National Energy Data: Survey and Analysis

Published On: 24-06-2023

Why is in news? First-ever Comprehensive Energy Sector Report of BEE's Energy Data Management Unit released

The Union Ministry of Power has come out with a comprehensive energy sector report titled **National Energy Data: Survey and Analysis 2021-22**, which is the maiden report of **Energy Data Management Unit**, set up under Bureau of Energy Efficiency, Ministry of Power.

The report **provides granular information about energy supply and consumption patterns across various sectors** of the Indian economy.

The report contains **extensive data compiled for the last six years**, i.e., from FY 2016-17 to FY 2021-22, along with trends and analysis of fuel-wise energy consumption in major end-use sectors.

This report also provides an overview of the impact of various energy conservation policies and their associated carbon dioxide emission reduction and monetary savings

The report has been prepared by Ministry of Power through Bureau of Energy Efficiency in collaboration with NITI Aayog, various line Ministries and Departments, institutions, and other stakeholders.

Key highlights:

This report **provides granular fuel-wise energy consumption data** for various sectors. This detailing will enable a **better understanding of the energy profile of various sectors, sub-sectors and consumer groups**.

The use of distinct conversion factors (of domestic coal and imported coal) for different years based on different calorific values of coal gives a realistic picture of coal-based energy supply and consumption in the country.

In the latest edition of 2023 Report of Ministry of Statistics & Programme Implementation, the conversion factors of coal have been derived using a weighted average methodology rather than using a single representative GCV for all grades of coal.

This report **also provides an overview of the impact of various policies on energy savings and CO2 emission reduction** with corresponding monetary savings.

Energy supply to economy **during last six years is actually less by 18%;** this has been found out by using Indian coal conversion factors, rather than IEA conversion factors which has been used before

Lower energy consumption value by 8% in 2021-22.

Increased share of electrification on consumption side to 20.9%.

The information provided in this report will help in assessing the status of data availability of various energy products in the country.

It can also help in analysing energy intensity of the country thereby enabling policy makers to formulate robust policies and carry out course corrections.

Way Forward:

There **exists limited data on non-commercial energy sources** such as biomass although these modes meet significant energy needs.

There appeared **a need to bridge the existing gap in the exploration side of data** (i.e., 2D, and 3D surveys).

There is also a possibility that a **significant amount of data** could be **collected from government-subsidized projects and disseminated** and would be captured in the upcoming editions of the report.

Bureau of Energy Efficiency:

The Government of India set up Bureau of Energy Efficiency (BEE) on **1st March 2002** under the provisions of the **Energy Conservation Act, 2001**.

The mission of the Bureau of Energy Efficiency is to **assist in developing policies and strategies with a thrust on self-regulation and market principles,** within the overall framework of the Energy Conservation Act, 2001 with the **primary objective of reducing energy intensity of the Indian economy**.

BEE co-ordinates with designated consumers, designated agencies and other organizations and recognize, identify and utilize the existing resources and infrastructure, in performing the functions assigned to it under the Energy Conservation Act. The Energy Conservation Act provides for regulatory and promotional functions.

Functions of BEE:

Create awareness and disseminate information on energy efficiency and conservation

Arrange and organize training of personnel and specialists in the techniques for efficient use of energy and its conservation

Strengthen consultancy services in the field of energy conservation

Promote research and development

Develop testing and certification procedures and promote testing facilities

Formulate and facilitate implementation of pilot projects and demonstration projects

Promote use of energy efficient processes, equipment, devices and systems

Take steps to encourage preferential treatment for use of energy efficient equipment or appliances

Promote innovative financing of energy efficiency projects

Give financial assistance to institutions for promoting efficient use of energy and its conservation

Prepare educational curriculum on efficient use of energy and its conservation

Implement international co-operation programmes relating to efficient use of energy and its conservation

Energy Audit:

The Government of India has **identified certain energy intensive industries labelled as 'designated consumers'** and **made it compulsory for them to conduct Energy Audits** following the 'Bureau of Energy Efficiency (Manner and Intervals of Time for Conduct of Energy Audit) Regulations, 2010'. It has declared new energy standards for ACs which will be applicable from 1 January 2021.

Energy Efficient Lamps:

Bachat Lamp Yojana is a **voluntary participation program** that provides Energy Efficient Compact Fluorescent Lamps (CFLs) at the same cost as regular incandescent bulbs. Participant investors in the sales earn internationally tradeable carbon credits under the Clean Development Mechanism of the Kyoto Protocol.

Standards and Labelling:

The BEE has **made it mandatory for certain high energy use consumer equipment** and appliances to be tested and labelled with their energy performance in order for consumers to be able to make an informed choice about their purchases.

The program also allows for some classes of products to volunteer for testing and labeling.

The program includes outreach and workshops for sellers to understand the labeling and the cost and energy saving potential of rated equipment and appliances in order for them to inform customers.

The program includes a searchable database for consumers to compare products.