Energy Transition and Fiscal Impact

This editorial is based on **"Coping with Fiscal Effects of Energy Transition"** which was published in The Hindu BusinessLine on 18/04/2022. It talks about India's fiscal dependence on fossil fuels and the economic impact of transitioning to cleaner energy.

For Prelims: Renewable Energy, International Energy Agency (IEA), Net-Zero Commitments, Electric Vehicles, Concessional GST, Green Hydrogen Policy, Council on Energy, Environment and Water (CEEW), Carbon Tax, Sovereign Green Bonds, Masala Bonds

For Mains: Clean Energy Transition - India's Initiatives and Associated Challenges, Fiscal Impacts of Energy Transition

Energy transitions are gaining momentum worldwide, and India is no exception. It has created one of the world's largest markets for **renewable energy.**

However, this transition is going to be a complex task keeping in mind the fiscal impacts of it. Also, ensuring that the opportunities of India's transition are shared fairly throughout society is not an easy task, given the country's population and diversity.

To achieve the **trifecta of jobs, growth and sustainability**, India must strive to **put people and a smooth fiscal transition at the centre** of its energy transformation.

What about India's Fiscal Dependence of Fossil Fuels?

- In a document published by the **International Monetary Fund (IMF)**, governments' (both Centre and State) **revenue from coal, oil and natural gas, will be affected over the next two decades** as India shifts toward renewable energy sources.
- As per the **International Energy Agency (IEA)**, under fairly standard assumptions on growth, prices and taxes, there would be **continued growth in revenues from fossil fuels till 2040.**
    - However, revenues would **fall significantly as a share of the GDP** and overall government budget, naturally imposing fiscal challenges for both the Central and State governments in the next two decades.
- As of 2019, more than a fifth of the Centre's revenues were from fossil fuels including both **tax (both direct and indirect) and non-tax revenues (including royalties, dividends etc.)** paid by **public sector undertakings (PSUs).**
    - For the State governments, total revenues from fossil fuels were lower at about **8% of total revenues.**
    - The **combined revenue** for both the Centre and States was **13% of the total revenue collected,** which translates to **3.2% of India's GDP.**
        - This share is **much higher than** India's Defence expenditure, and **comparable to**

the combined education, culture and sports expenditures of both the Centre and States.

What is the Fiscal Impact of Transition?

- **At Global Level:** The impacts will not be felt evenly. **China will feel about 27% of a cumulative $75 trillion economic** hit to global GDP by 2050, while the **US will see about 12%**, Europe will experience 11% and **India about 7%.**
    - **Economies such as Iraq** that do not have financial reserves to invest in non-fossil fuel sectors **could suffer the biggest losses** in economic output.
    - Wealthy economies with deep capital markets that already have big investments in energy transition technologies, such as **France and Switzerland, will be better positioned.**
- **At National Level:** During the Covid-19 period, governments' reliance on fossil fuel for revenues — mainly petroleum increased.
    - Despite decrease in the international crude oil prices, **taxes on petrol/diesel in India were increased** leading to decoupling of international and domestic oil prices.
    - According to latest data, the **revenue from petroleum was 2.7% of GDP** in 2019-20 which **increased to 3.4% of GDP in 2020-21** on account of **higher excise and VAT.**
    - As India starts pursuing its **net-zero commitments**, the first step would be to reduce the use of fossil fuels. Consequently, this **major source of revenues will disappear.**

What are the Concerns Associated?

- **Decline in Revenues:** Over time the **revenues from fossil fuel will steadily fall as India shifts to renewable energy sources,** ramps down the use of fossil fuels, and as electric vehicles (EVs) increase.
    - If current economic trends persist, revenues are estimated to fall from 3.2% in 2019 of GDP to **1.8% and 1% in 2030 and 2040 respectively.**
- **Subsidies - A Necessary Evil:** A large part of the energy transition may need to be supported through direct or indirect **subsidies by concession of excise duty on EVs, concessional GST** on electric cars, **concessions given under** Green Hydrogen Policy etc. like the Small wind energy and Hybrid systems programme.
    - The subsidies will add to the Centre and States' **fiscal stress**. But **without these subsidies the energy transition itself may slow down.**
- **Impact on Political Economy:** The declining revenue can have political economic ramifications as well. The year **2022 is the last year of GST compensation** given to State governments, which may put **stress on certain States' revenue.**
    - Furthermore, **under the GST structure, States have limited autonomy** to raise taxes, which may exacerbate the issue.
        - The Centre in the last few years have started collecting more revenues via cess which is not shared with States, running the risk of **straining the Centre-State relationship.**
- **Challenges of Investments:** The 21st report of the **Standing Committee on Energy (2021-22)** on financial constraints in the renewable energy sector highlights that India's long-term RE commitments **require ₹1.5-2 trillion annually.** Actual investments in the last few years have been around **₹75,000 crore.**
- **Gender Disparity in Green Sector:** According to a 2019 study by **Council on Energy, Environment and Water (CEEW)** and the IEA, women account for nearly **32% of the renewables workforce globally but only around 11% of the rooftop solar workforce in India.**

How can India Cope with the Fiscal Transition?

- **Additional Taxes**: When the government experiences revenue stress, it finds **energy to be the easiest source of revenues. Additional taxes on coal or probably a** carbon tax can be imposed.
    - Slowly phased in from a small amount roughly equivalent to the existing coal cess (or GST compensation cess) to reach **Rs 2,500 per tonne of carbon dioxide** by the middle of the

century.
    - In the short run, India can also increase revenues from some other source like **increasing tax on demerit goods like alcohol, tobacco etc.** to compensate for the reduction in energy sourced from fossil fuels.
- **Strong Policies:** Just as we need strong climate policies, we also need **strong social policies and local institutions** to ensure that the **clean energy transition is fair and just.**
    - India must be prepared for the fact that job gains might not occur in the same locations as job losses and that **most new jobs are expected to be non-unionised,** often lacking safety nets. The policies need to be framed accordingly.
    - **Carbon tax revenues may need to be recycled back to poorer** households who spend a large fraction of their income on energy.
- **Investment Challenge as an Opportunity:** The **Budget 2022** announced that the government proposes to issue **sovereign green bonds** to mobilise resources for green infrastructure.
    - These bonds are expected to be **serviced by rupee revenues, with rupee-denominated end-use.** This makes a strong case for domestic as well as ‘masala’ bond **issuances overseas.**
    - Several Indian corporates have tapped the India International Exchange (India INX) to raise capital from international investors. India’s immense requirements for green finance could be turned into an advantage to **develop a homegrown but world-facing capital market.**
        - This could establish India as a **gateway for emerging economies** in Asia and Africa looking to raise international capital for their own transitions.
- A **Gender Balanced Transition:** While India’s energy transition will create many new jobs, the limited **participation of women in the growing green workforce** must be addressed.
    - As a priority, renewable energy companies must **promote policies to ensure gender parity in their workforce.**
    - These could include **investments in suitable facilities for women** at project sites, designing guidelines for **flexible working arrangements,** and **creating programmes** to prepare more **women for leadership roles.**

Drishti Mains Question

Discuss the fiscal impact of clean energy transition on India and suggest measures for smooth transition from an economic perspective.

UPSC Civil Services Examination, Previous Year Questions (PYQs)

Q. With reference to the Indian Renewable Energy Development Agency Limited (IREDA), which of the following statements is/are correct? (2015)

1. It is a Public Limited Government Company.
2. It is a Non-Banking Financial Company.

Select the correct answer using the code given below:

(a) 1 only
(b) 2 only
(c) Both 1 and 2
(d) Neither 1 nor 2

Ans: (c)