

# India Renewable Energy Sector Opportunity Analysis

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## Abstracts

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Renewable energy is deemed as the future of energy and India is working in that direction with its various policies. The government has planned a number of projects that would be launched in the next few years and these will enhance India's renewable energy status. The research and development phase has already passed and the execution of projects is underway. Given the different policies and incentive packages launched by the government to attract investment in the sector, renewable energy in India is bound to grow at an unprecedented pace. The basic infrastructure has been set up that will facilitate the future of renewable energy in the country.

Indian Government gives multiple benefits to renewable energy projects such as no need for industrial clearance, availability of loan, excise duty exemption, custom duty concession, financial support to renewable energy's R&D projects, income tax holiday, accelerated depreciation, preferential tariffs, interest and capital subsidies, energy buy-back and third party sale and trading. At the same time, the Government is also trying to reduce the capital cost of renewable energy projects so that more and more companies can invest in the sector. To fulfil this aim, Government is trying to adopt latest and suitable technologies in the sector and promote healthy competition among the players.

India is one of the few countries to have set up an independent ministry to overlook the growth of renewable energy. The Ministry of New and Renewable Energy is the authority that launches the various schemes and projects to enunciate the renewable energy growth and to see that the schemes are properly utilized for the benefit of the nation. MNRE has proposed many schemes that will determine the future of renewable energy in India. These projects will establish a proper growth strategy in the future for the exploitation of the huge potential of renewable sources of energy in the country. There is a large amount of renewable energy potential that can be developed with help

from the incentive schemes initiated by the ministry.

In FY'2013, around 57% of the total electricity produced used coal as the source of fuel to generate electricity, 17% power was produced by hydro or water based sources, 12% electricity was generated using renewable energy sources and gas contributed 9% to the total power generation. Government has set a target to generate 53,000 MW from renewable energy sources by 2017. To achieve this ambitious target government has introduced several programs such as Generation Based Incentives (GBI), Renewable Energy Certificates, Feed-in-Tariff (FIT) support, solar specific, Renewable Purchase Obligation (RPO), Generation Based Incentives (GBI) and long term PPAs.

“India Renewable Energy Sector Opportunity Analysis” Report gives detailed overview on the following aspect related to renewable energy sector in India:

Significance of Renewable Energy for India

Renewable Energy Potential & Installed Capacity by Source

Government Support & Incentive Framework

Current Scenario of Decentralize/Off Grid Renewable Energy

Emerging Sources of Renewable Energy: Hydro, Geothermal & Tidal energy.

Policy & Regulatory Framework

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## About

Energy is a primary need for development of a country's economy and human development and power shortage is one of the serious problems faced by Indian government. Achieving, energy security by providing power to all is the primary aim of government. Conventional energy sources are vulnerable to political instabilities, trade disputes, embargoes, and wars besides being limited in quantity and availability all across the world. Moreover, consumption of conventional energy such as coal, petroleum products results in a large import bill besides creating environmental problems. Thus, exploiting renewable energy will solve serious problems of Indian Energy sector like power shortage, ecological hazards, rising price of oil and gases.

It is estimated that over 400 Million Indians do not have access to electricity. The rapid growth of Indian economy, increasing urbanization & industrial base and improving standards of living for millions of Indian households has resulted in increase in electricity demand. It is projected that electricity demand in India would rise with 18% making it the second largest contributor to increase in global electricity demand by 2035. Increasing electricity demand has consistently outstripped supply and substantial energy & peak shortages prevailed from 2009-10. It is expected that energy need in India would increase at a hectic pace. Given that traditional fossil fuel supplies are dwindling and turning expensive, there is an urgent need to look for renewable sources of energy that are sustainable to use in the long run. It is therefore inevitable to depend on a varied portfolio of energy sources, with a mix of both fossil fuels and renewable sources.

At present, India is facing substantial power deficit over 10% and peak hour deficit is more than 12%. The rising supply-demand gap is expected to slow the economy growth as it is affecting industrial growth. The widening gap between consumption and domestic output is one of the major concerns for Indian government. Most of the power plants are coal based, depleting coal reserve and rising import is putting an extra burden on budget. Hence, developing cheaper and more sustainable means of power generation, i.e. renewable energy (RE) has emerged as one of the most viable option in front of the government. Moreover, the world and India is realizing the importance of producing sustainable power which is eco friendly and the awareness to switch to renewable energy sources is rising at a fast rate. India has abundant renewable energy resources; by providing incentives the government is trying to increase investment and capacity to generate electricity from renewable energy. Since renewable energy is the cleanest source of power generation it can play a crucial role in India's energy basket in the long-term given the rapidly rising demand and the need to provide power to rural



areas.

India's vast potential of renewable energy is yet to be tapped effectively. Renewable energy contributes to the total power generation capacity in India. In FY'2012, only about 56% of the total electricity produced used coal as the source of fuel while 20% power was produced by hydro or water based sources. Renewable sources contributed to 12% of the generated electricity, while gas contributed 9% to the total power generation, with 2% and 1% contribution coming from nuclear and diesel based power.

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