

REQUEST FOR EXPRESSION OF INTEREST
Green Hydrogen Transportation Study in India

Publication date: 23rd Oct 2022

Submission date: 14th Nov 2022

Country: India

Description of procurement:

The consulting firm will carry out a comparative analysis between export of power vs offshore production of green hydrogen.

Scope of Work:

The Scope of work includes:

1. Design options for 2 GW Offshore Windfarm and green Hydrogen production
 - i) Floating Offshore vs. fixed structure incl. examples of pilots / projects under development with main specifications – Give an overview of the different technology options for floating offshore and fixed structures. Compare them, showing advantages and disadvantages. Give examples.
 - ii) Centralised electrolysis conducted onshore; vs. centralised electrolysis conducted offshore; vs. decentralised electrolysis conducted offshore; incl. examples of pilots / projects under development with main specifications –Give an overview of then different technology options for electrolysis (centralised vs. decentralised, onshore vs. Offshore). Compare them, showing advantages and disadvantages. Give examples.
 - i. Each with explaining illustrations and GLP–Provide illustrations
 - ii. Google maps layers / KML file to illustrate different positions of Generators, Substations, Pipes, Electrolyser, H2 storage–Create India related map to illustrate potential positions of technology components. Make them visually appealing and provide the files.
 - iii. Component wise rough cost breakdown for Off-shore wind as well as Hydrogen Production. incl. Grid infrastructure / Pipelines–Create a cost breakdown for the assessed technologies, split by components.
 - iv. Methodology of Cost Analysis and Lease rate calculations. –Show and explain your methodology for your cost analysis
2. Electricity Generation Estimate
 - i) Methodology for calculating Wind data incl. general information about most common LIDAR, SODAR etc. Used for data collection – Show and explain your methodology for calculating wind data and compare with common methods.
 - ii) Methodology for WRA and details of most common Software used–Show and explain your methodology for wind resource assessment

- iii) Estimated electricity generation and capacity factor per annum/ month /day /4-hour (heatmap)–Provide graphs and heatmaps
 - iv) Estimated LCOE of electricity–Provide graph(s)
3. Green Hydrogen Production Estimate
- i) Estimated green hydrogen production per annum /months/ day / hour(heatmap)–Provide graphs
 - ii) Estimated LCOE of green H2 park–Provide graphs, compare LCOE to those of other hydrogen-producing countries and show their power sources

Eligibility Criteria:

The bidder must have the following administrative and financial requirements for conducting the assignment

- Be a registered as national organization or entity
- Average annual turnover for the last three financial years should be at least 140,000 Euros
- The agency should have minimum 20 employees as of 31.12.2021
- The agency must have handled at least 4 reference projects with focus on areas of energy technologies incl. techno-economic feasibility and project planning (References on reports and techno-economic feasibility studies are required) with at least 2 projects in the wind energy sector in the last three years with minimum commission value of Euro 10,000.
- The organization must be experienced in the areas of o project planning, management and consulting (min. 10 years)
 - o techno-economic feasibility (min. 10 years)
 - o energy technology/economics (min. 10 years)

Reference on reports

The agency must have regional experience in India

For more information, please email to info@tenderingprojects.es