

# HYGENCO INDIA PRIVATE LIMITED

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HYGENCO/2022/CERC/02

15.03.2022

To,  
Mr. Sanoj Kumar Jha  
Hon'ble Secretary  
Central Electricity Regulatory Commission  
Janpath, New Delhi – 110 001

**Subject:** Comments/suggestions on Draft Central Electricity Regulatory Commission (Terms and Conditions for Renewable Energy Certificates for Renewable Energy Generation) Regulations, 2022

**Ref:** (1) Public Notice No. RA-14026(11)/1/2022-CERC; Dated 15 Feb 2022

Dear Sir,

At the outset, we are pleased to convey our regards and appreciation for your initiatives to encourage private sector participation at national level.

We wish to introduce Hygenco Private Limited (hereinafter referred as “Hygenco”), a company incorporated under Companies Act 1956 and a generating company within the meaning of Section 2(28) of the Electricity Act 2003, Hygenco aims to be a global leader in deploying Green Hydrogen and Green Ammonia powered industry solutions.



We hereby submit our comments as Annexure 1, on aforesaid draft regulation as published on the website of the Hon'ble Commission, for the kind consideration and necessary action by this Hon'ble Commission.

We sincerely request the Hon'ble Commission to consider these suggestions/requests while finalising the aforementioned regulations.

We look forward to your guidance.

Yours sincerely

For **Hygenco India Private Limited**

(Anand Kumar)  
Senior Manager – Regulatory and Policy Affairs

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## ANNEXURE 1: SUBMISSION ON BEHALF OF HYGENCO INDIA PRIVATE LIMITED

### BACKGROUND

The Electricity Act, amongst other things, provides for regulatory interventions for the promotion of renewable energy sources, through a) determination of tariff; b) specifying renewable purchase obligation (RPO); c) facilitating grid connectivity; and d) promotion of development of market. Section 3 of the Electricity Act provides that the Central Government shall, from time to time, prepare the National Electricity Policy (“*NEP*”) and National Tariff Policy 2016 (“*Tariff Policy*”), in consultation with the State Governments and the Authority for development of the power system based on the optimal utilisation of resources such as *inter alia* hydro and *renewable sources of energy*.

It is submitted that Section 61(h) of the Act enjoins the Appropriate Commission [the Central Electricity Regulatory Commission (“*CERC*”) and State Electricity Regulatory Commissions (“*SERCs*”) respectively] to specify terms and conditions for determination of tariff for *promotion of cogeneration and generation of electricity from renewable sources of energy*. Section 66 of the Act also empowers the Regulators to take measures for the development of market in electricity which is inclusive of the renewable energy segment of the sector.

Further, Section 86(1)(e) of the Act provides for the SERCs to promote co-generation and generation of electricity from renewable sources of energy by providing suitable measures for connectivity with the grid and sale of electricity to any person, and also specify, for purchase of electricity from such sources, a percentage of the total consumption of electricity in the area of a distribution licence. Further, Section 86(4) of the Act stipulates that the State Commission in discharge of its functions shall be guided by National Electricity Policy, National Electricity Plan and the Tariff Policy published under Section 3 of the Act. Additionally, the key objectives of the Tariff Policy include, amongst other things, promoting generation of power through solar and other sources of renewable energy.

In November 2021 COP26 concluded in Glasgow with all countries including India agreeing the Glasgow Climate pact. India assured its cooperation to tackle climate change in earnest. Hon’ble Prime Minister Shri Narendra Modi announced an ambitious target which include raising non-fossil fuel-based energy capacity to 500 GW, lowering total projected carbon emission by one billion tonnes, and meeting 50% of the country’s energy needs through renewable sources.

Hon’ble Prime Minister of India, Mr. Narendra Modi, has announced the National Hydrogen Mission (NHM) on India’s 75<sup>th</sup> Independence Day, with an ambition to make India a global hub for producing and exporting green hydrogen. **In line of same announcement on 17<sup>th</sup> February 2022 Ministry of Power has issued Green Hydrogen Policy aimed at boosting domestic production of green hydrogen to 5million tonnes by 2030 and making India an export hub of clean fuel.**

India is diverse country with different geographical advantages due to its varied available resources. Renewable energy sources are not evenly spread across different parts of the country. On the one hand there are States where the potential of RE sources is not that significant. This inhibits SERCs in these States from specifying higher Renewable Purchase Obligation (RPO). On the other hand, there are States like Rajasthan

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and Tamil Nadu where there is very high potential of RE sources. In such States there are avenues for harnessing the RE potential beyond the RPO level fixed by the SERCs.

In this context the concept of Renewable Energy Certificates (REC) assumes significance. This concept seeks to address the mismatch between availability of RE sources and the requirement of the obligated entities to meet their RPO. It is also expected to encourage the RE capacity addition in the States where there is potential for RE generation as the REC framework seeks to create a national level market for such generators to recover their cost.

Hon'ble Central Electricity Regulatory Commission (CERC) has notified Regulation on Renewable Energy Certificate (REC) in fulfilment of its mandate to promote renewable sources of energy and development of market in electricity. Hon'ble CERC has first issued regulations for REC framework named 'Terms and Conditions for recognition and issuance of Renewable Energy Certificate for Renewable Energy Generation Regulations' '**Principal Regulation**' in the year 2010 which later amended in the year 2010, 2013, 2014 & 2016.

## COMMENTS/SUGGESTIONS FOR CONSIDERATION ON DRAFT REGULATION

We pray to this Hon'ble Commission to consider the following issues being raised by it in the instant Draft Central Electricity Regulatory Commission (Terms and Conditions for Renewable Energy Certificates for Renewable Energy Generation) Regulations, 2022.

### **Issue 1: Eligibility for Issuance of Certificates**

Hon'ble Commission vide its Draft Regulation in the matter of Central Electricity Regulatory Commission (Terms and Conditions for Renewable Energy Certificates for Renewable Energy Generation) Regulations, 2022 has mentioned about eligibility for issuance of certificates which is reproduced as below for reference:

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#### ***"4. Eligibility for Issuance of Certificates***

*.....(3) Captive generating stations based on renewable energy sources and meeting the conditions as specified under clause (2) of this Regulation in respect of renewable energy generating stations shall be eligible for issuance of Certificates:*

*Provided that the Certificates issued to such captive generating stations to the extent of self-consumption, shall not be eligible for sale.*

*(4) An obligated entity being a distribution licensee or an open access consumer, which purchases electricity from renewable energy sources in excess of the renewable purchase obligation determined by the State Commission shall be eligible for issuance of Certificates to the extent of purchase of such excess electricity from renewable energy sources."*

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## Hygenco Comments

We submit that Renewable Energy Certificate (REC) main purpose is to compensate mismatch of renewable energy sources availability among different states of India and to fulfill RPO's by obligated entities across states. Green hydrogen can be an impactful solution to achieve decarbonization efforts of Government of India.

Green Hydrogen/ Green Ammonia is another form of RE energy which is produced by electrolysis of water with the use of electricity produced by Renewable Sources. Entities buying Green Hydrogen/ Green Ammonia is buying renewable energy indirectly.

In India most of hydrogen requirement is from Fertilizer, Petroleum refineries, transport and from marine industries. These industries normally produce or buy hydrogen as per their requirement, which was produced using natural gas, falling under the category of 'Grey', 'Black', 'Brown' and 'Blue' depends upon method of production. If such industries opt to buy Green Hydrogen/ Green Ammonia which was produced using RE source of Power, then such engagements will ultimately be contributing towards less carbon emissions, decarbonizing the whole ecosystem.

Industrial & Commercial establishments buying Green Hydrogen/ Green Ammonia should be eligible for offsetting their RPO obligation vis-à-vis the amount of Green Hydrogen/ Green Ammonia bought.

Ministry of Power (MoP) with its notification no. 23/09/2021-R&R dated 16<sup>th</sup> August, 2021 has issued Draft Electricity (Promoting renewable energy through Green Energy Open Access) Rules 2021-Reg. In these Draft Rules MoP has stated that obligated entities can fulfill their obligations by purchase of Green Hydrogen, relevant clause reproduced as below:

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*(E) Purchase of green hydrogen.*

*“Green hydrogen” is the hydrogen produced using electricity from the renewable sources. The obligated entity including the Industries can also meet their Renewable Purchase Obligation by purchasing green hydrogen.*

*The quantum of green hydrogen would be computed by considering the equivalence to the Green hydrogen produced from one MWh of electricity from the renewable sources or its multiple. The norms shall be notified by the Central Commission.”*

Considering the same We humbly request Hon'ble Commission to kindly accommodate the appropriate changes as herein below

*“4. Eligibility for Issuance of Certificates*

*.....(3) Captive generating stations based on renewable energy sources and meeting the conditions as specified under clause (2) of this Regulation in respect of renewable energy generating stations shall be eligible for issuance of Certificates:*

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*Provided that the Certificates issued to such captive generating stations to the extent of self-consumption, shall not be eligible for sale.*

***Provided that the Certificates issued to such captive generating stations to the extent of green hydrogen production, shall be eligible for sale.***

*(4) An obligated entity being a distribution licensee or an open access consumer, which purchases electricity from renewable energy sources **or green hydrogen** in excess of the renewable purchase obligation determined by the State Commission shall be eligible for issuance of Certificates to the extent of purchase of such excess electricity from renewable energy sources”*

## **Issue 2: Denomination of Certificate**

Hon’ble Commission vide its Draft Regulation in the matter of Central Electricity Regulatory Commission (Terms and Conditions for Renewable Energy Certificates for Renewable Energy Generation) Regulations, 2022 has mentioned about denomination of Certificates which is reproduced as below for reference:

### *“12. Denomination of Certificate*

*(1) Each Certificate issued under these regulations shall represent one Megawatt hour of electricity generated from renewable energy sources and injected or deemed to be injected (in case of self-consumption by eligible captive generating station based on renewable energy sources) into the grid:*

*Provided that Certificate Multiplier may be determined by the Commission as per clause (2) of this Regulation:*

*Provided further that Certificates shall be issued in multiple of the assigned Certificate Multiplier as per clause (2) of this Regulation for one Megawatt hour of electricity generated and injected or deemed to be injected into the grid.*

*(2) The Certificate Multiplier for the period of three years from the date of effect of these regulations or such other period as may be decided by the Commission, as determined in Appendix-1 shall be as under:*

<b><i>Renewable Energy Technologies</i></b>	<b><i>Certificate Multiplier</i></b>
<i>On-shore Wind and Solar</i>	<i>1</i>
<i>Hydro</i>	<i>1.5</i>
<i>Municipal Solid Waste (MSW) and non-fossil fuel-based cogeneration</i>	<i>2</i>
<i>Biomass and Biofuel</i>	<i>2.5</i>

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## **Hygenco Comments**

We would like to submit that Hon'ble MOP with its Notification No. 23/02/2022-R&R dated 17<sup>th</sup> February, 2022 has issued Green Hydrogen Policy in line with National Hydrogen Mission as announced by Hon'ble Prime Minister of India on India 75<sup>th</sup> Independence Day. As per Clause 10 of National Hydrogen Policy which is reproduced as below for reference:

*“Renewable Energy consumed for the production of Green Hydrogen/ Green Ammonia shall count towards RPO compliance of the consuming entity. The renewable energy consumed beyond obligation of the producer shall count towards RPO compliance of the DISCOM in whose area the project is located.”*

Clause 1 of aforesaid Policy defines Green Hydrogen/ Green Ammonia which is reproduced as below for reference:

*“Green Hydrogen/ Green Ammonia shall be defined as Hydrogen/ Ammonia produced by the way of electrolysis of water using Renewable Energy; including Renewable Energy which has been banked and the Hydrogen/ Ammonia produced from biomass”*

*Green Hydrogen is one of the cleanest forms of energy and with better policy support, promotional regulatory provisions at central level Green Hydrogen can become an impactful solution to decarbonize energy intensive sectors by achieving India goal of 500GW renewable capacity by 2030.*

Since tariff of green hydrogen is significantly high as compared to other forms energy and since this technology is in initial stage of development, Considering the same we request Hon'ble Commission to include certificate multiplier of '3' in mentioned Draft regulation, which will ultimately promote green hydrogen market.

***In this regard we request the Hon'ble Commission to introduce certificate multiplier for computing REC's equivalent to green hydrogen production/consumption from RE resources. Accordingly incorporate below changes in Clause 12 as below:***

*“12. Denomination of Certificate*

*(1) Each Certificate issued under these regulations shall represent one Megawatt hour of electricity generated from renewable energy sources and injected or deemed to be injected (in case of self-consumption by eligible captive generating station based on renewable energy sources) into the grid:*

*Provided that Certificate Multiplier may be determined by the Commission as per clause*

*(2) of this Regulation:*

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*Provided further that Certificates shall be issued in multiple of the assigned Certificate Multiplier as per clause (2) of this Regulation for one Megawatt hour of electricity generated and injected or deemed to be injected into the grid.*

*(2) The Certificate Multiplier for the period of three years from the date of effect of these regulations or such other period as may be decided by the Commission, as determined in Appendix-1 shall be as under:*

<i>Renewable Energy Technologies</i>	<i>Certificate Multiplier</i>
<i>On-shore Wind and Solar</i>	<i>1</i>
<i>Hydro</i>	<i>1.5</i>
<i>Municipal Solid Waste (MSW) and non-fossil fuel-based cogeneration</i>	<i>2</i>
<i>Biomass and Biofuel</i>	<i>2.5</i>
<b><i>Green Hydrogen</i></b>	<b><i>3</i></b>

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