

Coal-fired projections: on the draft energy policy



The NITI Aayog's Draft National Energy Policy (DNEP) predicts that between now and 2040, there will be a quantum leap in the uptake of renewable energy together with a drastic reduction in fossil fuel energy intensity.

Because of economic and population growth, India's annual per-capita electricity consumption is expected to triple, from 1075 kWh in 2015-16 to over 2900 kWh in 2040. The DNEP assumes 100% electrification throughout India in the near term and steadily improving energy efficiency. However, in addition to DNEP guidelines several critical issues involved in the on-going energy transition need to be taken into consideration.

Introduction

Energy is acknowledged as a key input towards raising the standard of living of citizens of any country, as is evident from the correlation between per capita electricity consumption and Human Development Index (HDI). Accordingly, energy policies of India have over the years directly aimed to raise per capita energy consumption, even while the main focus of the country's development agenda has been on eradication of poverty. While India strives to achieve a double digit growth rate in its national income, it is equally important that clean energy is available to all the citizens.

The NEP draft comes at a time when the energy sector is seeking clarity. In the face of claims of surplus power, even as rampant energy poverty continues to plague the country, the sector needs clear signals of the future pathways.

What is the aim of recent National Energy Policy?

The intention of the National Energy Policy is to present a broad framework for the overall energy sector, taking into account the multiple technology and fuel options. The National Energy Policy (NEP) aims to chart the way forward to meet the Government's following bold announcements in the energy domain.

- All the Census villages are planned to be electrified by 2018, and universal electrification is to be achieved, with 24x7 electricity by 2022.
- The share of manufacturing in our GDP is to go up to 25% from the present level of 16%, while the Ministry of Petroleum is targeting reduction of oil imports by 10% from 2014-15 levels, both by 2022

- INDC (Intended Nationally Determined Contributions) target at reduction of emissions intensity by 33%-35% by 2030 over 2005.
- achieving a 175 GW renewable energy capacity by 2022, and share of non-fossil fuel based capacity in the electricity mix is aimed at above 40% by 2030

In the light of the energy challenges faced by the country, and the global energy related developments, the NEP proposes to set out the national energy objectives and the strategy to meet them. There are four key objectives of National Energy Policy. However, these four goals may or may not move in harmony with one another.

- Access at affordable prices,
- Improved security and Independence
- Greater Sustainability and
- Economic Growth.

While steps have already been taken by the Government to embed many such developments in the sectoral energy policies, however, it is desirable to develop a clear roadmap so that there is clarity amongst all the stakeholders on the Government's long-term energy agenda.

What are the issues with the draft?

1. Regarding Coal Energy:

Despite the fact that existing coal plants are running at low efficiencies, the DNEP relies on coal power to sustain the nation's base load requirement to meet rising energy demand. It proposes that coal will fuel 67% of India's power generation in 2022.

- The first anomaly is that while India claims it will make a big push for renewables, it will continue to rely on coal for its base load generation.
- This is in direct conflict with the declared twin goals of sustainability and comes ironically at a time when solar and wind tariffs appear to be reaching historic new lows.
- The NITI Aayog also forecasts that "our coal industry will emerge as an exporter of coal" in the backdrop of the shocking drop in demand for coal from most industrialised.
- The DNEP does not say what would be the fate of new allottees of coal mines which have bid aggressively and won rights to mine coal for captive power generation.
- Generation of power is licence free under the Electricity Act of 2003, so private miners do not need any licence to set up generating plants. All they need is a connection to the grid. Since the grid is State-owned, the Central government has adequate leverage to defer or delay connections.

In the past three years, with slow industrial growth, independent coal producers have been faced with reduced demand for their power. Power plants, both public and private, have been running at merely 60% plant load capacity utilisation.

The conventional power industry already suffers a high level of bank loan defaults, insolvency and other legal proceedings. It is not surprising that new energy investors are crowding the nascent solar space.

1. Regarding Electric Vehicles

- The DNEP fails to highlight the gradual substitution of internal combustion engines with electric vehicles. Several European nations have announced their plans to go for 100% electric vehicles in the next two decades.
- This transformation in the automobile sector could be accompanied by grid- and consumer-level electricity storage at homes, offices and factories.

While storage and electric vehicles are cursorily mentioned, the DNEP does not focus on these crucial subjects.

1. Regarding Oil resources

The DNEP acknowledges that India's oil consumption has grown 63% from 2005 to 2016 whereas refining capacity has grown only 15%. Gas consumption has increased 38% while production has actually fallen since 2012.

- India's energy security does require a large strategic storage of oil to take care of any vagaries in its international supply chain.
- India has been building up its stored reserves while international oil prices have dropped in the past couple of years. But the strategic storage of oil does not tackle the problem of high dependence on oil.
- The peaking of India's oil demand could have been envisaged but has not been identified in the DNEP.
- On the one hand, the draft policy recognises that by 2040, India's oil import dependence may reach 55% from the current level of 33%. On the other hand, it offers *nothing to curtail* such dependence.

All that the DNEP offers is to promote use of public transportation and railways to reduce oil consumption. Unless electric transport is carefully planned, India's dependence on imported oil is likely to continue.

Way forward

The drafting committees need to examine the paradigm shifts occurring in storage and electric vehicles to promote new technologies in renewable energy, such as smart grids, smart homes, battery storage and concentrated solar heat and power. Energy efficiency, which entails using less energy for the same service, is an important element in energy policy. For instance, the recent campaign by the government to replace regular bulbs by LED bulbs has the potential to reduce energy load.

India has also missed opportunities in the manufacturing of equipment. New institutions, organisations and funding mechanisms for promoting renewable technologies need to be created not later than this year's end