

GOVERNMENT OF INDIA  
MINISTRY OF ENVIRONMENT, FOREST AND CLIMATE CHANGE

**RAJYA SABHA**  
**UNSTARRED QUESTION NO.1803**  
**TO BE ANSWERED ON 22.12.2022**

**Investment to achieve net zero goal by 2070**

1803. SMT. RANJEET RANJAN:  
Dr. AMEE YAJNIK:

Will the Minister of ENVIRONMENT, FOREST AND CLIMATE CHANGE be pleased to state:

- (a) whether to achieve its net zero goal by 2070, India would require cumulative investments of \$10 trillion;
- (b) whether Government plans to increase investment in the renewable energy sector and mobilise finance to achieve India's climate goals by 2030, if so, details thereof;
- (c) details of measures Government is taking to strengthen its credible green bonds and credible sustainability-linked bonds, loans, transition bonds as it moves toward its goal of a greener economy; and
- (d) whether Government plans to develop a measurement, reporting and verification (MRV) system to help track green finance in country, if so, details thereof and if not, reasons therefor?

**ANSWER**

MINISTER OF STATE IN THE MINISTRY OF ENVIRONMENT, FOREST AND CLIMATE CHANGE  
(SHRI ASHWINI KUMAR CHOUBEY)

(a) India's vision to achieve net zero emissions by 2070 has been carefully considered after taking into account the principles of United Nations Framework Convention on Climate Change (UNFCCC), in particular, the principle of common but differentiated responsibilities and respective capabilities in the light of national circumstances.

According to latest estimates in India's Long term Low-Carbon Development Strategy (LT-LEDS) document submitted to the UNFCCC in November, 2022, it is envisaged that a transition to a low-carbon development pathway will entail costs, pertaining to the deployment of new technologies, development of new infrastructure, and other transaction costs. Several estimates regarding India's financial needs exist. Many of them focus on the energy sector, including industry, buildings, and transport. Estimates vary across studies due to differences in assumptions, coverage, and modelling approaches, but fall in "the range of trillions of dollars by 2050".

(b) Government of India has already taken a number of measures including the announcements in the Union Budget 2022-23. Sovereign green bonds and thematic funds for blended finance in areas including climate action were announced in the Union Budget

2022-23. The Budget pushes energy transition by encouraging domestic production of solar power equipment and batteries, in line with India's climate commitments. Government of India has also approved the Production Linked Incentive Scheme (Tranche II) on 'National programme on High Efficiency Solar PV Modules', with an outlay of Rs.19,500 crore for achieving manufacturing capacity of Giga Watt (GW) scale in High Efficiency Solar PV Modules.

(c)& (d) As per the Securities Exchange Board of India (SEBI), green debt securities are created to fund projects that have positive environmental and/or climate benefits. Proceeds from these bonds are earmarked for green projects. The SEBI (Issue and Listing of Non-convertible Securities) Regulations, defines green debt security as a debt security issued for raising funds that are to be utilised for project(s) and/ or asset(s) falling under any of the following categories, subject to the conditions as may be specified by the Board from time to time:

- i. Renewable and sustainable energy including wind, solar, bioenergy, other sources of energy which use clean technology,
- ii. Clean transportation including mass/public transportation,
- iii. Sustainable water management including clean and/or drinking water, water recycling,
- iv. Climate change adaptation,
- v. Energy efficiency including efficient and green buildings,
- vi. Sustainable waste management including recycling, waste to energy, efficient disposal of wastage,
- vii. Sustainable land use including sustainable forestry and agriculture, afforestation
- viii. Biodiversity conservation, or
- ix. a category as may be specified by the Board, from time to time.

Further, the final Sovereign Green Bonds Framework of India has now been approved. The Framework for Sovereign Green Bonds by the Government of India has been designed to comply with all the four components and key recommendations of the International Capital Market Association (ICMA) Green Bond Principles (2021). The four core components as outlined by ICMA green bond principles are:

- i. Use of proceeds
- ii. Project evaluation and selection
- iii. Management of proceeds; and
- iv. Reporting

Green finance is a very broad and evolving concept, with no multilaterally agreed definition of green finance so far.

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