

## General Studies-3; Topic: Energy

### India's Energy Sector Reforms

#### 1) Introduction

- India's economy has been experiencing some of the greatest structural changes like note ban, GST and efforts to diversify the energy mix.
- The country's expanding middle class represents a growing source of demand for energy.
- The Prime Minister Narendra Modi met CEOs of top global and Indian firms to explore ways to raise domestic output and cut imports.

#### 2) Need for Reforms

- The status of the energy sector in India is highly uneven and the scope for reform in many areas still exists.
- Regulatory reforms for effective adoption of green power through grid management and long-term visibility to private sector investors
- To explore ways to raise domestic output and cut imports.
- To seek investment in exploration and production, processing, transportation and distribution network in oil and gas.
- To achieve government's vision of energy access, efficiency, sustainability and security.
- For securing overseas supplies through equity and long-term contracts
- As per estimates by the Central Electricity Authority, electrical energy requirement is expected to grow by 37 per cent by the financial year 2021-22.
- To secure universal, affordable, accessible, 24x7 quality power for all.

#### 3) Policy Initiatives in Past 3 Years

- Deregulation of diesel prices, which reignited private sector interest in fuel retailing.
- Gas pricing and marketing freedom
- New policy for exploration and production.
- Russia's Rosneft acquired Essar Oil's refinery in Gujarat and a countrywide fuel retail network for \$12.9 billion earlier this year.

#### 4) Opportunities

- The Government's programmes like, the DDUGJY and UDAY is likely to result in improved distribution efficiency, reduce supply-demand dissonance, decrease technical and commercial losses, improve revenue realisation and establish smart distribution network.
- The Union Government's thrust on renewable energy is likely to increase the penetration of electricity in the country, thereby driving the demand upwards.
- Emerging technologies like power storage devices, electric vehicles, energy saving devices, smart transmission and distribution systems, etc, are opening for business expansion.

#### 5) Challenges

- The power sector is in early stages of transformation from coal-centric generation to variable renewable power generation.
- This transformation will pose several daunting commercial and technical challenges for both policy makers and market players.

- Power tariff structures in India are rigid.
- Private investments have stagnated for the last few years while fuel demand has been rising by 5-6 percent annually.
- Factor Reforms in Land, labour and capital are long overdue which is holding the domestic manufacturing capacities of solar equipments.

### 6) **Way Forward**

- Innovation and research in the oil and gas sector.
- Need for a unified energy policy, seismic data sets and a gas tariff regulatory board.
- Encouragement for biofuels, improving gas supply and setting up of a gas hub.
- Inclusion of gas and electricity in the GST framework in gradual manner.
- Need to develop energy infrastructure and access to energy in eastern India.
- As India moves towards a cleaner and more fuel-efficient economy, its benefits must expand horizontally to all sections of the society, and in particular to the poorest.
- In an era of cheaper renewables, we need comprehensive reform of pricing, grid utilization and related ancillary services.
- As renewable power becomes more mainstream, it should stop expecting special advantages and compete on equal terms.
- Government should allow private and foreign firms to take a stake in producing oil and gas fields of ONGC with a condition that they would get a fixed fee for producing more than the pre-determined baseline output.
- The sector needs investors, both domestic and global, who can bring in the best technology and capital
- Need to create domestic manufacturing capacities. Currently major part of solar panels and equipments are imported from China.
- Investment priorities in the energy sector needs to be reviewed and pricing reforms in the petro products sector is necessary.
- We need to think strategically and plan for next 10, 15 and 20 years. UK has announced that by 2040 no car registration would be allowed other than for electric vehicles.

### 7) **Conclusion**

- Complete switching to any one particular source of energy is not always practical
- Both conventional and non-conventional sources have their own advantages and disadvantages and the right balance of both is very important.