

UNIVERSITY OF PETROLEUM & ENERGY STUDIES

Dehradun

End Semester Examination – DEC, 2021

Name of the Program: MBA Oil & Gas Management SEM - Ist
Subject Name: New & Alternative Sources of Energy Max. Marks : 100
Duration : 3 Hrs No. of Pages -4 Course Code : OGPM-7001

SECTION – A Total - 20 Marks

Attempt all questions (Each questions carry same marks) – (10X2Marks)

1. What do you mean by term Renewable Energy? Explain.
2. What is Primary Energy? Explain.
3. Explain meaning “Secondary Energy” with example.
4. Expand terms CCUS and MNRE in Energy.
5. Name two different types of Solar Energy.
6. Explain Sustainable Energy.
7. Explain Green and Blue Hydrogen.
8. Name four new and renewable energy sources.
9. What is Fossil Fuel? Explain.
10. What are India’s target of Renewable Energy for 2022 and 2030?

SECTION – B Total - 20 Marks

Attempt all questions. Each question carries equal marks.- (4 X5 Marks)

11. Why soft foreign investments are key for Renewable Energy Project? Explain.

OR

“Hydrogen particularly Green Hydrogen will be future fuel for human beings” – Evaluate this statement with your suggestions.

12. What do you mean by CBM? Explain.
13. Distinguished between Conventional and Non-Conventional Energy with examples.
14. What do you mean by Shale Gas? Explain its future in India.

SECTION – C

30 Marks

Attempt all questions. (30 marks = 3X10 Marks)

- 15. Critically analyzed present situation and suggest for betterment regarding use of energy in India in future.**
 - 16. Select anyone new or alternative energy resource after evaluating with other resources for India. Suggest for better applications of this resource in future for energy security.**
 - 17. “Renewable and Alternative Energy with Storage is going to change Energy & Transportation in the coming decades” – Critically evaluate this statement with your suggestions for better energy transition.**
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SECTION – D

- 30 Marks = 2X15Marks

The Union Ministry of New and Renewable Energy (MNRE) announced August 12, 2021 that the country has achieved the milestone of installing 100 gigawatts (GW) of renewable energy capacity. This excluded large hydroelectricity capacities installed in the country, the ministry added. The press release for the announcement said:

While 100 GW has been installed, 50 GW is under installation and 27 GW is under tendering. India has also enhanced its ambition to install 450 GW of renewable energy capacity by 2030. If large hydro is included the installed RE capacity increases to 146 GW at present as we have currently 46GW of large Hydro. The achievement is indeed a landmark in India’s green portfolio but is still not an encouraging sign of the country attaining its 2022 target of 175 GW installation.

In 2015-16, the Centre had announced it would install 175 GW of renewable energy (excluding large hydro) by 2022. This means, the country has 19 months to install the remaining 75 GW it had intended, considering the government was referring to the financial year of 2022-23.

Looking at the past performance, the sector will have to make unprecedented progress in these months to achieve the target, according to energy experts. An analysis of monthly installed capacity in the first six months of 2021, after the first wave of the novel coronavirus disease (COVID-19) pandemic, explains this apprehension. Between January and June, only 1GW of renewable energy capacity was installed in a month on an average, according to data by the Central Electricity Authority (CEA) under the Union Ministry of Power. Moreover, the target set for installed solar energy capacity is 100 GW by March 2023 — 40 GW rooftop solar and 60 GW ground-mounted utility scale. The country has managed to install only 43.94 GW till July 31, 2021, the CEA data suggests. The rooftop solar installation has been particularly dismal at 7GW till December 2020, according to Bridge to India, a renewable energy consultancy. India has to quadruple its monthly installation rate to achieve its target within the stipulated time.

The capacity addition has been concentrated in Karnataka (15.6 GW), Tamil Nadu (15.5 GW) Gujarat (14 GW), Rajasthan (11.4 GW), Maharashtra (10.4 GW) till July 31, 2021, according to CEA. Installation in the eastern (1.7 GW) and north-eastern (0.4 GW) regions has been scanty, and in the islands (38 megawatts) has been negligible. “The country has also enhanced its ambition to install 450 GW of renewable energy capacity by 2030,” read the press note by the ministry.

Predictions by experts, however, are comparatively modest. “The capacity predicted at our end is 150 GW by 2025 and 400 GW by 2030,” said Samrat Sengupta, programme director of climate change & renewable energy department at the Centre for Science and Environment, a Delhi-based non-profit. Some long-term policies for the solar sector introduced recently may act as dampeners, he noted.

The basic Customs duty on imported solar cells and modules effective April 1, 2022 and the mandatory registration for manufacturers of the same under the Approved List of Models and Manufacturers, are some of them, he added. Development in the wind energy industry

slowed down in the last five years as solar energy gained a competitive advantage after changes in the feed-in tariff policy, said Sengupta.

By 2025, renewable energy capacity development may be bolstered by the entry of competitive storage technology players in the Indian market, predicted the researcher.

Attempt both questions :- (30 marks = 2X 15 Marks)

- 18. Analyze the progress of India for achieving targets of Renewable Energy till 2030 as per facts given in passage and also known to you.**
 - 19. Give your suggestions for Renewable Energy growth and development in India in the coming decade for meeting target of emission reduction as per Paris Agreement.**
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