

Carbon Accounting Proxy (CAP) Methodology for Estimating Scope 1 & Scope 2 Emissions

Based on recent stakeholder inputs, many enterprises in India find it challenging to quantify their carbon footprint accurately using the base methodology laid out in the SEBI BRSR Core disclosures ([Annexure](#)). This is primarily due to the lack of direct access to quantity-based data for fuel, refrigerants and electricity consumption. While it is vital that companies in India improve their ability to internally collect quantitative data around fuel consumption, electricity use and fugitive emissions to comply with BRSR Core requirements, there is a need for short-term guidance around a standardised, accessible and flexible carbon accounting methodology that is based on more easily available ‘Spend data’ for fuel and electricity consumption in order to estimate enterprise Scope 1 and Scope 2 emissions.

This memo outlines a provisional ‘spend-based’ methodology for calculating Scope 1 and 2 carbon emissions that can be leveraged by enterprises in India for their BRSR Core disclosures in the absence of the more granular data required to undertake a ‘quantity-based’ calculation.

There exists a precedent for similar spend-based guidance in international standards. For instance, the GHG Protocol allows for the use of multiple methodologies (quantity-based, spend-based, distance-based, supplier-specific, etc.) for estimating Scope 3 emissions. In order to estimate Scope 3 Purchased Goods and Services Emissions, the GHG Protocol allows for the use of a spend-based methodology for calculating emissions, with the intention of leveraging the ready availability of reliable and well-structured financial data, specifically spend information on goods and services. The US EPA provides similar guidance around using spend-based proxies for the emissions estimation of certain types of activities when quantity-based information is not available. This memo extends the same principle to create a Scope 1 and Scope 2 carbon emissions accounting framework for organisations that do not have access to quantity-based fuel and energy information.

While the Annexure in this provisional Carbon Accounting Proxy (CAP) memo aggregates pricing information from credible public sources, there are inherent uncertainties when using spend-based methods. This approach should thus be used only when access to more granular quantity-based data is unavailable, and should be phased out at the earliest date possible in favour of a more accurate quantity-based methodology.

1. Need for Provisional Spend-Based Methodology

Large enterprises in India often operate across diverse locations and regulatory environments, complicating the direct measurement of fuel and electricity usage. A quantity-based reporting of carbon emissions requires precise data on the units and quantities of the fuels, refrigerants & electricity units consumed by the organisation, which may not be readily available or accurately measurable for all entities. This data gap significantly hinders the ability of these enterprises to comply with regulatory disclosure requirements laid out in the BRSR Core

guidance. A spend-based methodology to estimate carbon emissions offers a viable alternative by leveraging audited financial data, which is readily available and subject to a high degree of rigour in accordance with generally accepted audit practices.

2. Spend-Based Methodology Explained

The Carbon Accounting Proxy (CAP) methodology estimates the direct (Scope 1) and indirect (Scope 2) green-house gas emissions (in units of carbon dioxide equivalents - CO₂e) by:

- First, using a spend-based approach to convert fuels and electricity usage data (in INR) to quantity estimates using credible public pricing information.
- Then, using the existing BRSR guidance for applying quantity-based Intergovernmental Panel on Climate Change (IPCC) emission factors to convert the above data (fuel / electricity usage) to emissions estimates.

The CAP approach involves the following steps:

- **Data Collection:** Gathering relevant data from existing financial/accounting systems on expenses related to fuels, refrigerants and electricity use across the organisation, classified state-wise, where possible;
- **Price Adjustments:** Using the CAP pricing database consisting of credible public pricing information (price factors) to convert spend-based data to quantity-based data for each type of fuel, refrigerant and electricity unit consumed;
- **Application of Emission Factors:** Applying the appropriate IPCC quantity-based emission factors to the estimated quantities in order to calculate carbon dioxide equivalent (CO₂e) emissions.
- **Aggregation:** Aggregating the calculated CO₂e emissions across all the relevant categories to derive the total Scope 1 and Scope 2 emissions footprint.

$$\text{Carbon Emissions} = (\text{Spend Data} / \text{Price Factor}) \times \text{Emission Factor}$$

3. Inherent Uncertainties

While the spend-based approach facilitates carbon accounting for enterprises lacking quantity-based data, it inherently carries some uncertainties. These include:

- **Variability in Pricing Information:** Public pricing data may not reflect actual prices paid due to negotiated contracts, bulk discounts, seasonal shifts or other factors.
- **Heterogeneity in Location / Business Unit Information:** Since the price factors are based on location and sectoral proxies, incorrect or mislabeled financial entries on expenditure could result in inaccuracies in estimated emissions.
- **Challenges with Baselineing, Intercomparisons & Target-Setting:** Comparisons of carbon accounting estimations using quantity-based and spend-based approaches are inherently hard to reconcile due to limited pricing information. Enterprises should note

that there is a significant benefit to shifting to quantity-based approaches at the earliest in order to estimate baselines, set targets and track performance of their sustainability journey.

- **Incomplete System Boundary:** This approach DOES NOT include a methodology to estimate all types of fugitive emissions, process emissions or carbon capture.

Despite these uncertainties, the CAP methodology could provide an accessible starting point for enterprises aiming to navigate the complexities of carbon accounting. This methodology enables enterprises to bypass the barriers involved in the direct measurement of quantity-based emissions estimations and provides an adaptable framework for carbon accounting that enterprises can use when they are early in their sustainability journey. It provides a basis for action and directional progress in the absence of perfect data, while emphasising the importance of continuous improvement and verification.

4. Conclusion

The adoption of the CAP methodology for Scope 1 and Scope 2 carbon accounting offers a practical solution for enterprises in India that do not have quantity-based data, enabling them to estimate their carbon footprint and engage in meaningful carbon management practices. However, enterprises should only adopt this provisional approach in the event that they are unable to follow the guidance in the BRSR, and should phase out the use of this approach as soon as possible.

Annexure-I

Spend to Quantity Conversion Price Factors for CAP

Fuel	Price for FY24	Price for FY23	Quantity Based Emission Factors	Methodology
Diesel	INR. 92.59 /litre	INR. 93.7/litre	2.68 kgCO2e/litre	<ol style="list-style-type: none"> 1. Average price has been determined using prices for top 4 metro cities annualised for FY24 and FY23 2. Structured data provided by the Petroleum Planning and Analysis Cell was referred to in order to determine the national annualized average price for Diesel 3. Standard deviation in prices across cities is INR 2.19/ litre for FY24 and INR 2.5/litre for FY23
Petrol	INR 102.9/ litre	INR 104.35/litre	2.27 kgCO2e/litre	<ol style="list-style-type: none"> 1. Average price has been determined using prices for top 4 metro cities annualised for FY24 and FY23 2. Structured data provided by the Petroleum Planning and Analysis Cell was referred to in order to determine the national annualized average price for Petrol. 3. Standard deviation in prices across cities is INR 4.46/litre for FY24 and INR 3.14/litre for FY23
CNG	INR 87.83/ kg	NA	2.56 kgCO2e/kg	<ol style="list-style-type: none"> 1. Average price has been determined using prices for 24 states for the month of Mar'24 2. The prices for CNG for 24 different states, as of March 2024, were obtained from BPCL, a credible source. 3. Standard deviation in prices is INR 7.21/kg for FY24. 4. FY23 prices for CNG could not be obtained from credible government sources.
LPG	INR 96.51/ kg	INR 107.35/kg	2.98 kgCO2e/kg	<ol style="list-style-type: none"> 1. Average price has been determined using prices for Commercial 19 kg Indane Gas for top 4 metro cities annualised for 12 months of FY24 and FY23. 2. Structured data provided by IOCL was referred to for in order to determine annualised average. 3. Standard deviation in prices across cities is INR 5.37/Kg for FY24 and INR 12.06/kg for FY23.

Crude Oil	INR 6,811 / barrel	INR 7400/ barrel	395 kgCO2e/barrel	<ol style="list-style-type: none"> 1. Average prices have been determined using centralised prices provided by the Petroleum Planning and Analysis Cell for the last 24 months. 2. Structured data provided by the Petroleum Planning and Analysis Cell was referred to in order to determine the national annualized average price for Crude Oil. 3. Standard deviation in prices is INR 5.70/barrel for FY24 and INR 12.8/barrel for FY23.
Natural Gas	INR 25 / kilolitre	INR 21 / kilolitre	2.14 kgCO2e/kl	<ol style="list-style-type: none"> 1. Average prices have been determined using centralised prices provided by the Petroleum Planning and Analysis Cell to arrive at the national annualised average price for the last 24 months. 2. Structured data provided by the Petroleum Planning and Analysis Cell was referred to in order to determine the national annualized average price for Natural Gas. 3. Standard deviation estimation suggests that Natural Gas estimate is highly uncertain and should not be applied without validation.
Kerosene	INR 92,676/ kilolitre	INR 112,794.78 / kilolitre	2518 kgCO2e/kl	<ol style="list-style-type: none"> 1. Average price has been determined using prices for 4 top metro cities for the last 24 months provided by IOCL. 2. Structured data provided by IOCL for 4 metro cities over the past 24 months was obtained to arrive at annualized average. 3. Standard deviation in prices across states is INR 2315/kl for FY24 and INR 2962.8/kl for FY23
R-22 / HCFC-22	TBD	TBD	TBD	TBD
R-32 / HFC-32	TBD	TBD	TBD	TBD

R-113	TBD	TBD	TBD	TBD
R-124	TBD	TBD	TBD	TBD
R-124a	TBD	TBD	TBD	TBD
R-1233zd	TBD	TBD	TBD	TBD
R-514a	TBD	TBD	TBD	TBD
R-1234ze	TBD	TBD	TBD	TBD
R-513a	TBD	TBD	TBD	TBD

R-1234yf	TBD	TBD	TBD	TBD
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Methodology for calculating Coal Prices

1. Average price has been determined by using centralised prices for 23 different grades of coal as provided by the Ministry of Coal for the last 12 months.
2. [Historical Data](#) from Ministry of Coal dated 15th March, 2024 has been used to obtain annualised average prices of 23 different grades of Coal.

Coal - G1	INR 9785/tonne	INR 15159.42/ tonne	2440.68 kgCO2e/tonne	1. Standard deviation in prices across 12 month is INR 1744/ tonne for FY24 and INR 2373/tonne for FY23.
Coal - G2	INR 6505/tonne	INR 9062.42/ tonne	2440.68 kgCO2e/tonne	1. Standard deviation in prices across 12 month is INR 361/tonne FY24 and INR 1875/tonne for FY23
Coal – G3	INR 6187/tonne	INR 8731.33/ tonne	2440.68 kgCO2e/tonne	1. Standard deviation in prices across 12 month is INR 314/tonne for FY24 and INR 1816 /tonne for FY23.

Coal – G4	INR 6189/tonne	INR 9282.58/ tonne	2440.68 kgCO2e/tonne	1. Standard deviation in prices across 12 month is INR 388/tonne for FY24 for INR 1889 /tonne for FY23.
Coal – G5	INR 5971/tonne	INR 8680/tonne	2440.68 kgCO2e/tonne	1. Standard deviation in prices across 12 month is INR 307/ tonne for FY24 and INR 1758/tonne for FY23
Coal – G6	INR 5376/tonne	INR 7916/tonne	2440.68 kgCO2e/tonne	1. Standard deviation in prices across 12 month is INR 345/ tonne for FY24 and INR 1777/tonne for FY23.
Coal – G7	INR 2419/ tonne	INR 3782/tonne	2440.68 kgCO2e/tonne	1. Standard deviation in prices across 12 month is INR 81/ tonne for FY24 and INR 850/tonne for FY23.
Coal – G8	INR 2291/tonne	INR 3152/tonne	2440.68 kgCO2e/tonne	1. Standard deviation in prices across 12 month is INR 102/tonne for FY24 and INR 1245/tonne for FY23

Coal – G9	INR 2824/tonne	INR 2710/tonne	2440.68 kgCO2e/tonne	1. Standard deviation in prices across 12 month is INR 81/tonne for FY24 and INR 527/tonne for FY23.
Coal – G10	INR 2661/tonne	INR 2854.08/tonne	2440.68 kgCO2e/tonne	1. Standard deviation in prices across 12 month is INR 119/tonne for FY24 and INR 628 /tonne for FY23
Coal – G11	INR 1968/tonne	INR 2473.67/tonne	2440.68 kgCO2e/tonne	1. Standard deviation in prices across 12 month is INR 79/ tonne for FY24 and INR 301/tonne for FY23.
Coal – G12	INR 1868/tonne	INR 2579/tonne	2440.68 kgCO2e/tonne	1. Standard deviation in prices across 12 month is INR 179/tonne for FY24 and INR 537/tonne for FY23
Coal – G13	INR 1782/tonne	INR 2359/tonne	2440.68 kgCO2e/tonne	1. Standard deviation in prices across 12 month is INR 79/tonne for FY24 and INR 351/tonne for FY23

Coal – G14	INR 1398/tonne	INR 2048.08/tonne	2440.68 kgCO2e/tonne	1. Standard deviation in prices across 12 month is INR 113/tonne for FY24 and INR 337/tonne for FY23
Coal – G15	INR 1170/tonne	INR 1773.33/tonne	2440.68 kgCO2e/tonne	1. Standard deviation in prices across 12 month is INR 96/ tonne for FY24 and INR 506/tonne for FY23.
Coal – G16	INR 4591/tonne	INR 3849/tonne	2440.68 kgCO2e/tonne	1. Standard deviation in prices across 12 month is 0 for FY24 and INR 1096/tonne for FY23.
Coal – G17	INR 712/ tonne	INR 641.67/tonne	2440.68 kgCO2e/tonne	1. Standard deviation in prices across 12 month is INR 10/tonne for FY24 and INR 12/tonne for FY23.
Coal - ST-I	INR 24619/ tonne	INR 26821/tonne	2440.68 kgCO2e/tonne	1. Standard deviation in prices across 12 month is INR 2953/tonne for FY24 and INR 4906 /tonne for FY23

Coal - ST-II	INR 22100/ tonne	INR 26554/tonne	2440.68 kgCO2e/tonne	1. Standard deviation in prices across 12 month is INR 2800/tonne for FY24 and INR 11273/tonne for FY23
Coal - W-I	INR 5929/tonne	INR 6212/tonne	2440.68 kgCO2e/tonne	1. Standard deviation in prices across 12 month is INR 249/tonne for FY24 and INR 0 /tonne for FY23
Coal - W-II	INR 5005/ tonne	INR 5822/ tonne	2440.68 kgCO2e/tonne	1. Standard deviation in prices across 12 month is INR 210/ tonne for FY24 and INR 348/tonne for FY23
Coal - W-III	INR 4208/ tonne	INR 5767/ tonne	2440.68 kgCO2e/tonne	1. Standard deviation in prices across 12 month is INR 719/ tonne for FY24 and INR 566/tonne for FY23.
Coal - W-IV	INR 2297/ tonne	INR 2644/tonne	2440.68 kgCO2e/tonne	1. Standard deviation in prices across 12 month is INR 105/ tonne for FY24 and INR 186/tonne for FY23.

State Wise Electricity Prices

Approach & Methodology

- State-specific average electricity prices are taken from the Central Electricity Authority's (CEA) publication, '[Electricity Tariff & Duty & Average Rates of Electricity Supply in India.](#)'
- Assumes consumption patterns for various consumer categories defined by their sanctioned load and consumption units to estimate the average electricity price.
- The average electricity prices encompass two main components: a) Fixed charges (monthly fees), b) Energy charges (cost per unit of electricity consumed) determined by the tariff orders issued by respective State Electricity Regulatory Commissions, and any government subsidies that may be applicable. Additionally, other charges like cross-subsidy surcharge, wheeling charges, and electricity duty are also considered.
- Data from the most recent edition (2022-2023) was used to represent current pricing structures. The methodological rigour employed by the CEA in compiling this data ensures the reliability and validity of the subsequent analysis.

Reference: Central Electricity Authority. 'Electricity Tariff & Duty & Average Rates of Electricity Supply in India [Report - Mar 2022]', published in 2023. https://cea.nic.in/wp-content/uploads/files/2023/11/Book_2022.pdf

(accessed April 5, 2024)

State level Electricity Tariff was obtained from **PART 3 - Average Rates of Electricity Supply and Electricity Duty** between page number 151-168.

Key Assumptions

- Prices are computed based on assumed consumption at various levels of sanctioned load of consumers.
- For both commercial and industrial connection categories, state-wise price slabs reported by CEA were equally weighted to determine average prices for sanctioned loads ≤ 10 kW and ≤ 30 kW (commercial) and ≤ 15 kW ≤ 100 kW (industrial).
- This calculation employs specific sanctioned load slabs (e.g., 2 kW, 5 kW, 10 kW, 20kW, and 30kW for commercial; 5 kW, 10 kW, 15 kW, 50 kW, and 100 kW for industrial) and calculates an equal weighted average of the prices reported for these slabs from CEA data.
- Although this method assumes consistent pricing within the range, standard deviations are also reported to provide a sense of the variation.

State Wise Price for Commercial Connection (For Sanctioned Load ≤ 10 kW)

Name of Utility	Average Price (Rs. / kWh)	Standard Deviation (Rs. / kWh)	Emission Factors kgCO ₂ e/kWh
Andaman & Nicobar Islands	9.93	1.58	0.716
Andhra Pradesh	9.74	0.65	0.716
Arunachal Pradesh	5.00	0.00	0.716
Assam	8.47	0.00	0.716
Bihar (Urban Areas)	8.81	0.23	0.716
Bihar (Rural Areas)	7.68	0.25	0.716
Chandigarh	5.55	0.15	0.716
Chhattisgarh	8.44	1.00	0.716
Dadra & Nagar Haveli	3.96	0.11	0.716
Daman & Diu	3.91	0.11	0.716
Delhi (BYPL/BRPL/NDPL-TPDDL)	10.80	1.69	0.716
Delhi (NDMC)	10.80	1.69	0.716
Goa	5.48	0.33	0.716
Gujarat	5.62	0.00	0.716
Gujarat- (Torrent Power Ltd., Ahmedabad)	6.13	0.09	0.716
Gujarat- (Torrent Power Ltd., Surat)	5.78	0.00	0.716
Haryana	7.16	0.00	0.716
Himachal Pradesh	5.74	0.18	0.716
Jammu & Kashmir and Ladakh	5.28	1.19	0.716
Jharkhand (Urban Areas)	6.81	0.16	0.716
Jharkhand (Rural Areas)	6.19	0.16	0.716
Karnataka (Bruhat Bangalore Mahanagara Palike, Municipal Corp. & all Urban)	10.80	0.08	0.716
Karnataka (Areas under Village Panchayats)	10.18	0.07	0.716
Kerala	10.00	1.21	0.716
Lakshadweep	8.66	0.66	0.716
Madhya Pradesh (Urban Areas)	8.49	0.03	0.716
Madhya Pradesh (Rural Areas)	8.26	0.03	0.716
Maharashtra	11.44	0.70	0.716

Maharashtra - Mumbai - (B.E.S.T)	9.16	0.68	0.716
Maharashtra - Mumbai - (Adani Electricity)	9.82	0.68	0.716
Maharashtra - Mumbai - (TATA's)	9.54	0.68	0.716
Manipur	7.95	0.21	0.716
Mizoram	7.52	0.05	0.716
Meghalaya	7.98	0.14	0.716
Nagaland	8.48	0.32	0.716
Odisha	7.57	0.42	0.716
Puducherry	7.48	0.41	0.716
Punjab	8.50	0.18	0.716
Rajasthan	10.20	0.27	0.716
Sikkim	5.50	0.60	0.716
Tamil Nadu	8.66	0.22	0.716
Tripura	7.78	0.43	0.716
Uttarakhand	6.65	0.00	0.716
Uttar Pradesh (Urban)	11.50	0.94	0.716
Uttar Pradesh (Rural)	6.70	0.00	0.716
West Bengal (Urban)	9.88	0.75	0.716
West Bengal (Rural)	9.87	0.75	0.716
West Bengal - (CESC Ltd., Kolkata)	9.78	0.87	0.716
West Bengal - (IPCL)	6.24	0.38	0.716
D.V.C (Jharkhand Area)	5.50	0.00	0.716
Telangana	9.66	0.51	0.716

State Wise Price for Commercial Connection (For Sanctioned Load \leq 30 kW)

Name of Utility	Average Price (Rs. / kWh)	Standard Deviation (Rs. / kWh)	Emission Factor
Andaman & Nicobar Islands	12.20	0.2	0.716
Andhra Pradesh	10.54	0.0	0.716
Arunachal Pradesh	5.00	0.0	0.716

Assam	8.71	0.3	0.716
Bihar (Urban Areas)	9.07	0.0	0.716
Bihar (Rural Areas)	7.95	0.0	0.716
Chandigarh	5.74	0.0	0.716
Chhattisgarh	9.62	0.0	0.716
Dadra & Nagar Haveli	4.08	0.0	0.716
Daman & Diu	4.03	0.0	0.716
Delhi (BYPL/BRPL/NDPL-TPDDL)	11.77	0.0	0.716
Delhi (NDMC)	11.77	0.0	0.716
Goa	5.87	0.0	0.716
Gujarat	6.15	0.0	0.716
Gujarat- (Torrent Power Ltd., Ahmedabad)	7.16	0.0	0.716
Gujarat- (Torrent Power Ltd., Surat)	7.20	0.0	0.716
Haryana	7.89	0.6	0.716
Himachal Pradesh	6.63	0.0	0.716
Jammu & Kashmir and Ladakh	6.56	0.0	0.716
Jharkhand (Urban Areas)	6.97	0.0	0.716
Jharkhand (Rural Areas)	6.38	0.0	0.716
Karnataka (Bruhat Bangalore Mahanagara Palike, Municipal Corp. & all Urban)	10.88	0.0	0.716
Karnataka (Areas under Village Panchayats)	10.27	0.0	0.716
Kerala	11.16	0.0	0.716
Lakshadweep	9.37	0.0	0.716
Madhya Pradesh (Urban Areas)	9.46	0.0	0.716
Madhya Pradesh (Rural Areas)	9.16	0.0	0.716
Maharashtra	14.68	5.6	0.716
Maharashtra - Mumbai - (B.E.S.T)	9.90	2.0	0.716
Maharashtra - Mumbai - (Adani Electricity)	10.77	2.3	0.716
Maharashtra - Mumbai - (TATA's)	10.28	2.1	0.716
Manipur	8.18	0.0	0.716
Mizoram	7.58	0.0	0.716
Meghalaya	8.14	0.0	0.716
Nagaland	8.84	0.0	0.716

Odisha	8.02	0.0	0.716
Puducherry	7.92	0.0	0.716
Punjab	8.77	0.1	0.716
Rajasthan	11.54	0.0	0.716
Sikkim	6.56	0.6	0.716
Tamil Nadu	8.90	0.0	0.716
Tripura	8.26	0.0	0.716
Uttarakhand	7.22	0.8	0.716
Uttar Pradesh (Urban)	12.45	0.0	0.716
Uttar Pradesh (Rural)	6.70	0.0	0.716
West Bengal (Urban)	10.69	0.0	0.716
West Bengal (Rural)	10.69	0.0	0.716
West Bengal - (CESC Ltd., Kolkata)	10.72	0.0	0.716
West Bengal - (IPCL)	6.57	0.1	0.716
D.V.C (Jharkhand Area)	5.50	0.0	0.716
Telangana	10.32	0.0	0.716

State Wise Price for Industrial Connection (For Sanctioned Load ≤ 15 kW - Small Industries)

Name of Utility	Average Price (Rs. / kWh)	Standard Deviation Rs. / kWh)	Emission Factor kgCO ₂ e
Andaman & Nicobar Islands	8.15	0.69	0.716
Andhra Pradesh	7.26	0.00	0.716
Arunachal Pradesh	4.30	0.00	0.716
Assam (Urban Areas)	5.67	0.00	0.716
Assam (Rural Areas)	5.34	0.00	0.716
Bihar	8.67	0.00	0.716
Chandigarh	4.61	0.00	0.716
Chhattisgarh	5.95	0.00	0.716
Dadra & Nagar Haveli	4.32	0.44	0.716
Daman & Diu	4.36	0.00	0.716

Delhi (BYPL/BRPL/NDPL-TPDDL)	10.89	0.00	0.716
Delhi (NDMC)	10.89	0.00	0.716
Goa	4.78	0.13	0.716
Gujarat	5.79	0.00	0.716
Gujarat- (Torrent Power Ltd., Ahmedabad)	5.67	0.09	0.716
Gujarat- (Torrent Power Ltd., Surat)	5.42	0.21	0.716
Haryana	7.27	0.19	0.716
Himachal Pradesh	4.96	0.06	0.716
Jammu & Kashmir and Ladakh	4.18	0.00	0.716
Jharkhand	7.20	0.69	0.716
Karnataka (Bruhat Bangalore Mahanagara Palike, Municipal Corp. & all Urban)	8.14	0.33	0.716
Karnataka (Areas under Village Panchayats)	7.64	0.33	0.716
Kerala	6.47	0.22	0.716
Lakshadweep	6.87	0.00	0.716
Madhya Pradesh (Urban Areas)	9.52	0.00	0.716
Madhya Pradesh (Rural Areas)	8.68	0.00	0.716
Maharashtra	7.47	0.23	0.716
Maharashtra - Mumbai - (B.E.S.T)	7.35	0.20	0.716
Maharashtra - Mumbai - (Adani Electricity)	8.23	0.20	0.716
Maharashtra - Mumbai - (TATA's)	7.66	0.20	0.716
Manipur	5.32	0.00	0.716
Mizoram	6.71	0.10	0.716
Meghalaya	7.83	0.00	0.716
Nagaland	6.30	0.11	0.716
Odisha	6.78	0.02	0.716
Puducherry	6.38	0.00	0.716
Punjab	7.41	0.00	0.716
Rajasthan	7.90	0.10	0.716
Sikkim (Urban)	6.12	0.47	0.716
Sikkim (Rural)	4.49	0.57	0.716
Tamil Nadu	6.16	1.20	0.716
Tripura	8.04	0.14	0.716

Uttarakhand	5.93	0.00	0.716
Uttar Pradesh (Urban)	10.18	0.34	0.716
Uttar Pradesh (Rural)	9.41	0.32	0.716
West Bengal (Urban)	7.87	0.50	0.716
West Bengal (Rural)	7.67	0.48	0.716
West Bengal - (CESC Ltd., Kolkata)	7.89	0.38	0.716
West Bengal - (IPCL)	5.13	0.40	0.716
D.V.C (Jharkhand Area)	6.17	0.00	0.716
Telangana	7.25	0.04	0.716

State Wise Price for Industrial Connection (For Sanctioned Load \leq 100 kW - Medium Industries)

Name of Utility	Average Price (Rs. / kWh)	Standard Deviation (Rs. / kWh)	Emission Factors
Andaman & Nicobar Islands	8.32	1.3	0.716
Andhra Pradesh	7.26	0.0	0.716
Arunachal Pradesh	4.30	0.0	0.716
Assam (Urban Areas)	6.57	1.3	0.716
Bihar	8.81	0.2	0.716
Chandigarh	5.13	0.7	0.716
Chhattisgarh	6.53	0.8	0.716
Dadra & Nagar Haveli	4.39	0.4	0.716
Daman & Diu	5.68	1.9	0.716
Delhi (BYPL/BRPL/NDPL-TPDDL)	10.89	0.0	0.716
Delhi (NDMC)	10.89	0.0	0.716
Goa	4.82	0.2	0.716
Gujarat	6.02	0.3	0.716
Gujarat- (Torrent Power Ltd., Ahmedabad)	6.64	1.5	0.716
Gujarat- (Torrent Power Ltd., Surat)	6.24	1.3	0.716
Haryana	7.94	1.1	0.716

Himachal Pradesh	5.70	0.9	0.716
Jammu & Kashmir and Ladakh	4.05	0.2	0.716
Jharkhand	7.84	2.0	0.716
Karnataka (Bruhat Bangalore Mahanagara Palike, Municipal Corp. & all Urban)	8.74	1.4	0.716
Karnataka (Areas under Village Panchayats)	8.22	1.3	0.716
Kerala	6.98	0.8	0.716
Lakshadweep	6.87	0.0	0.716
Madhya Pradesh (Urban Areas)	9.52	0.0	0.716
Madhya Pradesh (Rural Areas)	8.68	0.0	0.716
Maharashtra	9.13	2.0	0.716
Maharashtra - Mumbai - (B.E.S.T)	8.77	1.7	0.716
Maharashtra - Mumbai - (Adani Electricity)	9.72	1.8	0.716
Maharashtra - Mumbai - (TATA's)	9.04	1.6	0.716
Manipur	7.05	2.4	0.716
Mizoram	6.73	0.2	0.716
Meghalaya	7.83	0.0	0.716
Nagaland	6.60	0.6	0.716
Odisha	7.02	0.3	0.716
Puducherry	6.38	0.0	0.716
Punjab	7.85	0.6	0.716
Rajasthan	8.23	0.6	0.716
Sikkim (At 11 kV)	6.63	1.5	0.716
Tamil Nadu	5.82	1.5	0.716
Tripura	8.15	0.3	0.716
Uttarakhand	7.17	1.7	0.716
Uttar Pradesh (Urban)	10.72	1.1	0.716
Uttar Pradesh (Rural)	9.92	1.0	0.716
West Bengal (Urban)	8.35	1.3	0.716
West Bengal (Rural)	8.12	1.3	0.716
West Bengal - (CESC Ltd., Kolkata)	8.46	1.3	0.716
West Bengal - (IPCL)	5.51	1.1	0.716

D.V.C (Jharkhand Area)	6.69	0.7	0.716
Telangana	7.25	0.0	0.716