

Accelerating post-pandemic economic recovery with clean energy infrastructure and jobs in India

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Scientists, experts and policymakers are increasingly mindful that climate change risks pose a much bigger threat to India's economic development goals than the shocks induced by the current pandemic. The 'Assessment of climate change over the Indian region', a report of the Ministry of Earth Sciences, Government of India, has projected an alarming picture of the rise in average surface temperature, Indian ocean warming, changes in rainfall, droughts, sea level rise, tropical cyclones and changes in the mighty Himalayas by the end of this century. The current urgency to deal with the pandemic induced economic contractions contains a risk for 'lock-ins'. Stimulus spending should therefore embed climate proofing instruments for economic recovery. A balanced stimulus is imperative to strengthen the economic fabric ahead of future climate-related shocks.

Ernst & Young LLP (EY) is collaborating with the Federation of Indian Chambers of Commerce and Industry (FICCI), the voice of India's business and industry, to shape concrete policy recommendations for balancing economic recovery and climate neutrality goals in the post COVID stimulus efforts by Government of India. Through this collaboration, EY and FICCI teams have identified over 600 'shovel-ready' clean energy investment opportunities in the pipeline with tremendous potential for accelerating post-pandemic economic recovery, creating jobs and ultimately contributing towards India's long-term climate objectives.

This report is a culmination of above efforts to emphasize what is at stake in terms of the economic development, capital mobilisation, self-reliance, jobs and environment in the critical thematic areas of clean energy infrastructure (viz. Utility scale RE power generation, Rooftop Solar PV deployment, Decentralized RE power generation, Original RE equipment manufacturing and EV Charging Infrastructure). The project pipeline identified here has the potential to accelerate ~INR 2 Lakh crore of equity and ~INR 4 Lakh crore of project finance debt but more importantly support close to ~15 lakh fresh jobs in the immediate future. Further, the stimulus measures summarised can help advance the clean energy project pipeline and help frame the next leg of post-pandemic stimulus action.

It is critical that the new energy infrastructure boost economic recovery and self-reliance without reversing the trends of GHG emission, air pollution and other climate change related shocks in the post COVID economic recovery era.

Together, we can seize this opportunity and create a positive impact for the economy and society as whole. It is an opportunity not worth wasting.



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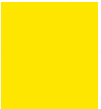
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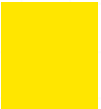
Acronyms

AC	Alternate Current
ACC	Advanced Chemistry Cell
C&I	Commercial & Industrial
CAGR	Compound Annual Growth Rate
CAPEX	Capital Expenditure
CEA	Central Electricity Authority
CERC	Central Electricity Regulatory Commission
CFA	Central Financial Assistance
CPSU	Central Public Sector Undertakings
DCR	Domestic Content Requirement
DHI	Department of Heavy Industries
DIC	designated ISTS customers
DISCOM	Distribution Company
DRE	Distributed Renewable Energy
EESL	Energy Efficiency Services Limited
EPC	Engineering, Procurement and Construction
EV	Electric Vehicle
FICCI	Federation of Indian Chambers of Commerce & Industry
GT&D	Generation, Transmission & Distribution
GW	Gigawatt
ICAR - CAZRI	Indian Council of Agricultural Research Central Arid Zone Research Institute

IEA	International Energy Agency
IPP	Independent Power Producer
IREDA	Indian Renewable Energy Development Agency Limited
ISTS	Inter State Transmission Network
kW	kilowatt
LOA	Letter of Award
LTA	Long-term access
MNRE	Ministry of New and Renewable Energy
M-SIPS	Modified Special Incentive Package Scheme
MSME	Micro, Small & Medium Enterprises
MW	Megawatt
NHPC	National Hydroelectric Power Corporation Limited
NTPC	National Thermal Power Corporation Limited
OEM	Original equipment manufacturer
OPEX	Operating Expenditure
PBI	Procurement based incentive
PERC	Passivated Emitter and Rear Cell
PHC	Primary Health Center
PLI	Production Linked Incentive
PM-KUSUM	Pradhan Mantri Kisan Urja Suraksha evam Utthaan Mahabhiyan
PPA	Power purchase agreement

PSU	Public sector undertakings
PV	Photovoltaic
R&D	Research and Development
RE	Renewable Energy
REIL	Rajasthan Electronics & Instruments Limited
RESCO	Renewable Energy Service Company
RTC	Round-the-clock
RTPV	Rooftop Solar Photovoltaic
RTS	Rooftop Solar
SECI	Solar Energy Corporation of India Limited
SERC	State Electricity Regulatory Commission
SPV	Special Purpose Vehicle
UT	Union Territory
WHO	World Health Organization





Executive summary

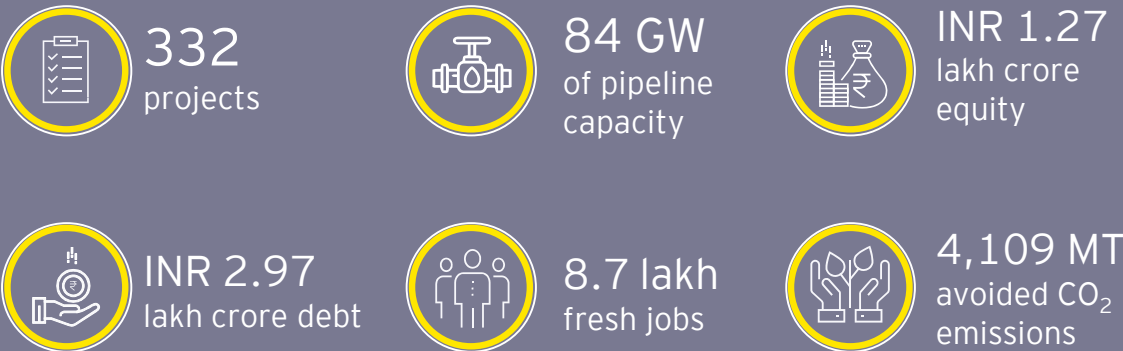
This report has identified over 600 ‘shovel-ready’ low carbon investment opportunities in the pipeline with tremendous potential for post-pandemic economic recovery and job creation in India. An assessment of what is at stake in terms of the economic development, capital mobilisation, self-reliance, jobs and environment is also presented for the first time in each of the critical thematic areas of low carbon infrastructure. Further, the stimulus measures summarised in this report can help advance the low carbon project pipeline and help frame the next leg of post-pandemic stimulus action.

Theme: Utility scale RE power generation

Stimulus action

- Clarity on waiver of inter-state transmission charges and losses on supply of solar and wind power beyond June 2023
- Set up a mechanism to rediscover tariffs for stranded projects without PPA
- Establish a robust coordination mechanism between Central off-takers and State governments toward firming up long term power procurement plans
- Expand the domestic lending base for hybrid RE power projects in pipeline
- Promote electrification of end use to boost demand growth

Project pipeline and impact



Theme: Rooftop Solar PV deployment in residential, C&I sectors

Stimulus action

- Boost demand for rooftop solar deployment in the institutional sectors, especially rural health centres and schools
- Promote net metering in all categories of consumers up to 1 MW of sanctioned load
- Promote third party owned business models for accelerated RTPV capacity addition in the domestic category
- Set up contactless digital platforms for reducing transaction costs and enhancing consumer experience of ease of doing rooftop solar

Project pipeline and impact

