Green Hotline

August 30, 2024

INDIA BUDGET 2024: FUELING GREEN GROWTH

- The India 2024 Budget significantly boosts funding and has introduced policies for renewable energy initiatives, with a strong focus on green hydrogen, solar and thermal energy, and nuclear power, demonstrating India's commitment to sustainable growth.
- Framework related initiatives have also been introduced via the India 2024 Budget, including policies for storage and grid capacity, electric mobility and production linked incentive schemes.
- Specific analysis of measures introduced in the India 2024 Budget which would affect investments, with a particular focus on foreign direct investment.
- Evaluation of the measures proposed by the budget and potential shortcomings of the same, in line with India's climate commitment goals.

BACKGROUND

India's power sector is witnessing a change, characterized by the growing emphasis on Renewable Energy ("**RE**") sources, modification of the energy sourcing mix and clean energy generation to keep up with the demand for sustainability, energy security and climate change mitigation. Some of India's climate change commitments include:

- Aiming to achieve net-zero economy by 2070;
- Reducing the emissions intensity of its GDP by 45% (forty five percent) by 2030; and
- Reducing the total projected carbon emissions by 1,000,000,000 (one billion) Tonnes by 2030.

The key to achieve this, a trend being recognised world over, is to focus on power generation through RE- a transition which would require enhancement of the grid infrastructure in India (with respect to storage of power, transmission, smart meters etc), seamless integration, research and development and adoption of new technologies as well as requiring a stable and supportive regulatory framework to enhance efficiency. The targets set in place by the Indian government ("**Government**") with respect to a transition into a clean energy mix include[1]:

- Achieving about 50% (fifty percent) cumulative electric power installed capacity from non-fossil fuel-based energy resources by 2030;
- Aiming for 500 (five hundred) Gigawatt ("**GW**") of RE installed capacity by 2030; and
- Aiming for production of 500,000 (five hundred thousand) tonnes of green hydrogen by 2030.

RE is also a relatively untapped sector at this stage, where RE sources as of 2024 have a combined installed capacity of 195.01 (one hundred ninety-five-point one percent) GW. It is also valued at a whopping USD 403,700,000,000 (United states dollars four hundred three billion seven hundred million). When viewed in conjunction with the increasing prominence of this sector world over, including its attractiveness to investors because of certain benefits from investing in sustainable projects, the potential is limitless.

We will in this hotline analyse the policy changes, schemes and budget allocations the Government has proposed in the Interim Budget[2] and the Budget[3] in order to meet these goals, its international commitments and capitalise on investment in this sector.

KEY HIGHLIGHTS OF THE BUDGET

A. GOVERNMENT INITIATIVES WITH RESPECT TO SPECIFIC RE SOURCES

The Budget significantly increases the allocation for the Ministry of New and Renewable Energy ("**MNRE**") to INR 191,000,000,000 (Indian rupees one hundred ninety-one billion) from INR 128,500,000,000 (Indian rupees one hundred twenty-eight billion five hundred million) in budget 2023[4]. This increased funding will support various RE projects, and the Budget as well as the Interim Budget have specifically focused on green hydrogen, solar, nuclear and thermal energy sources.

- **Green Hydrogen**

  The National Green Hydrogen Mission[5] ("**NGHM**") is a policy initiative approved by the Union Cabinet in January 2023. The mission is spearheaded by MNRE and aims to position India as a global leader in green hydrogen

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production, utilization, and export by the year 2030. This initiative is part of India's broader efforts to transition to sustainable energy sources and reduce its carbon footprint. The NGHM encompasses various strategies and investments to promote the development of green hydrogen technologies, infrastructure, and market mechanisms. The Interim Budget has significantly increased the allocation for the NGHM to INR 6,000,000,000 (Indian rupees six billion), marking a 102% (one hundred and two percent) rise from the previous year's allocation of INR 2,970,000,000 (Indian rupees two billion nine hundred seventy million).

- **Solar Energy**

For solar power, the introduction of the PM Surya Ghar Muft Bijli Yojana[6] has been a commendable initiative to promote subsidized installation of rooftop solar panels for 10,000,000 (ten million) households along with free electricity up to 300 (three hundred) units per month through the increased budgeted allocation of INR 100,000,000,000 (Indian rupees one hundred billion), up from INR 48,000,000,000 (Indian rupees forty-eight billion) in 2023-24. However, the initial Rooftop Solar Programme[7] was intended to generate 40 (forty) GW coming from solar panels on rooftops, and by the end of 2023, rooftop solar energy generation was just 11 (eleven) GW.

There have been major technical glitches with the National Portal[8] in the past that resulted in significant delays in rooftop installations and implementation related logistics issues, leading to huge financial losses for the solar energy sector. The Budget made no mention of these malfunctions, means or redressal, nor did it give any assurance of a smoother functioning in the future.

- **Nuclear Energy**
  - Development of Bharat Small Reactors ("**BSR**")

    The Budget includes plans to develop and deploy BSR, which are miniature nuclear reactors designed for captive power generation. These reactors are expected to provide a flexible and cost-effective solution for nuclear power, complementing traditional large-scale nuclear plants.
  - Small Modular Reactors ("**SMRs**")
  - The Government is partnering with the private sector to conduct research and development on SMRs. These reactors can be mass-produced in factories and have a power capacity of up to 300 (three hundred) Megawatt ("**MW**") per unit. SMRs are being promoted for their potential safety, cost-effectiveness, and suitability for locations that cannot support large nuclear plants.
  - The Budget marks a strategic shift by welcoming private sector participation in the nuclear energy sector. This collaboration will increase the capital flow which can be used to enhance research and development, leading to innovations in nuclear technology and potentially accelerating the deployment of advanced nuclear reactors. However, this capital-intensive sector has not yet been fully opened up as FDI is still restricted. In order to ensure optimum growth of the nuclear energy sector, the Government may need to consider relaxing FDI norms for this energy source.
- **Thermal Energy**

The joint venture proposed between Bharat Heavy Electricals Limited ("**BHEL**") and National Thermal Power Corporation ("**NTPC**") focuses on developing an Advanced Ultra-Super Critical ("**AUSC**") thermal power plant. This project involves setting up an 800 (eight hundred) MW AUSC thermal power plant, the main benefit of which is the potential to achieve higher thermal efficiency and reduced emissions compared to conventional thermal power plants[9]. Furthermore, the development and implementation of AUSC technology within the country will reduce reliance on foreign technology, fostering self-reliance and promoting the advancement of domestic power generation technologies in India.

- **Analysis**

India continues to rely heavily on coal as its primary energy source. During the financial year 2022-23, coal accounted for approximately 77.01% (seventy-seven-point zero one percent) of the total energy generation. While India's objective of achieving 50% (fifty percent) energy generation from renewable sources and transitioning away from fossil fuels by 2030 may seem ambitious, implementing the proposed measures to integrate these alternative energy sources into the energy mix is a step in the right direction.

B. FRAMEWORK RELATED GOVERNMENT INITIATIVES

Apart from the initiatives introduced in respect of the specific RE sources (*mentioned above*), in the Interim Budget and the Budget, the Government has also introduced overarching initiatives in the RE sector to boost the transition to clean energy. A few of the initiatives are as follows:

- **Storage and grid capacity**

A policy promoting pumped-storage projects will be introduced to store electricity. This move is very well received, as one of the major challenges in the transition to clean energy sources is integration of RE sources into the electric grid, due to its variable and intermittent nature.[10] Pumped storage projects facilitate efficient energy conversion, and they will promote grid stability by storing surplus energy during off-peak times and releasing it during peak hours, as well as provide ancillary services such as frequency regulation and voltage support. While this does address the need of the hour, barriers in adoption of these projects (such as ecological challenges, financial viability and project timelines) also have to be kept in mind.

- **Electric Mobility**

In the Interim Budget, the Government emphasised its commitment to electric mobility as part of its broader strategy to promote sustainable and green energy solutions, focusing on electrification of public transportation systems such the adoption of e-buses through payment security mechanisms with a goal to achieve 30% (thirty percent) electrification of vehicles in India by 2030.

Announcements in the Budget have accounted for allocations to expand the Electric Vehicle ("**EV**") charging

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infrastructure, including the installation of more public charging stations and the development of fast-charging networks. Additionally, in the budget announced in 2023, the government announced the Faster Adoption and Manufacturing of Hybrid and Electric Vehicles ("**FAME**") scheme[11], to provide subsidies for EV buyers and manufacturers. The Budget has increased incentives for the adoption of EVs through the FAME scheme.

In March 2024, the Government introduced the Electric Mobility Promotion Scheme 2024[12] ("**EMPS 2024**") to provide support to the two and three-wheeler vehicle segment to fast track the transaction with respect to e-mobility. This scheme was originally set to run from April 1, 2024, to July 31, 2024 with a total capital outlay of INR 5,000,000,000 (Indian rupees five billion), however, it has been extended to September 30, 2024 and the capital outlay has been enhanced to INR 7,780,000,000 (Indian rupees seven billion seven hundred eighty million).

The Budget also provides funds for research and development in electric mobility technologies to encourage innovation and the development of advanced battery technologies. Measures to boost local manufacturing of EV components such as batteries, motors, and control systems align with the Make in India initiative.

However, while the Interim Budget's intention to promote the electric mobility ecosystem was clear, the Budget did not seem to build on this by providing any further policy changes/incentives/schemes for the EV industry, instead, actions in the Budget were limited to increases in existing allocations.

- **Minerals**

The Budget proposes to fully exempt customs duty on 25 (twenty-five) critical minerals such as lithium, copper, cobalt, and rare earth elements. These minerals are integral for manufacturing solar panels and for battery storage in electric vehicles. India has been one of the largest importers of various forms of generating equipment and technology for improvement in its RE sector- for example, India's import of solar cells and panels experienced a significant rise in FY 2024, amounting to more than INR 514,600,000,000 (Indian rupees five hundred fourteen billion six hundred million) (representing a 2.84 (two point eight four) times increase compared to the previous FY). Thus, having these essential minerals exempted from customs duty will make it easier for these panels and batteries to be produced domestically. This move is therefore a welcome one and will potentially reduce India's dependence on imports, however, parallel measures such as increased budgetary allocations towards creation of domestic R&D measures for viable extraction and technologies, as well as opportunities/pathways for collaboration with other departments and the supply chain could have been introduced for greater impact.

- **Production Linked Incentives** ("**PLI**")

In the Budget, the Indian government introduced significant enhancements to the PLI schemes aimed at boosting the renewable energy sector[13]. The budget doubled the allocation for green hydrogen initiatives, highlighting India's commitment to accelerating its transition to a low-carbon economy. Additional incentives were provided for energy storage solutions and solar manufacturing to improve the reliability and efficiency of renewable energy sources. The PLI scheme was also expanded to include more labour-intensive sectors with strong linkages to MSMEs, promoting local manufacturing and job creation.

C. GOVERNMENT INITIATIVES TO BOOST INVESTMENTS IN THE RE SECTOR

The Government has introduced certain policy measures which could help companies to access easy credit and raise capital at preferential rates for green project, as follows:

- **Climate Taxonomy**

The Government has proposed developing a 'climate finance taxonomy' to enhance the availability of capital for climate adaptation and mitigation. A climate finance taxonomy is a system that classifies which parts of the economy may be marketed as sustainable investments[14]. This system also helps ascertain if economic activities are aligned with credible, science-based transition pathways, hence providing a standard to guide investors to invest in verified projects (as they gain clarity on what constitutes sustainable projects) and reduce the risk of greenwashing. Considering that green finance flows in India are falling far short of the country's current needs — they only account for around 3% (three percent) of total FDI inflows to India (as of 2022), this impetus is needed to attract foreign investment. This further sets India on a global standard, along with other countries which have introduced climate taxonomies including but not limited to the USA, EU, Singapore, Canada, South Korea[15]. This can facilitate global cooperation and integration into international financial systems focused on sustainability. Finally, a standardized system also helps in ensuring consistency across various sectors and projects, making it easier for India to track its progress towards its environmental goals and climate commitments.

- **Viability Gap Funding ("VGF")**

The Interim Budget introduced VGF to support the initial addition of up to 1 (one) GW of offshore wind energy capacity. VGF is a financial tool used by governments to support projects that are economically justified but may not be financially viable due to high initial capital costs. In previous budgets, the Government has utilized VGF for various infrastructure projects, however, the focus on VGF for RE projects (such as for offshore wind energy capacity) is a more recent development and expands the application of VGF to these new and emerging sectors.

- **Transfer to Sovereign Green Fund**

In the Budget, the Government increased the transfer to the Sovereign Green Fund by INR 500,000,000 (Indian rupees five hundred million), bringing the total to INR 1,700,000,000 (Indian rupees one billion seven hundred million). A sovereign green fund is a government-managed investment fund specifically earmarked for financing projects that have positive environmental impacts. This increase signifies the Government's commitment to enhancing the financial resources available for green initiatives.

- **Enhanced Credit availability**

The Budget also emphasizes the need for financial institutions to support green projects through enhanced credit availability. Measures include encouraging banks and financial institutions to offer preferential rates and better credit terms for projects that align with the country's environmental sustainability goals.

WHERE DID THE BUDGET FALL SHORT?

The follow through of the Budget from the roadmap set out in the Interim Budget seems to be lacking in the following aspects:

- Industry experts in the biogas sector are disappointed as the Budget did not meet the expectations set by the Interim Budget. They had anticipated a dedicated financing and research package for the sector's expansion, akin to the current scheme for green hydrogen.
- While the Interim Budget allocated more funds for green hydrogen, the latest Budget did not provide additional supporting initiatives. These anticipated measures included tax holidays, concessional corporate tax rates, and extra fiscal support for producing green hydrogen.
- For the wind sector, further measures apart from VGF were expected, including measures which addressed critical issues within the wind energy sector, ranging from difficulties in land acquisition, delays in obtaining necessary clearances, contractual conflicts, and global supply chain disruptions.

Further, with the growth of RE, smart meters are emerging as a crucial tool for promoting energy efficiency and conservation, empowering consumers to monitor their usage and make informed decisions to save energy. They also facilitate time-of-use pricing, encouraging off-peak usage and balancing the load on the grid. The Government, recognising this, had as a part of the National Smart Grid Mission[16], set an initial goal of replacing 250,000,000 (two hundred fifty million) conventional meters with smart meters by 2025, however, as of July 2024, out of the 222,000,000 (two hundred twenty two million) consumer smart meters sanctioned, only 12,800,000 (twelve million eight hundred thousand) had been installed, which is just about 6% (six percent) of the target.[17] The installed distribution transformer meters account for just 2% (two percent) of its target, and installation of feeder meters has only reached 10% (ten percent) of its target.[18] Despite slow progress on smart meter implementation in India, the Government has not introduced any new incentives or initiatives to capitalise on and promote the usage of these smart meters in the infrastructure of the power sector, thus missing an opportunity to push forward an important infrastructure upgrade.

Additionally, there are unresolved challenges in the power sector that could affect the generation, storage, and transmission of RE as well. These issues include the absence of a stable policy and regulatory framework, the abandonment of projects after their initiation, and financially distressed distribution companies. These factors may hinder the effectiveness of the measures introduced in the Budget. It remains to be seen how well these measures will be implemented in light of these ongoing challenges.

CONCLUSION

The Budget lays a strong foundation for the country's green transition, with substantial investments and forward-looking policies in renewable energy, electric mobility, and sustainable infrastructure. By prioritizing innovation and local manufacturing, the Budget sets the stage for a more resilient and self-reliant energy sector, paving the way for sustainable growth. However, to truly achieve its climate goals, India must not only focus on funding but also ensure robust policy frameworks and address the gaps that could hinder the transition to a greener economy.

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[1]Announced by the Finance Minister on July 23, 2024, available at: https://www.indiabudget.gov.in/doc/budget_speech.pdf

[2]Announced by the Finance Minister on February 1, 2024, available at: https://pib.gov.in/PressReleaseIframePage.aspx?PRID=2001136

[3]Announced by the Finance Minister on July 23, 2024, available at: https://www.indiabudget.gov.in/doc/budget_speech.pdf

[4]Union Budget 2023-24 Analysis, available at https://prsindia.org/budgets/parliament/union-budget-2023-24-analysis

[5]National Green Hydrogen Mission, available at https://mnre.gov.in/national-green-hydrogen-mission/

[6]Guidelines for Implementation of Component 'Model Solar Village' under PM-Surya Ghar: Muft Bijli Yojana, available at https://mnre.gov.in/notice/guidelines-for-implementation-of-component-model-solar-village-under-pm-surya-ghar-muft-bijli-yojana/

[7]India's Rooftop Solar Programme was introduced in 2014 to encourage the installation of solar panels on rooftops. The program's goal was to increase the installed capacity of solar energy to 40 gigawatts (GW) by 2022, as part of a larger goal of 100 GW by 2030, available at https://smartnet.niua.org/sites/default/files/resources/Scheme-Grid-Connected-Rooftop-%26-small-solar-power-plants.pdf

[8]National Portal for PM Surya Ghar Muft Bijli Yojana, available at https://www.pmsuryaghar.gov.in/

[9]NTPC BHEL Power Projects Private Limited, available at https://www.nbppl.in/

[10]Energy Storage System Roadmap for India: 2019-2032, available at https://www.niti.gov.in/sites/default/files/2019-10/ISGF-Report-on-Energy-Storage-System-%28ESS%29-Roadmap-for-India-2019-2032.pdf

[11]FAME India scheme, available at https://pib.gov.in/PressReleaseIframePage.aspx?PRID=1942506

[12]Ministry of Heavy Industries Electric Mobility Promotion Scheme 2024, available at https://heavyindustries.gov.in/ministry-heavy-industries-electric-mobility-promotion-scheme-2024

[13]Budget 2024-25: India's energy transition plan, available at https://www.hindustantimes.com/ht-insight/economy/budget-2024-25-indias-energy-transition-plan-101723285508424.html

[14]Climate Finance Taxonomies: Frameworks for the current landscape, available at https://bfaglobal.com/wp-content/uploads/2024/05/Climate-Finance-Taxonomies-Frameworks-for-the-current-landscape.pdf

[15]Two sides of the same coin: Green Taxonomy alignment versus transition risk in financial portfolios, available at https://www.sciencedirect.com/science/article/pii/S1057521922002708

[16]National Smart Grid Mission, available at https://www.nsgm.gov.in/

[17]Demand for Grants 2024-25 Analysis : Power and New & Renewable Energy, available at https://prsindia.org/budgets/parliament/demand-for-grants-2024-25-analysis-power-and-new-renewable-energy

[18]Demand for Grants 2024-25 Analysis : Power and New & Renewable Energy, available at https://prsindia.org/budgets/parliament/demand-for-grants-2024-25-analysis-power-and-new-renewable-energy