Energy access market (through only decentralized renewable energy, DRE) in India is estimated at US$400 million by 2018.

Market-based approaches to unlock energy efficiency opportunities are estimated to be worth more than US$11 billion.

THE CHALLENGE

- India is set to contribute 1/4th of the projected rise in global energy demand by 2040.
- India is the 4th largest greenhouse gas emitter after China, USA, and EU.
- Energy use in India has almost doubled since 2000, but energy consumption per capita is one third of the global average.
- 237 million Indians have no access to energy.
- In his budget speech, Hon'ble Finance Minister stated that 100% village electrification will be achieved by May 2018. However, the current definition of village electrification requires only 10% of households to be electrified, implying that the number of Indians with no or limited access to electricity is still significant.

THE OPPORTUNITY

- Annual investments in solar could surpass investments in coal by 2019-20, with US$35 billion committed by global players.
- By 2020, solar energy could be cheaper than coal.
- When renewable energy use is doubled, global GDP is expected to increase up to US$1.3 trillion.
- Energy access market (through only decentralized renewable energy, DRE) in India is estimated at US$400 million by 2018.
- Market-based approaches to unlock energy efficiency opportunities are estimated to be worth more than US$11 billion.

Government Initiatives

- India has committed to boost renewable energy capacity to 40% by 2030 and ensure that 40% of electricity requirement will be met through non-fossil fuels.
- India has committed to reduce emissions intensity of GDP by 33-35% by 2030 from 2005 levels.
- India has set a target for 175 GW of renewable energy by 2022.
- India, along with France, is spearheading the International Solar Alliance with more than 20 countries.
POTENTIAL AREAS OF FOCUS

- Working alongside central and state governments to pilot innovative renewable energy technologies
- Last mile connectivity for remote communities through innovative and grid-complementing DRE solutions, such as home energy systems and renewable energy mini-grids.
- Investment in solar energy and efficient storage (lithium-ion based batteries)
- Sector-building through innovative business models and financial institutions, such as green infrastructure bonds to raise funds to provide debt financing for renewable energy and energy efficiency projects

LOW SOLAR TARIFFS

In January 2016, auctions for solar capacities in the Bhadla solar park in Rajasthan, where a total of 420 MW of capacity was awarded, yielded tariffs at Rs. 4.34-4.36 per kilowatt hour (kWh). In comparison, coal tariffs range between Rs. 3-5 /kWh.

The lowest bid for solar projects before this was quoted at Rs. 4.63 per kWh in Andhra Pradesh.

SOLAR-POWERED AIRPORT

Cochin International Airport became the world’s first fully solar powered airport through an innovative PPP model. It generates 48,000-50,000 KW of power per day, with an expected project recovery cost of six years, avoiding 300,000 metric tons of carbon emissions over the next 25 years.

GREEN BONDS

Yes Bank raised US$ 150 million in February 2015 by issuing green bonds. The issue was a resounding success as it was subscribed twice over. The bank raised an additional US$47 million through private placement to International Finance Corporation (IFC). In October 2016, it raised a further US$49 million by issuing green infrastructure bonds to the FMO, the development bank of Netherlands.