufacturing units and hydrogen hubs.
5. To develop workforce for Green Hydrogen/Ammonia industries and create employment opportunities through skill development programmes.
6. To reduce cost of Green Hydrogen production during the policy period and make efforts to reduce it further in the long term.

3. Goal

The production capacity of 01 (one) million metric tonne per year of Green Hydrogen/Green Ammonia is targeted in Uttar Pradesh by the year 2029. To achieve the goals of the policy, the following have been envisaged:

i. To promote consumption of Green Hydrogen/Ammonia in hydrogen consuming areas in the state as per the National Green Hydrogen Mission and the policies of the Government of India
ii. To establish two Centres of Excellence (CoE) to carry out research, development, and technological innovation activities.
iii. The current demand of hydrogen in the state is about 0.9 million metric tons per year (MMTPA), which is mainly used in the fertilizer and refinery sectors. The state will promote Green Hydrogen/Ammonia production to meet its domestic demand and develop industrial infrastructure for the ecosystem.

4. Improving ease of doing business

The Government of Uttar Pradesh has taken initiatives to facilitate investments and businesses in the state. These initiatives range from simplifying processes to regulatory reforms for ease of doing business. In case of any overlap with the incentives provided in other policies of the State, the incentive provisions provided in this policy will apply. The following incentives will be provided by the Government of Uttar Pradesh to facilitate existing and new Green Hydrogen/Ammonia investments:

1. Single Window Clearance facility will be provided by the Government of Uttar Pradesh to facilitate seamless expansion of new Green Hydrogen/Ammonia projects and existing units.
2. The State Government will prepare data on availability of land bank and water and will help potential investors in providing land, water, and power transmission system as per requirement.

5. Development of Green Hydrogen/Ammonia Ecosystem

Infrastructure for the entire value chain will be strengthened for the development of Green Hydrogen/Ammonia ecosystem. Under this policy, along with hydrogen blending in Green Hydrogen consumption areas, development of industrial clusters/centers/valleys for Green Hydrogen/Ammonia will be encouraged with mandatory promotion of Green Hydrogen/Ammonia production around the consumption centers besides providing cooperation in its implementation as per the guidelines of the Government of India.

The policy will encourage Carbon Dioxide Recovery (CDR) units to utilize carbon emitted from biogas and other industries. Besides electrolyzer manufacturing, support will be provided in assessment of Right of Way (ROW) from production units to consumption centers for Green Hydrogen/Ammonia and its derivatives for technological development of their storage and transportation. Under the policy, adequate water supply, expansion of existing power transmission infrastructure and demand aggregation and regulatory support will be provided for development of Green Hydrogen/Ammonia production units.

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

i. The high cost of green hydrogen production is a major obstacle to its adoption. Innovation needs to be encouraged to reduce costs. It is expected that challenges in newly emerging Green Hydrogen applications, indigenous manufacturing of electrolyzer, system efficiency, transportation, storage etc. needs to be addressed.

ii. 02 (Two) Centres of Excellence will be established to reduce the production cost of Green Hydrogen & its products and for the development of new technologies. The establishment shall be done by educational institutions of national importance.

iii. 100% financial incentive (Maximum up to Rs 50 Crores) will be provided to Government educational institutions for establishing Centers of Excellence. This incentive will be provided subject to no double funding to the institute from any other source to the extent of financial incentives.

iv. Centers of Excellence will cover key areas of R&D such as electrolyzer manufacturing, Type-4 storage tanks, Testing laboratory for Green Hydrogen, Transportation of Green Hydrogen, Development of fuel cell electrolyzer for hydrogen production, Production of

Green Hydrogen through solar thermal and other technologies to reduce production cost etc.

v. Startups producing/using Green Hydrogen/Ammonia in Uttar Pradesh will be encouraged. Under this, incentives will be allowed to startups registered by the State Government and the Government of India.

vi. Each startup will be given a maximum financial incentive of Rs 25 Lakhs per year for 05 years. Only those startups which are registered under incubators of any educational institutions will be eligible for financial incentives.

vii. During the policy period, a maximum of three incubators will be encouraged with each incubator allowing a maximum of 10 startups.

viii. 20% incentive allocated to startups will be made available to the incubators as financial incentive for activities like Capacity Building, Hackathon, Events, and administrative expenses etc.

7. UPNEDA as Nodal Agency

Uttar Pradesh New and Renewable Energy Development Agency (UPNEDA) will act as nodal agency for implementation of this policy. The Nodal Agency will facilitate to fulfil the objectives of the Green Hydrogen policy, the implementation of schemes, and assistance to project developers.

8. Fiscal Incentives

To attract maximum investment in the State and to encourage competitiveness of industries on projects set up after the policy is promulgated, attractive financial incentives, concessions and subsidies will be provided under this policy. For this, detailed guidelines will be issued by the State Government. Financial incentives under the policy will be provided by the nodal agency.

8.1. Eligibility and Definitions

8.1.1 Effective Date means the date on which this Policy shall come into effect.

8.1.2 Effective Period means the period commencing from the Effective Date and up to the period, for which this Policy shall enforce (5 years) or until any amendment is made by the State Government.

8.1.3 Eligible Industrial undertaking means an institution owned by an industrial undertaking, LLP, Society, Trust, Industrial Co-operative Society owned by a company, entity formed as a partnership firm, which is engaged in manufacturing, production, processing, engage in contract manufacturing or job work of articles and set up as new or expansion or diversification project.

8.1.4 Expansion means an existing industrial undertaking which increases its gross block by a minimum of 25% through fresh capital investment.

8.1.5 Diversification means an existing industrial undertaking that manufactures a product completely isolated from the existing product. Further, to be eligible for incentives under diversification, the industrial undertaking must increase its gross block by at least 25% or qualify as Mega or above category project as defined in the policy through fresh capital investment, whichever is lower of the above two situations (minimum 25% increase in gross block or qualifying in Mega or above category) will be valid.

8.1.6 The following costs to be borne by the industrial undertaking for capital investment shall be considered:

I. **Land:** The actual purchase price as per the registered deed of land will be treated as the cost of land (excluding stamp duty and registration charges) for the project. If the land is allotted by Uttar Pradesh State Industrial Development Authority (UPSIDA) or any other entity of the State Government, the actual allotment price paid will be treated as the cost of the land (excluding stamp duty and registration charges).

II. **Bhawan:** Bhawan means a new building constructed for the project. It will also include the administrative building.

The actual expenditure incurred on the cost of new buildings constructed for setting up plant and machinery, in-house testing facilities, storage facilities and other buildings related to manufacturing process and building related to hostel/dormitory for workers, office space and administrative complex will be considered.

Note: - For the purpose of calculation of capital investment, a maximum of 30% of the total capital investment (which includes actual value of land, total cost of building, other construction, plant and machinery and infrastructure facilities as defined in this policy) shall be considered as the total land and building component.

III. **Other constructions:** Other construction means construction of compound walls and gates, security cabins, internal roads, borewells, water tanks, internal pipeline network for water and gas and other related constructions.

IV. **Plant and machinery:** Plant and machinery means new indigenous/imported plants and machinery, facilities, dies, moulds, jigs and fixtures and equipment for similar production which are owned and used within the plant. This will include cost of transportation, cost of foundation, construction, installation, and electrification. The cost of electrification will include the cost of power substation and transformer. Such other tools and equipment which are helpful for the manufacture of the product/s will also be included. Financial incentives

will be provided on all plants related to Green Hydrogen production, storage, and transportation.

Plant R&D for production of non-conventional energy in plant and machinery, vehicles used for transportation only within the premises of an industrial unit and material handling equipment exclusively used for transportation of goods within such premises, captive power generation/cogeneration plants set up within the State for industrial undertaking, Water treatment plants, pollution control plants with facilities for collection, treatment, disposal of waste/emission or solid/gaseous hazardous waste and diesel generator sets and boilers will also be included.

V. **Infrastructure Facilities:** Infrastructure facilities means such new roads, sewer lines, drainage, electric lines, railway siding infrastructure i.e., such other facilities necessary for the operation of the unit, which connects the premises of the project with the main infrastructure trunk lines. In addition, effluent treatment plant, sewage treatment plant set up by the industrial undertaking for its own use will also be included.

8.1.7 Ineligible capital investment- working capital, goodwill, initial and pre-operating expenses, capitalized interest, capitalized expenditure mentioned in the books of accounts for acquisition of technology/technical know-how, consultancy fees, royalties, design and drawings patents, licenses, software and intellectual property rights, Intangible Assets and power generation (except captive use, as specified under the head plant and machinery of capital investment defined in this Policy) will be treated as ineligible capital investment. Such items will not be considered for calculation of capital investment.

8.1.8 Meaning of cut-off date.

I. If the investment commences on or after the effective date of the policy, then the date of commencement of investment is within the effective period of the policy.

II. If the investment commences before the effective date of the policy, then the effective date of the policy will be considered. If only land is acquired before the effective date of the policy, the industrial undertaking in any other item (other than land) defined under capital investment is from the date of first investment made on or after the effective date of the policy.

8.1.9 Date of commencement of commercial production means the date on which the industrial undertaking commences commercial production.

8.1.10 The eligible investment period means a period starting from effective date of this policy till date of commencement of commercial operation or as specified in below table, whichever is earlier.
For Large projects, starting from effective date of this policy till date of commencement of commercial operation or 04 years, whichever is earlier.

For Mega projects, starting from effective date of this policy till date of commencement of commercial operation or 05 years, whichever is earlier.

For Super Mega projects, starting from effective date of this policy till date of commencement of commercial operation or 07 years, whichever is earlier.

For Ultra Mega projects, starting from effective date of this policy till date of commencement of commercial operation or 09 years, whichever is earlier.

Table-1: Eligible Investment Tenure	
Category	**Eligible Investment Tenure**
Large	4 years
Mega	5 years
Super Mega	7 Years
Ultra Mega	9 years

Note :- It will also include cases under capital investment, where the date of commencement of investment (for all categories) is within 05 years from the effective date and commercial production starts after the effective date. The condition would be that at least 80 % of the capital investment should have been made after the effective date.

Investment made in land component of capital investment before last 05 years from the effective date will be permissible for calculating capital investment. The value of such investment in land will be considered at the book value at the time of purchase of land (any revaluation of land thereafter will not be valid).

8.1.11 For implementation of the incentives, the following 04 categories are identified for investment commitment-based project categories (Table 2). The minimum capital investment required for eligibility of each project category will be called the Threshold Investment prescribed for the respective categories.

Table 2: Capital Investment Based Project Categories	
Category	**Eligible Investment Tenure**
Large	₹ 50 Cr or more but less than ₹200 Cr
Mega	₹ 200 Cr or more but less than ₹500 Cr
Super Mega	₹500 Cr or more but less than ₹3,000 Cr
Ultra Mega	₹3,000 Cr or more

Note: Incentives to MSMEs will be provided under the MSME policy of the state.

8.1.12 Eligible Capital Investment (ECI): ECI means the capital investment made by an industrial undertaking within the eligible investment period after the effective date of this policy. If the capital investment by the industrial undertaking has commenced before the effective date, at least 80% of

such capital investment should be made after the effective date of the policy and only the same capital investment will be treated as eligible capital investment.

Capital investment made in the eligible investment period, as calculated, will be considered for determination of Mega/Super Mega/Ultra Mega projects.

Although less than 10% of the investment made after the date of commencement of commercial production but within 04 / 05 / 07 / 09 years (depending on the category) will also be considered as eligible capital investment, in such cases the project category will be determined as defined in this policy.

8.1.13 Industrial undertakings making phased investments will be eligible for incentives under this Policy, provided such applications are received before the date of commencement of commercial operations of the first stage. In such cases, the relevant incentive will be disbursed only after the completion of Threshold Investment and commencement of commercial production of the respective phase in which Threshold Investment is completed. The project/unit will be eligible for relevant incremental incentives on phased additional eligible capital investment, although the eligible investment period will remain as mentioned in the policy.

8.2. Investment Incentives

To avail the investment incentives subvention, investors will be given an opportunity only once to choose one option from the three different options available. The investor will have to utilize this opportunity at the beginning of the project during application itself. The benefit of financial incentives for Green Hydrogen projects will be payable as per the location of the Green Hydrogen project.

However, an additional opportunity will be available to change the option selected by the applicant. This additional opportunity may be utilized before the approval of the 'High Level Empowered Committee' (HLEC) or 'Empowered Committee' (EC), as the case may be, for grant of Letter of Comfort. Thus, the investor will have only one opportunity to change the selected option and thereafter no further opportunity to change the selected option thereafter. The industrial undertaking can choose any one of the following 03 options:

8.2.1 Option 1: Capital Subsidy

I. Under this option, industrial undertakings can avail capital subsidy as per Table 3. Capital subsidy will be provided as per the following formula:

$$\text{Annual Capital Subsidy} = \frac{\text{Base Capital Subsidy} \times \text{GCM}}{\text{Permissible incentive disbursement period}}$$

Table 3: Capital Subsidy and Annual Limit (ECI = Eligible Capital Investment)				
District Area	**Large**	**Mega**	**Super Mega**	**Ultra Mega**
Gautam Budh Nagar and Ghaziabad	10% of Total ECI in 10 annual instalments	18% of Total ECI in 12 annual installments	20% of Total ECI in 15 annual installments	22% of Total ECI in 20 annual installments
Madhyanchal & Paschimanchal (Except Gautam Budh Nagar & Ghaziabad)	12% of Total ECI in 10 annual installments	20% of Total ECI in 12 annual installments	22% of Total ECI in 15 annual installments	25% of Total ECI in 20 annual instalments
Bandelkhand and Purvanchal	15% of Total ECI in 10 annual instalments	22% of Total ECI in 12 annual instalments	25% of Total ECI in 15 annual instalments	30% of Total ECI in 20 annual instalments
Annual limit	Rs 5 Crore	Rs 10 Crore	Rs 50 Crore	Rs 150 Crore
Annual limit with booster	Not Applicable	Rs 15 Crore	Rs 75 Crore	Rs 210 Crore

Special Financial Incentive: During the policy period, financial incentives of 35% and 40% of ECI in the respective category of Super Mega and Ultra Mega projects will be admissible for the first 05 Green Hydrogen/Ammonia projects (except for Meerut Division). Under this, the annual ceiling limit of projects is Rs 100 Crore and Rs 200 Crore for Super Mega and Ultra Mega projects respectively and including booster, Rs. 125 Crore and Rs. 225 Crore will be permissible for Super Mega and Ultra Mega projects respectively.

II. **Gross Capacity Utilization Multiple (GCM)**:

The policy introduces Gross Capacity Utilization Multiple (GCM) to ensure optimum utilization of the installed generation capacity by the beneficiaries of the policy.

GCM will be considered as '1' for the first year, provided the unit utilizes 40% of its installed capacity. For subsequent years, GCM will be considered as '1' provided the unit utilizes 75% or more of its installed capacity in that year.

If the capacity utilization is less than 75% of the installed capacity, the GCM will be reduced proportionately as per the formula given below:

$$\text{GCM} = \frac{\text{Minimum of (75\% of Max capacity utilization for the year)}}{75\%}$$

a) The maximum value of GCM shall be '1'.
b) If the capacity utilization is less than or equal to 10% of the installed capacity, GCM shall be zero.

c) In case of phased investment, the first year's GCM after each stage will be considered as '1' for additional investment made if the capacity utilization is at least 40% of the additional capacity installed in that phase. In subsequent years, if the total capacity utilization of the unit is 75% of the total installed capacity, the GCM will be '1' and if it is less than that, the GCM will be reduced proportionately.

d) In case of expansion category of projects, the installed capacity of the existing unit shall be the same as it was in the preceding financial year, the financial year in which commercial production has commenced in the expansion project. GCM will be calculated based on incremental capacity utilization achieved as a result of installed capacity due to additional investment.

e) In case of projects in diversification category, GCM will be calculated based on utilization of additional capacity installed for new product/products through additional investment.

f) The reduction in capital subsidy due to less than '1' GCM in a particular year will not be considered for subsequent years.

Note: Detailed guidelines regarding calculation of GCM will be provided under the procedures of the Policy, which shall be separately notified.

III. Subject to the annual ceiling with boosters mentioned in Table 3, projects in the Mega and above categories can avail the benefits of additional capital subsidy as per the following formula:

$$Annual\ Capital\ Subsidy\ = \frac{(Base\ Capital\ Subsidy + Employment\ Booster + Export\ Booster + Ecosystem\ Booster)\ \times\ GCM}{Permissible\ incentive\ disbursement\ period}$$

IV. **Employment Booster:** Mega and above category projects can avail the following employment boosters as per Table 3 on providing minimum employment. The percentage of annual employment booster will be calculated taking the average annual employment provided by the applicant (covered by the Employees' Provident Fund) as the basis.

a) Employment booster of 2% of ECI, on employing minimum employment in the year under consideration for the project category in question or employing 75% of women workers of minimum employment for the project category in question.

b) Employment booster of 3% of ECI, if more than double the minimum employment is employed in the considered year for the project category in question or employing 75% women workers are employed twice the minimum employment.

c) Employment booster of 4 % of ECI, on Employing more than the three times the minimum employment in the year under consideration for the project or employing 75% women workers three times the minimum employment.

Table 4: Project category-wise minimum employment numbers	
Category	**Employment**
Mega	300
Super Mega	600
Ultra Mega	1500

V. **Export boosters:** Projects of Mega and above category can avail the benefits of export booster, which shall be determined as a proportion of the production for export in a particular year and the total production in the same year as under:

a) Export booster of 2% of ECI, if exports of 25% or more but less than 50% of their production in the year under consideration.

b) Export booster of 3% of ECI, if export of 50% or more of its production in the year under consideration but less than 75%

c) Export booster of 4% of ECI, if export of 75% or more of its production in the year under consideration.

VI. **Ecosystem Booster:** If a Mega or above category project receives inputs or raw material from an existing or new manufacturing unit located in Uttar Pradesh for manufacturing its product, it will be provided with an ecosystem booster as follows:

a) Ecosystem booster of 02% of ECI, on procurement of 40% or more raw material but less than 60% as per requirement.

b) Ecosystem booster of 03% of ECI, on procurement of 60% or more raw material but less than 75% of raw material/input as per requirement.

c) Ecosystem booster of 04% of ECI, on procurement of 75% or more raw material as per requirement.

8.2.2 Option 2: Reimbursement of Net State Goods and Services Tax (SGST)

I. Subject to the condition that it does not exceed the amount of net SGST deposited in the treasury in a particular financial year, 100% of the accumulated SGST amount will be reimbursed as per Table 5:

Table 5: Net SGST Reimbursement					
Description		**Large**	**Mega**	**Super Mega**	**Ultra Mega**
Annual percentage of reimbursement of Net SGST period (in years)		100%	100%	100%	100%
		6	12	14	16
Gautam Buddh Nagar & Ghaziabad	Annual limit as percentage of ECI	16%	7%	6%	5%
	Overall limit as percentage of ECI	80%	80%	80%	80%

Madhyanchal and Paschimanchal (excluding Gautam Buddh Nagar and Ghaziabad)	Annual limit as percentage of ECI	18%	17%	14%	13%
	Overall limit as percentage of ECI	90%	200%	200%	200%
Bundelkhand and Purvanchal	Annual limit as percentage of ECI	20%	25%	21%	19%
	Overall limit as percentage of ECI	100%	300%	300%	300%

II. In case of expansion/diversification projects, only incremental investment would be eligible to receive incentives. Net SGST eligible for reimbursement will be assessed based on the Incremental Turnover. Incremental Turnover means the difference between the current turnover and the base turnover after expansion. Base turnover means maximum turnover in the financial year preceding the financial year in which the unit starts commercial production (or less than 05 years, if the unit has been operating for less than 05 years) and if the project is being implemented in a phased manner, then the year in which maximum turnover has been achieved in the 05 years preceding the date of commercial production of the first stage.

8.2.3 Option 3: Top-up on incentives received under Production Linked Incentive (PLI) Scheme of Government of India

I. 30 % of the sanctioned PLI incentives (as and when disbursed by Government of India) will be disbursed under any PLI scheme of the Government of India.

II. The extent of incentives provided by the State Government will be limited to 100% of the ECI.

III. Under this option, other such schemes other than the PLI Scheme of the Government of India are approved by the State Government can be included after the approval of the Chief Minister.

9. Land Availability and Incentives

The State Government will aid the developers in providing land and in case of Government land being available, land will be made available for production, consumption, storage, transportation, and other related purposes in Green Hydrogen/Ammonia projects. The following incentive benefits related to land will be available:

I. Government land/Gram Samaj land will be made available to Public Sector Undertakings/Joint Establishments of Central Government/State Government on lease basis for a period of 30 years at the rate of Re 1/- per acre per year. This land will be non-transferable. If the land is not used for Green Hydrogen projects within a period of 03 years from the date of allotment, i.e., if the work does not start, the land will be returned to the Government mandatorily.

II. Government land/ Gram Samaj land will be made available to private investors on lease basis at the rate of Rs. 15,000/- per acre per year for a period of 30 years. If the land is not used for Green Hydrogen projects within a period of 03 years from the date of allotment, i.e., if the work does not start, the land will be returned to the Government mandatorily.

III. For setting up of Green Hydrogen projects by the developer, an application will be submitted by the developer in respect of land use. If permission is not obtained under the change of land use from agriculture to non-agriculture and sealing of purchase land within the stipulated time, then in such case deemed permission will be obtained.

IV. 100% exemption in stamp duty chargeable for land purchased or leased for projects.

V. Land requirement with maximum 20 MW per kilo tonne per annum subject to a maximum of 5 acres per MW will be allowed to Project Developers for developing solar energy capacity for Green Hydrogen projects. In case of technological advances in the future, facilities of land requirement for solar projects will be admissible accordingly.

10. Availability of Water

The Uttar Pradesh Irrigation and Water Resources Department will allocate water to green hydrogen projects from the nearby available water sources. The developer will assess the amount of water required for the project and inform the department, the estimated details of water consumption. The cost of construction of water supply infrastructure from the water source to the project site will be borne by the developer.

11. Operational incentives

Energy and operation costs are significant in green hydrogen projects. The incentives given by the Government of India will be applicable in these projects. To reduce the operating cost of Green Hydrogen/Ammonia projects and making the production cost competitive, the following incentives will be provided in this policy:

11.1. Energy Storage (Banking):

Facility to bank the renewable energy used for production of Green Hydrogen/Ammonia will be available in the state. Permission for energy storage will be granted on monthly cycle basis as per mutual consent between the renewable energy producers and the power distribution company. Energy Banking facility for projects operational during the policy period, for a period of 25 years or the life of the project, whichever is earlier, such projects will be permissible for energy banking and settlement. Energy banking will be permitted subject to the following conditions:

a) Energy banking in a particular month will not be allowed to be withdrawn in subsequent months but should be settled during the same month.

b) The unutilized surplus stored energy at the end of the banking cycle (monthly) shall be deemed to be lapsed and shall be settled in accordance with the methodology laid down in the UPERC-CRE Regulations-2019 and amendments made from time to time.

c) The energy banked during the following periods shall be allowed to be used only during that time period and the unutilized energy accumulated during this period shall be settled as per methodology mentioned in the UPERC-CRE Regulations-2019 as amended from time to time.:

I. The energy banked during the time period 23:00 hrs to 05:00 hrs will be allowed to be used only during the same period and the unutilized energy will be settled as per methodology mentioned in the UPERC-CRE Regulations-2019 as amended from time to time.

II. The energy banked during the time period 05:00 hrs to 11:00 hrs will be allowed to be used only during the same period and the unutilized energy will be settled as per methodology mentioned in the UPERC-CRE Regulations-2019 as amended from time to time.

III. The energy banked during the time period 11:00 hrs to 17:00 hrs will be allowed to be used only during the same period and the unutilized energy will be settled as per methodology mentioned in the UPERC-CRE Regulations-2019 as amended from time to time.

IV. The energy banked during the time period 17:00 hrs to 23:00 hrs will be allowed to be used only during the same period and the unutilized energy will be settled as per methodology mentioned in the UPERC-CRE Regulations-2019 as amended from time to time.

11.2. The following incentive benefits for setting up of Green Hydrogen/Ammonia projects shall be permissible for 10 years after commencement of commercial production of the projects or useful life of the project, whichever is earlier:

I. 100% waiver on wheeling/transmission charges on sale to third parties (intra-state) renewable energy or captive use of renewable energy.

II. 100% waiver on cross-subsidy surcharge and wheeling/transmission charges on intra-state transmission for purchase of renewable energy within the state.

III. Waiver on inter-state wheeling/transmission charges will be applicable as per the guidelines issued by Central Electricity Regulatory Commission/Government of India.

11.3. 100% exemption of electricity duty will be applicable for a period of 10 years for renewable energy used in production of Green Hydrogen/Ammonia manufacturing units.

11.4 In case, the energy consumed for green hydrogen projects is procured partially under open access from other states and partially from DISCOM, then Demand Charges will be applicable only

on amount of energy consumed from DISCOM as per UPERC-CRE Regulations-2019, as amended from time to time.

11.5 100% captive use of generated power will be allowed for setting up of green hydrogen projects and transmission infrastructure for evacuation of power will be allocated on priority basis.

11.6 Energy consumed in green hydrogen production will be considered under Renewable Purchase Obligation (RPO) compliance of the green hydrogen project entity. Excess energy above the RPO compliance of project entity will be considered under RPO compliance of the DISCOM.

11.7 Green Hydrogen/Ammonia projects will attract industrial tariff on sourcing power from local DISCOMs.

12. Incentives from Government of India (GOI)

In addition to the incentives provided in this policy, incentives being provided by the Government of India from time to time on green hydrogen projects, will also be permissible to the project developers.

12.1 All green hydrogen projects will be provided white category status for obtaining environmental clearance.

12.2 Green hydrogen projects will be exempted from obtaining consent / NOC to establish and operate under the Pollution Control Rules of the Uttar Pradesh Pollution Control Board.

13. Implementation mechanism for sanction and disbursement of financial incentives

The implementation mechanism for sanction and disbursement of financial incentives to industrial undertakings as defined in Stage-8 of the Policy shall be as under:

13.1 Investment promotion agency UPNEDA, will act as the nodal institution for approval and disbursement of financial incentives provided to industrial enterprises.

13.2 Policy Implementation Unit (PIU) headed by a designated nodal officer of UPNEDA, will be set up to assist in processing of applications through single window portal mechanism.

13.3 An Evaluation Committee will be constituted at the level of Director, UPNEDA for evaluation of applications.

13.4 The concerned empowered committees shall be authorized to approve the changes in commercial operation, change in cut-off time, change in capital investment and commencement in commercial operation of proposals under guideline issued over the period of policy duration.

14. Empowered Committee and Responsibilities

Under the chairmanship of Additional Chief Secretary/Principal Secretary, Additional Sources of Energy Department, Government of Uttar Pradesh an empowered committee shall be constituted for monitoring and evaluation of all the activities under Green Hydrogen/Ammonia Policy 2024.
The Committee shall consist of the following members:

1	Additional Chief Secretary/Principal Secretary, Additional Energy Sources Department	-	Chairman
2	Additional Chief Secretary/Principal Secretary, Finance Department, or Nominated Representative Minimum Level Special Secretary	-	Member
3	Additional Chief Secretary/Principal Secretary, Revenue Department, or Nominated Representative Minimum Level Special Secretary	-	Member
4	Additional Chief Secretary/Principal Secretary, Ground Water Department, or nominated representative Minimum Level Special Secretary	-	Member
5	Additional Chief Secretary/Principal Secretary, Irrigation Department, or Nominated Representative Minimum Level Special Secretary	-	Member
6	Additional Chief Secretary/Principal Secretary, Energy Department, or Nominated Representative Minimum Level Special Secretary	-	Member
7	Additional Chief Secretary/Principal Secretary, Planning Department, or Nominated Representative Minimum Level Special Secretary	-	Member
8	Chief Executive Officer, Invest U.P. or Nominated Representative Minimum Level Special Secretary	-	Member
9	Managing Director, U.P. Power Corporation Ltd.	-	Member
10	Managing Director, U.P. Power Transmission Corporation Ltd.	-	Member
11	Subject Matter Expert of Central/State Government nominated by UPNEDA	-	Member
12	Director, UPNEDA	-	Member Secretary

The empowered committee will play an important role in setting up the Green Hydrogen Projects and carry out the following functions under the Policy:

1. Submit the recommendation of large size of project for approval to the Hon'ble Minister of Additional Sources of Energy, Govt. of Uttar Pradesh.
2. Facilitation and coordination with various government departments and institutions.
3. Interpret the provisions of this policy and if required, recommend the amendment(s) in the policy to the government.
4. Convey the new provisions in the policy & guidelines for implementation.
5. Review the work progress and re-evaluate the targets set under this policy.

15. High Level Empowered Committee and Responsibilities

Under the chairmanship of Chief Secretary, Government of Uttar Pradesh, a high-level empowered committee shall be constituted with the members as follows:

1	Additional Chief Secretary/Principal Secretary, Additional Energy Sources Department	-	Member
2	Additional Chief Secretary/Principal Secretary, Finance Department	-	Member
3	Additional Chief Secretary/Principal Secretary, Revenue Department	-	Member
4	Additional Chief Secretary/Principal Secretary, Ground Water Department	-	Member
5	Additional Chief Secretary/Principal Secretary, Irrigation Department	-	Member
6	Additional Chief Secretary/Principal Secretary, Energy Department	-	Member
7	Additional Chief Secretary/Principal Secretary, Planning Department	-	Member
8	Chief Executive Officer, Invest U.P.	-	Member
9	Managing Director, U.P. Power Corporation Ltd.	-	Member
10	Managing Director, U.P. Power Transmission Corporation Ltd.	-	Member
11	Subject Matter Expert of Central/State Government nominated by UPNEDA	-	Member
12	Director, UPNEDA	-	Member Secretary

The High-Level Empowered Committee will submit its recommendations to the Hon'ble Cabinet, Government of Uttar Pradesh for approval and disbursement of Mega and above category project applications. The Committee shall be empowered to provide any clarity or interpretation within the policy and to resolve any problems arising in the implementation of the policy.

16. District Level Committee and Responsibilities

Under the chairmanship of District Magistrate, a district level empowered committee shall be constituted for coordination and regulatory support required for identification of land and water sources and setting up of green hydrogen projects.

The Committee shall consist of the following members:

1	District Magistrate	-	Chairman
2	Chief Development Officer	-	Member
3	Executive Engineer, Irrigation Department	-	Member
4	General Manager, District Industries Centre	-	Member
5	Executive Engineer, DISCOM	-	Member
6	Executive Engineer, U.P. Power Transmission Corporation Ltd.	-	Member
7	Project Officer/Project In-charge, UPNEDA	-	Member Secretary

In the said committee, other officers can be associated by the District Magistrate as per local requirement and all investors will be compulsorily invited to the meeting.

17. Policy Amendments and Employment Generation

The Government of Uttar Pradesh is authorized to make necessary amendments for the successful implementation of this policy. About 1,20,000 jobs are expected to be created, directly and indirectly, through the projects established during the policy period.

Definitions

1. **Energy Banking -** The process by which an energy producer supplies electricity to the grid not for the purpose of sale of energy to a third party or consumer, but instead withdraws it from the grid for its own use in accordance with notified terms and conditions.
2. **Energy transition-** In the context of energy transition, it means energy conversion from non-renewable energy sources to renewable sources.
3. **Net Zero-** Net zero means reducing greenhouse gas emissions as close to zero as possible and any remaining emissions emitted into the atmosphere are reabsorbed by oceans and forests.
4. **Green Hydrogen-** Green hydrogen is produced by the process of electrolysis of water using renewable energy or banked renewable energy. Biomass-based hydrogen, produced using pyrolysis of biogas or other biomass products, is also classified as green hydrogen, or as defined by the Government of India.
5. **Green Ammonia-** It is a derivative of green hydrogen and nitrogen, where the process is completely based on carbon-free renewable energy.
6. **Grey Hydrogen-** Hydrogen produced from natural gas or methane using steam methane reformation or auto-thermal reformation is called grey hydrogen. The Greenhouse Gases produced in this process are not captured.
7. **Hydrogen Valley -** A Hydrogen Valley is a city / an island / an industrial cluster / a geographical area where many hydrogen-consuming industries are integrated into the integrated hydrogen ecosystem in such a way that the projects are economically viable.

(**Source:** Policy by Government of India dated 17.02.2022 and National Green Hydrogen Mission Records, January 2023)