

Energy Data Collection Mechanisms- Country Practice

I. Coal and Coal Derivatives

I.1. Organisational set up: The Coal Controller's Organisation is a Subordinate Office of the Ministry of Coal, having its headquarters at Kolkata and field offices at Dhanbad, Ranchi, Bilaspur and Nagpur. Statistics Division of Coal Controller's Organisation, functioning in Kolkata HQs under the overall guidance of Coal Controller, is at present having a Director level officer of the Indian Statistical Service as Head of the Division and one Deputy Director level officer of the Indian Statistical Service.

I.2. Current activities: Statistics Division is doing all works related to Coal Statistics under Ministry of Coal. Major role of Statistics Division may be summarised as follows:-

- Collection, Compilation, Analysis and Dissemination of Coal Statistics.
- Undertakes Annual Survey of Coal Industry to assess the coal production, despatch and stock at pithead
- To monitor the progress of captive coal and lignite blocks.
- To maintain a database of washeries in India.
- To provide no objection certificate in the matter of IEM (Industrial Entrepreneurs Memorandum) from SIA(Secretariat for Industrial Assistance) of D/o Industrial Promotion and Policy of M/o Commerce and Industry and to maintain corresponding database.

I.3. Future initiatives:- The need for Coal Controller Organisation's own survey is felt with an aim to develop a rich database on various aspects of coal statistics –Reserve, production, despatches, pit head closing stock, besides collecting colliery-wise exhaustive technical data.

I.4. Details of the data flows/items:

Data items –This organisation is collecting data on the following items on a regular basis:-

<u>ITEMS</u>	<u>PERIODICITY</u>
1. Reserve(from GSI),	Annual
2. Production (from coal/lignite company)	Monthly

3. Despatches (from coal/lignite company)	-do-
4. Pit head closing stock, “	-do-
5. Price (from non-captive coal companies)	-do-
6. Wagon loading (Rail) (from CIL/SCCL)	-do-
7. Export and import(from DGCI&S)	-do-
8. Coal consumption in steel (from SAIL/RINL/TSL)	Monthly
9. Coal consumption in power, cement etc sector	Annual
10. Captive coal and lignite mining(from CEA etc.),	Monthly
11. Washery in India(from different washery operators),	Monthly
12. World coal statistics(from International Energy Agency),	Annual
13. Colliery/Lignite-wise Production data,	Annual

❑ Data Sources and Act/Order/Rule Etc.

The data are collected from different coal / lignite companies under the statutory power vested with the Coal Controller under the provisions of the Collection of Statistics Act, 1953, the Colliery Control Rule, 2004 & Coal Mines (Conservation & Development) Act, 1974 and publications of CIL, SAIL, and DGCI&S.

❑ Methodology of Data collection:-

Monthly Data- Data are collected from coal companies (Pvt. & Public) on monthly basis on some major parameters.

Annual survey- Complete enumeration (through mailed questionnaire) and sample check by physical inspection for Annual survey of Coal and Lignite Industries.

Coverage : Entire coal and lignite producing sector.

Response : 100%

❑ Details of the data items being compiled and periodicity

<u>ITEMS</u>	<u>PERIODICITY</u>
1. Coal Production data for PMO -	Monthly
2. Data for Infrastructure Bulletin of MOSPI through MOC-	Monthly
3. Monthly Coal Statistics.-	Monthly
4. Data for IIP (Covering Washed Coal, Middling & Hard Coke)-	Monthly
5. Data for IIP of mineral sector (Coal & Lignite-state wise)-	Monthly
6. Provisional Coal Statistics by April end of the next financial year-	Annual
7. Coal Directory of India-Vol.I (Coal Statistics) “	Annual
8. Coal Directory of India –Vol.II (Mine Statistics)	Annual
9. Growth Report (Executive Summary)-	Monthly
10. U.N. annual energy report- through CSO	Annual

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| 11. IEA (for energy balance in case of non-OECD country: India) | Annual |
| 12. Ad-hoc Reports | As and when required |

I.5. Data collection problems:

As far as the coverage is concerned, there is no problem. Response of coal and lignite companies is satisfactory. But this organization is having a huge shortage of statistical officials. Due to lack of statistical support officials, data necessary for calculating value addition, hard coke production price at consumer level etc. could not be collected. Also survey for value addition, coke production has been discontinued. As the Coal Controller, in general, is not having trained/skilled statistical manpower this organisation faces data quality problems at times. To overcome this problem physical inspection is undertaken for production, dispatch data etc.

II. Petroleum and Natural Gas

The Ministry of Petroleum and Natural Gas is mandated to take measures for exploration and exploitation of petroleum resources including natural gas and coal bed methane, and also distribution, marketing and pricing of petroleum products.

II.1. Organizational set up and activities

Ministry of Petroleum has an Economic and Statistics Division headed by Economic Adviser. The Division provides economic inputs to the Divisions of the Ministry after detailed analysis of the plan and programmes. An exhaustive data base is maintained on production and trade of crude oil, natural gas, petroleum products and stages of capacity creation by the petroleum industry. The Economic and Statistics Division is involved in the plan formulation exercise of the public sector enterprises associated with petroleum exploration, production, refining and marketing. Also, all issues pertaining to foreign investment policy in the petroleum sector and issues relating to Double Taxation Avoidance Agreement (DTAA) on Income & Capital etc. are handled in the Division.

The Division brings out the following reports for monitoring the performance of Petroleum & Natural gas products:

- Monthly & Quarterly Reports on Petroleum Statistics:** Collection, compilation and submission of Reports on:
- (i) Production of Crude Oil, Natural Gas and Petroleum Products to Ministries/ Department/Committees etc. on monthly basis. Also preparation of quarterly report on Production Performance to Ministry of Planning & Programme Implementation;
 - (ii) Import/Export of Crude Oil and Petroleum Products to the designated Ministries/ Departments.
 - (iii) Joint Oil Data Initiative Statistics to United Nations Statistics Division.

❑ **Publication of Annual Basic Statistics on Petroleum & Natural Gas Products and Annual Indian Petroleum & Natural Gas Statistics**

II.2. Details of the data flows and items

Data Collected: Production of Crude Oil, all Petroleum Products, Natural Gas, LNG, Imports/Exports of Oil & Petroleum products, Consumption of Petroleum Products and Refinery intake etc. on monthly basis and apart from these data other related data for publication of “Basic Statistics on Indian Petroleum & Natural Gas Products” and “Indian Petroleum & Natural Gas Statistics” being collected annually.

Periodicity & Data Sources: The data being collected on monthly, quarterly, annual basis from all Public Sector Undertakings and Private Oil Companies including oil refineries.

Methods of Data Collection: Data collected through electronic mail, FAX as well as hard copy by post.

Data Dissemination Methods: Monthly, Quarterly and Annual Progress Reports circulated to all concerned and also uploaded on Ministry’s web site for the public user.

II.3. Provisions under which statutory returns are collected for the petroleum sector:

(i) For returns on crude oil and natural gas

- Principal Legislation:

THE OILFIELDS (REGULATION AND DEVELOPMENT) ACT, 1948
(53 of 1948) (8TH SEPTEMBER, 1948)

- Subordinate Legislation:

THE PETROLEUM AND NATURAL GAS RULES, 1959
(As amended from time to time)

Section 14: Royalty on petroleum and furnishing of returns and particulars:

(2) The lessee shall, within the first seven days of every month or within such further time as the Central Government or the State Government, as the case may be, may allow, furnish or cause to be furnished to the Central Government or the State Government as the case may be a full and proper return showing the quantity of all crude oil, casing head condensate and natural gas obtained during the preceding month from mining operations conducted pursuant to the lease. The monthly return required to be furnished shall be, as nearly as may be, in the form specified in the schedule annexed to these rules.

(ii) For returns on refinery output (petrol, diesel etc)

-Principal Legislation:

THE INDUSTRIES (DEVELOPMENT AND REGULATION) ACT, 1951, (ACT NO. 65 OF 1951)

-Subordinate Legislation:

Scheduled Industries (Submission of Production Returns) Rules, 1979.

Section 6: However, collection of data is also governed by the Gazette of India (Extraordinary) Part II-Section 3-Sub Section (i) order No.G.S.R.272(E) dated 16.04.1999 wherein clause 8 states that “Every oil refining company shall furnish to the Central Government or an agency nominated by Central Government any and every information that may be asked for in regard to the procurement, stocking, movements (onshore or offshore), transfers, imports, exports and sales of crude oil and or all products at such period, in such manner and from such of the sources, as may be specified from time to time”.

III. Electricity

(A) ORGANISATIONAL SETUP

III.1 Organisation of Central Electricity Authority

The Central Electricity Authority (CEA) is a statutory organisation originally constituted under section 3(1) of the repealed Electricity (Supply) Act, 1948 since substituted by section 70 of the Electricity Act, 2003. It was established as a part-time body in the year 1951 and made a full-time body in the year 1975.

CEA is headed by a Chairperson who as the Chief Executive of the Authority oversees largely the development of Power Sector in the country. A Secretary, appointed by the Authority with the approval of the Central Government under section 72 of Electricity Act 2003, assists the Chairperson in discharging of CEA’s statutory functions. The Secretary also assists the Chairperson in all matters pertaining to administration and technical matters including human resource development and concurrence of hydro power projects etc. There are six (6) Wings in CEA namely Planning, Hydro, Thermal, Grid Operation & Distribution, Economic & Commercial and Power System each headed by a Member of the Authority. Under each Member, there are technical Divisions each headed by an officer of the rank of Chief Engineer. At present, there are twenty-nine Divisions in CEA headquarter at New Delhi.

III.2 Subordinates offices of CEA

There are 14 subordinate offices of CEA viz. five (5) Regional Inspectorial Organizations, four (4) Regional Power Survey Organizations and five (5) Regional Power Committees located in various parts of the country.

❑ **Regional Inspectorial Organization (RIO)**

Under Chief Engineer (EI) in Power System Wing, five (5) Regional Inspectorial Organisation (RIO) offices, each headed by an officer of the rank of Superintending Engineer function at New Delhi, Mumbai, Chennai, Kolkata and Shillong to inspect the HV/MV installations of the Central Government.

❑ **Regional Power Survey Organization (RPSO)**

Four (4) Regional Power Survey Organisation (RPSO) offices, each headed by an officer of the rank of Deputy Directory function at New Delhi, Mumbai, Bangalore and Kolkata under Chief Engineer (DMLF) in the Planning Wing to carry out surveys to forecast the demand of power in their respective regions.

❑ **Regional Power Committees (RPCs)**

Five (5) Regional Power Committee (RPCs) each headed by a Member Secretary, an officer of the rank of the Chief Engineer, are functioning at New Delhi, Mumbai, Bangalore, Kolkata and Shillong to facilitate the integrated operation of the Regional Electricity Grids.

III.3. Details of the data Flows/ Items

In exercise of the powers conferred by section 177, read with section 74 and clause (i) of section 73 of the Electricity Act, 2003, the Central Electricity Authority published the regulations vide Extra Ordinary Gazette notification dated 19th April 2007, namely:- Central Electricity Authority (Furnishing of Statistics, Returns and Information) Regulations, 2007

(a) Sources of Statistics, Returns and Information

All licensees, generating companies and person(s) mentioned below, but not limited to, shall furnish to the Authority such statistics, returns or other information relating to generation, transmission, distribution, trading and utilization of electricity at such times and in such form and manner as specified under these regulations-

❑ **Licensees**

- (i) Transmission Licensees;
- (ii) Distribution Licensees;
- (iii) Trading Licensees;
- (iv) Central Transmission Utility;
- (v) State Transmission Utilities;
- (vi) Appropriate Governments who are responsible for transmitting, distributing or trading of electricity;
- (vii) Damodar Valley Corporation established under sub-section (1) of section 3 of the Damodar Valley Corporation Act, 1948 (14 of 1948);

- (viii) Any person engaged in the business of transmission or supply of electricity under the provisions of the repealed laws or any act specified in the Schedule;
- (ix) Any person who intends to generate and distribute electricity in a rural area as notified by the State Government;
- (x) State Electricity Boards;
- (xi) Local authorities including Cantonment Boards;
- (xii) Deemed licensees and entities exempted from licence.
- (xiii) Bhakra Beas Management Board.

□ Generating companies

- (i) Generating companies established by appropriate Governments;
- (ii) Independent Power Producers;
- (iii) Appropriate Governments responsible for generating electricity;
- (iv) Bhakra Beas Management Board;
- (v) Any person engaged in the business of generating electricity under the provisions of the repealed laws or any act specified in the Schedule;
- (vi) Damodar Valley Corporation.

□ Person(s) generating electricity for own use:

- (i) All captive power producers;
- (ii) Any other person including Co-operative Society, Association of persons, body of individuals, etc. engaged in generating electricity for its or his own use.

□ Other entities

- (i) National Load Despatch Centre;
- (ii) Regional Load Despatch Centre(s);
- (iii) State Load Despatch Centre(s);
- (iv) Regional Power Committee(s);
- (v) High voltage or extra high voltage consumers of electricity.

(b) Formats for furnishing of statistics, returns or information –

The entities shall furnish the statistics, returns and information as per the formats annexed to these regulations titled “List of formats, frequency(ies) and target date(s)”. These formats can also be obtained from the website of the Central Electricity Authority. (website www.cea.nic.in)

(c) Time schedule for furnishing of statistics, returns or information –

The time schedule or targets for furnishing of statistics, returns or information is specified by the Authority on its prescribed formats.

(d) Frequency of submission of statistics, returns or information –

The frequency of submission i.e. daily, weekly, monthly, quarterly or annually is specified by the Authority in its prescribed formats.

(e) Manner of furnishing the statistics, returns or information –

The statistics, returns or information in the prescribed formats shall be furnished to the Authority preferably electronically or by post or courier or fax.

III.4 Data collection problems

The Central Electricity Authority is receiving data from various Public and Private Entities/ Utilities / Organizations/Industries. Though, it is mandatory to these organizations to furnish the correct, complete data in time, yet the following problems are being faced in collection of data.

1. Delay in furnishing data.
2. Furnishing incomplete/ incorrect data.
3. Non submission of data.

For smooth collection of the electricity data, CEA is installing electronic data collection system titled as Information Management System (IMS), where all the returns of electricity data can be directly furnished by concerned party (licensees, generating companies, entities etc.)

IV. New and Renewable Energy

IV.1. Nodal ministry

Ministry of New and Renewable Energy (MNRE) is the nodal Ministry of the Government of India at the National level for all matters relating to new and renewable energy. The Ministry has been facilitating the implementation of broad spectrum programmes including harnessing renewable power, renewable energy to rural areas for lighting, cooking and motive power, use of renewable energy in urban, industrial and commercial applications and development of alternate fuels and applications. In addition, it supports research, design and development of new and renewable energy technologies, products and services.

IV.2. Organisational setup

It is broadly organized into eight Groups dealing with 'Bio-Energy, Research & Development and TIFAD(Technology Information Forecasting, Assessment and Databank), Solar Energy',

and Remote Village Electrification’, Biomass and Wind Power’, ‘Energy for Urban, Industrial & Commercial Applications’, ‘Small Hydro and Information & Public Awareness’, ‘Hydrogen Energy’ and ‘Administration and Coordination’. In addition, the Ministry has an Integrated Finance Division, which is functioning under the Special Secretary and Financial Adviser. The Ministry is classified as a Scientific Ministry.

IV.3. Current responsibilities

- (a) Formulating policies and programmes for the development of new and renewable sources of energy;
- (b) Coordinating and intensifying research and development activities in new and renewable sources of energy;
- (c) Ensuring implementing of Government’s policies in regard to all matters concerning new and renewable sources of energy.

IV.4. Data flows

The basic data being compiled includes year wise and month wise no. of systems installed, their capacities, locations, etc. and is obtained from various stakeholders i.e. State Government Departments/Nodal Agencies, NGOs, Private Entrepreneurs, etc. Annual statistical information regarding achievements under different programmes/schemes is being included in the yearly Annual Report of the Ministry.