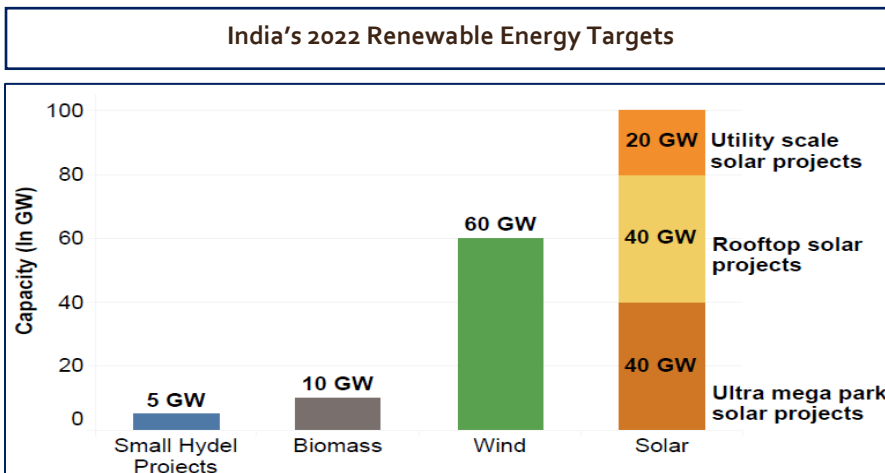




Making Renewable Energy Markets Work



Renewable energy (RE) is key to mitigating emissions and supporting green growth. In 2015, India enhanced its RE target to 175GW by 2022 supported by a concrete and comprehensive roadmap of policy and regulatory reforms, market-support, detailing technology need and bilateral and global cooperation. The emphasis is now on achieving this target through market creation to develop a vibrant renewable energy business climate.



KEY MESSAGES

“The UK and India have much in common in our pursuit for secure, affordable and sustainable energy for our citizens.”

Amber Rudd, Secretary of State for the Department of Energy and Climate Change (DECC)

“India and UK are natural energy partners and deeper engagement can lead to a win for both”

Piyush Goyal, Union Minister of State for Power, Coal, New & Renewable Energy

Joint investments on solar energy R&D are being made to harness Indo-UK science and technology expertise for a better future.

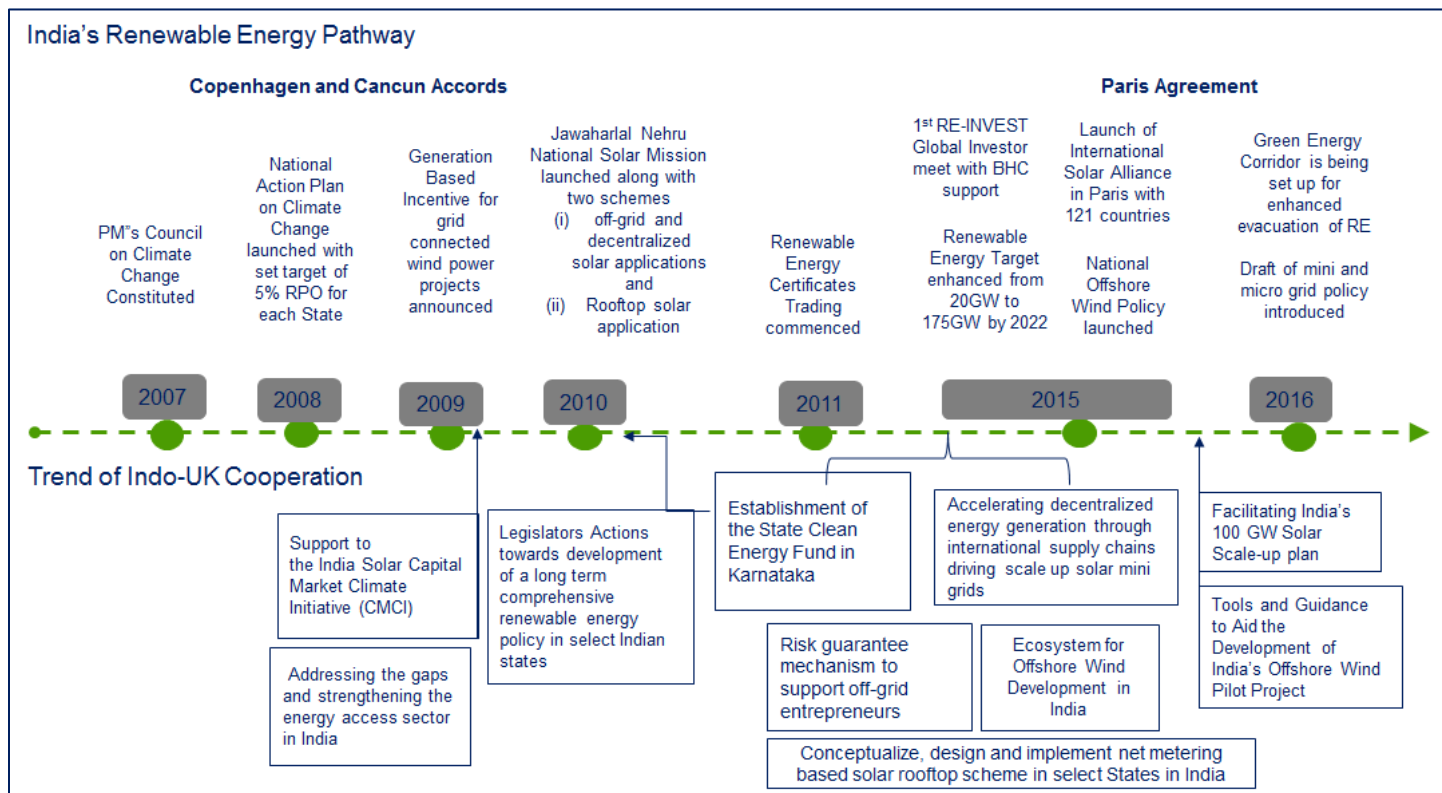
Declared during India-UK Tech Summit, 2016

India's offshore wind power policy is expected to open new frontier for RE markets with the first bidding round coming up by 2018

Awareness building among decision makers and lenders on de-risking across the renewable value chain is key to opening more markets.

Monitoring, reflecting and sharing of results achieved and lessons learned is key to scaling-up green energy opportunities.

The India - UK bilateral relationship has focused on renewable energy for the past decade, starting from building sub-national capacity among state legislators, to deployment of off-grid solutions and developing risk guarantee frameworks - to enhance private investment, and the development of Indian offshore wind market. The cooperation includes the development of large-scale solar parks and sub-national clean energy fund deployment. This brief sets out the range of partnerships that have delivered projects and learning in India to create sustainable energy access. **Figure below illustrates Indo - UK collaboration toward RE progress in India**



Specific Initiatives for Mutual Co-Benefits in RE sector:

Capacity Support and Knowledge Platforms



Since 2010, the UK in collaboration with the Climate Parliament (a global organisation based in the UK) has been working through a network of key Indian legislators from the fast-moving [states of India to develop inclusive decentralized state-level RE policies](#). These state policies will directly support India's ambition of achieving its 175 GW [renewable energy goal](#) by 2022.

The long-term bilateral cooperation has led to the creation of a common platform called "[Legislators-Business Forum on Low Carbon Local Area Development](#)" housed in the Federation of Indian Chambers of Commerce and Industry (FICCI). The Forum successfully unites legislators and corporates, and develops synergies for accelerated adoption of renewable energy solutions and other clean technologies at local level.

In March 2017, "[The Renewable Energy Local Area Development toolkit](#)" was launched with the aim of providing comprehensive information and details on implementing renewable energy technologies and projects for legislators, enabling them to develop RE plans in their respective constituencies. The toolkit was supported by the UK and approved by India's Ministry of New and Renewable Energy (MNRE).



For Local Area Development by Legislators

Harnessing Off-Grid Ventures



Another strand of renewables work has been on Off Grid Renewables. The UK supported three states, namely Bihar, Odisha and Jharkhand, to identify funding mechanisms that encourage public-private partnerships for off-grid renewables initiatives. For example, power for mobile towers that provide a clear business case on the economics and social benefits of using [renewables over diesel fuel has been piloted in Bihar and Uttar Pradesh](#) under the banner of the [Climate and Development Knowledge Network \(CDKN\) India Programme](#). Learning from pilots has also highlighted that lack of a risk guarantee limits expansion in the sector. As a result, through the next line of technical assistance, the UK explored the [best-fit risk guarantee mechanism](#) that can enhance financial flows to off-grid entrepreneurs in India. The UK is also examining the need for developing clear guidelines for international supply chains entering India to scale up the [deployment of high quality solar mini grids](#), which will [boost investment in the sector](#).

Together, these projects are leading to the creation of viable markets in India for national and international off-grid players while and supporting rural low carbon growth reforms.

Strengthening Offshore Wind Opportunities



In 2014, the UK initiated action-lab workshops to create an environment for offshore wind discussions in India. Having received overwhelming demand from Indian Government actors that recognised the UK as a preferred partner for [offshore wind energy](#) development, the UK launched a series of programmes to MNRE. The [technical advisory work](#) included delivery of a process to initiate concession competition for upcoming offshore wind projects and a financial model that can

better estimate the costs of future Indian offshore wind farms. Since then, the three UK based consulting partners: IT Power Consulting, CmY Consultants, and SeaChange Offshore have been working with the state governments of Gujarat and Tamil Nadu to prepare them for the first bidding rounds expected to start by 2018. The engagement also consolidated the evidence base for the formulation of the [National Offshore Wind Energy Policy](#), launched in 2016. **These projects have further strengthened the well-established business relationship between the UK and Indian Governments, paving the way for local and global investors to take advantage of the fast-growing green energy opportunities in India.**

“The UK and Indian governments’ recent joint statement recognizes the need for large scale, low cost, long term finance to deliver India’s renewable energy ambitions.”

Charles Yates, MD, CmY Consultants working for FCO India on an Offshore Wind Project.

Leveraging Solar Initiatives



With the launch of [Jawaharlal Nehru National Solar Mission](#) in 2010, India has attracted many international players to invest in Indian solar energy. Market reforms were still required to make solar energy a sustainable business investment. The UK launched a technical assistance support with MNRE to design a financial and regulatory incentive mechanism to improve financial viability and investor confidence in the national solar mission. The project '[Capital Market Climate Initiative \(CMCI\)](#)' was launched in September 2010 to establish public-private dialogues and actions to mobilize and scale up private finance flows for low carbon technologies, solutions and infrastructure in India.

In support of [solar parks](#), the UK government, in association with Solar Energy Corporation of India (SECI), formulated enabling policy and regulatory framework for establishing large solar parks while leveraging the UK’s commercial, technical, financial and policy expertise and experience.

At the sub-national level, the UK committed to respond to various State Governments' needs for assistance in accelerating deployment of RE. This included: a) the State of Karnataka which aimed to gather a high-quality evidence-based and policy inputs to earmark [Clean Energy funding for RE development](#); b) States of [Madhya Pradesh](#) and more recently Punjab, Rajasthan and Odisha; They sought guidance in identifying reforms pertaining to policy, regulatory, technical, and safeguards/standards to accelerate RE uptake.

Opportunities Ahead:

- India is the most vibrant power market in the world, particularly for renewables.
- UK- India partnerships with Indian State Legislatures have led to enhanced RE policy uptake at the sub-national level.
- India's 2016 Offshore Wind Power policy is expected to open a new frontier for RE markets with the first bidding round coming up by 2018.
- The City of London has a role to play in leveraging international capital, including through the City's recently launched Green Finance Initiative.
- Both the Indian and UK Governments are paving the way for national and [international investors to take advantage](#) of the sustainable and profitable green energy opportunities in the RE sector.
- The RE program has led to low carbon growth reforms in India.

“There is need for the developed world to show its commitment towards climate change by putting money in climate finance. India needs low cost long term finance for its ambitious renewable energy scale up plans and finance hubs like London could take a front seat in mobilizing it.”

Piyush Goyal, Union Minister of State for Power, Coal, New & Renewable Energy during his UK visit in April 2016 to strengthen India-UK collaboration on RE development.



Climate Parliament India group of MPs participating in annual parliamentary workshops to raise awareness and build the capacity of legislators on climate issues.
Picture Credit - The Climate Parliament;