

India's Renewable Energy Transition and Investment Opportunities

Background:

The India-EFTA TEPA, which formalised a commitment of USD 100 billion in FDI from EFTA member states, provides a strong policy foundation for deepening sectoral collaboration. EFTA countries have established strengths in offshore wind and hydropower technology, large pools of sovereign and institutional capital, R&D base and engineering capabilities for clean energy components, and geothermal energy expertise, which map directly onto gaps and opportunities in India's clean energy transition.

Objective:

This webinar provides a focused platform for engagement between EFTA companies and Indian stakeholders. It aims to bring out the policy incentives and market dynamics of Indian renewable energy sector and identify avenues for EFTA countries to participate in, amongst others, R&D, generation and manufacturing investments.

Indias Clean Energy Transition:

Renewable energy is playing an increasingly important role in India's electricity sector, with 254 GW of installed capacity and 152 GW in the pipeline. India has set an ambitious target of achieving Net Zero by 2070 and has already achieved its medium-term target of 50% of cumulative electric power installed capacity from non-fossil fuel sources reached in June 2025, five years ahead of the 2030 deadline set under its Nationally Determined Contribution (NDC) to the Paris Agreement. This rapid transition has been made possible by a policy framework focused on both power generation and the systematic development of a domestic manufacturing base.

A) Renewable Energy Generation:

The installed renewable energy capacity in India has grown steadily at 10% CAGR over 2015-2024, with solar installed capacity reaching 141 GW, Wind 55 GW and Hydro 51 GW as of March 2026. India's cost of capital for grid-scale renewable energy is one of the lowest amongst emerging markets, with over 83% of power sector investments going to renewable energy in 2024. Tax incentives like accelerated depreciation reduce tax liabilities, improving cash flow, and enhancing return on investment, making renewable energy generation a financially attractive business option. The National Geothermal Policy 2025 aims to establish geothermal as one of the key pillars of achieving Net Zero by 2070.

B) Manufacturing capacity:

India has rapidly expanded module manufacturing capacity to 144 GW and is beginning to build upstream polysilicon and wafer manufacturing lines. India already has an advanced wind manufacturing ecosystems and can produce all major wind turbine components, with nacelle assembly capacity estimated at around 20 GW per year, supported by both domestic and international manufacturers. In emerging industries like green hydrogen, India has a concerted policy push in terms of National Green Hydrogen Mission with an outlay of ~USD 2.3 bn expanding India's existing electrolyzer manufacturing footprint of over 2GW/year.

This has been enabled by a predictable and conducive policy environment, offering a wide range of interventions depending on technological and industrial maturity. Some of these interventions are:

- i. *Incentivizing domestic production:* The Production Linked Incentive Scheme (PLI) is a performance linked incentive on incremental sales from domestic manufacturing. PLI for

Advanced Cell Chemistry targeted 50 GWh of battery cell manufacturing. The National Green Hydrogen Mission, with an outlay of USD 2.3 bn, aims to target 5 million metric ton annually by 2030 making India a global hub for producing, utilizing, and exporting green hydrogen. Incentivizing value adds, they enable creation of domestic supply chains.

- ii. *Building an ecosystem:* Taking an ecosystem approach, Hydrogen Mission also seeks to create hubs for hydrogen production. It aims to develop regions capable of supporting large-scale production and utilization, implementation of pilot projects in hard to abate sectors and building supply chains for pipeline and storage facility.
- iii. *Cost-Competitive Input and Raw materials:* Government of India has eliminated customs duties on many critical minerals crucial in clean tech manufacturing and exemption on basic custom duty on capital goods required for processing of critical minerals.
- iv. *Predictable demand trajectory and market creation:* Policies like Approved List of Models and Manufacturers for solar modules and cells, Energy Storage Obligations create a growing, mandated demand. Consistent tendering activity by central agencies like Solar Energy Corporation of India have aggregated demand, achieving competitive price discovery across sectors. It has acted as a market maker, with over 150 tenders for grid scale battery energy storage since 2019, with total 200 GW tendered. Recent auctions for green ammonia set record-low tariffs, signalling that green hydrogen derivatives can compete with fossil fuels in commercial markets.

India allows 100% FDI through the automatic route in renewable energy. Its clean energy transition is grounded in a policy architecture that is both, comprehensive and layered. The calibrated nature of interventions based on the maturity of technology and industry has created a conducive environment for manufacturing scale-up alongside deployment growth. The combination of a large and growing domestic market, competitive project economics, a maturing industrial base, and strong policy continuity positions India as one of the most attractive clean energy investment destinations.