सत्यमेव जयते

भारत सरकार

Government of India

विद्युत मंत्रालय

Ministry of Power

केन्द्रीय विद्युत प्राधिकरण

Central Electricity Authority

इलेक्ट्रिक वाहन (ईवी) सार्वजनिक चार्जिंग स्टेशन (पीसीएस) मासिक विद्युत उपभोग रिपोर्ट

Electric Vehicles (EVs) Public Charging Stations (PCS) Monthly Power Consumption Report

सितम्बर 2024 / September 2024

स्वच्छ ऊर्जा और ऊर्जा परिवर्तन प्रभाग

Clean Energy and Energy Transition Division

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F O R E W O R D

India's insufficient petroleum reserves have led to heavy reliance on crude oil and natural gas imports, making it the third-largest oil importer globally, following the US and China. Approximately 82.8% of India's crude oil and 45.3% of its natural gas are imported. The consumption of petroleum products significantly contributes to air pollution, creating a pressing need to curb their usage and tackle the pollution issue. Moreover, the substantial size of crude oil imports burdens the Indian economy, necessitating a shift toward cleaner fuel alternatives and technologies to reduce dependence on petroleum products and safeguard the environment.

The Ministry of Power, with aim to accelerate the E-mobility transition in the country by accelerating development of Public Charging Infrastructure (PCS) for electric vehicles, has published revised consolidated guidelines titled "Guidelines for Installation and Operation of Electric Vehicle Charging Infrastructure-2024" dated 17.09.2024.

Further, after review of FAME-II and EMPS-2024, Ministry of Heavy Industries (MHI) formulated PM Electric Drive Revolution in Innovative Vehicle Enhancement (PM E-DRIVE) scheme with the approval of the Union Cabinet. The number of vehicles and the expenditure under EMPS-2024 (implemented for the period from 1st April 2024 to 30th September 2024) is subsumed under the number of vehicles and outlay of PM E-DRIVE Scheme. The PM E-DRIVE Scheme, with an outlay of ₹10,900 crore, shall be implemented from 1st October 2024 to 31st March 2026, for faster adoption of electric vehicles (EVs), setting up of charging infrastructure and development of EV manufacturing eco-system in the country.

In this regard, information on PCS are required for assessment of progress made in development of necessary charging infrastructure in meeting the various stated objectives like development of safe & reliable EV charging eco system, ensuring energy security & reduction of emission intensity etc., and to take further policy intervention. The data on energy consumption in these EV charging stations is also important for the purpose of load forecasting, distribution system planning and integrated resource planning in the country.

This report is based on the data/information submitted by various utilities. Few information from other utilities is awaited to make this report more comprehensive.

State/UT wise-Electricity Consumption Details - EV charging stations in India

Clean Energy & Energy Transition Division, Central Electricity Authority

Region	September, 2024			April, 2024 to September, 2024		
State/UT	Electricity Consumed in EV Charging Stations (excl. Heavy Duty) (in MU)	Electricity Consumed in Heavy Duty PCS only (in MU)	Total Electricity Consumed (in MU)	Electricity Consumed in EV Charging Stations (excl. Heavy Duty) (in MU)	Electricity Consumed in Heavy Duty PCS only (in MU)	Total Electricity Consumed (in MU)
Northern						
Chandigarh	0.05	0.55	0.61	0.22	3.44	3.66
Delhi	11.63	18.08	29.71	73.02	102.37	175.39
Haryana	1.67	0.04	1.72	10.83	0.24	11.07
Rajasthan	0.65	0.15	0.80	3.61	0.88	4.49
Uttar Pradesh	0.02	0.00	0.02	0.12	0.00	0.12
Western						
Gujarat	0.18	5.26	5.44	1.39	29.21	30.60
Madhya Pradesh	0.05	0.26	0.31	0.29	1.55	1.84
Maharashtra	3.33	14.79	18.12	12.40	78.04	90.45
Southern						
Andhra Pradesh	0.19	1.84	2.03	0.73	10.94	11.67
Karnataka	0.36	0.31	0.66	3.24	1.78	5.02
Kerala	1.13	0.00	1.13	6.50	0.00	6.50
Tamil Naidu	2.60	-	2.60	7.43	-	7.43
Telangana	0.40	0.98	1.39	2.47	4.65	7.12
Eastern						
Bihar	1.13	0.20	1.34	4.06	1.34	5.40
Odisha	0.01	0.02	0.03	0.05	0.29	0.34
West Bengal	0.17	0.20	0.37	0.90	1.30	2.20
North Eastern						
Assam	0.68	0.99	1.67	2.68	5.48	8.16
Grand Total	**24.26**	**43.67**	**67.93**	**129.94**	**241.52**	**371.46**

- : Not available with TANGEDCO

Note: As per the data furnished by State DISCOMs/ Utilities. The electricity consumption in MU has been rounded off to nearest hundredth place.

DISCOM/Utility-wise- Electricity Consumption Details - EV charging stations in India						
Clean Energy & Energy Transition Division, Central Electricity Authority						
	September, 2024			April, 2024 to September, 2024		
State-UT/DISCOM	Electricity Consumed in EV Charging Stations (excl. Heavy Duty) (in MU)	Electricity Consumed in Heavy Duty PCS only (in MU)	Total Electricity Consumed (in MU)	Electricity Consumed in EV Charging Stations (excl. Heavy Duty) (in MU)	Electricity Consumed in Heavy Duty PCS only (in MU)	Total Electricity Consumed (in MU)
Chandigarh	**0.05**	**0.55**	**0.61**	**0.22**	**3.44**	**3.66**
UT Chandigarh	0.05	0.55	0.61	0.22	3.44	3.66
Delhi	**11.63**	**18.08**	**29.71**	**73.02**	**102.37**	**175.39**
BRPL	5.40	5.61	11.01	36.40	26.74	63.14
BYPL	2.82	2.31	5.12	17.01	13.87	30.88
Tata Power-DDL	3.40	10.16	13.56	19.45	61.76	81.21
NDMC	0.02	0.00	0.02	0.16	0.00	0.16
Haryana	**1.67**	**0.04**	**1.72**	**10.83**	**0.24**	**11.07**
DHBVN	1.61	0.00	1.61	10.43	0.00	10.43
UHBVN	0.06	0.04	0.11	0.40	0.24	0.64
Rajasthan	**0.65**	**0.15**	**0.80**	**3.61**	**0.88**	**4.49**
AVVNL	0.05	0.00	0.05	0.29	0.00	0.29
JDVVNL	0.02	0.00	0.02	0.11	0.00	0.11
JVVNL	0.58	0.15	0.73	3.21	0.88	4.09
Uttar Pradesh	**0.02**	**0.00**	**0.02**	**0.12**	**0.00**	**0.12**
Noida Power (NPCL)	0.02	0.00	0.02	0.12	0.00	0.12
Gujarat	**0.18**	**5.26**	**5.44**	**1.39**	**29.21**	**30.60**
DGVCL	0.06	2.88	2.94	0.39	15.08	15.47
PGVCL	0.04	0.74	0.78	0.26	3.73	3.99
Torrent Power	0.05	1.64	1.69	0.27	10.35	10.63
UGVCL	0.03	0.00	0.03	0.46	0.05	0.52
Madhya Pradesh	**0.05**	**0.26**	**0.31**	**0.29**	**1.55**	**1.84**
MPMKVVCL	0.05	0.26	0.31	0.29	1.55	1.84
Maharashtra	**3.33**	**14.79**	**18.12**	**12.40**	**78.04**	**90.45**
AEML	1.33	1.29	2.61	1.33	1.29	2.61
Brihan Mumbai (BEST)	0.65	3.24	3.88	3.61	17.26	20.86
MSEDCL	1.36	10.26	11.62	7.47	59.50	66.97
Andhra Pradesh	**0.19**	**1.84**	**2.03**	**0.73**	**10.94**	**11.67**
APEPDCL	0.08	0.14	0.22	0.39	0.83	1.23
APSPDCL	0.11	1.71	1.82	0.34	10.10	10.44

DISCOM/Utility-wise- Electricity Consumption Details - EV charging stations in India

Clean Energy & Energy Transition Division, Central Electricity Authority

State-UT/DISCOM	September, 2024			April, 2024 to September, 2024		
	Electricity Consumed in EV Charging Stations (excl. Heavy Duty) (in MU)	Electricity Consumed in Heavy Duty PCS only (in MU)	Total Electricity Consumed (in MU)	Electricity Consumed in EV Charging Stations (excl. Heavy Duty) (in MU)	Electricity Consumed in Heavy Duty PCS only (in MU)	Total Electricity Consumed (in MU)
Karnataka	**0.36**	**0.31**	**0.66**	**3.24**	**1.78**	**5.02**
BESCOM	0.28	0.00	0.28	2.82	0.00	2.82
CESC Mysore	0.02	0.23	0.25	0.17	1.34	1.51
GESCOM	0.01	0.00	0.01	0.03	0.00	0.03
HESCOM	0.01	0.00	0.01	0.10	0.00	0.10
MESCOM	0.03	0.07	0.11	0.11	0.44	0.56
Kerala	**1.13**	**0.00**	**1.13**	**6.50**	**0.00**	**6.50**
KSEB	1.13	0.00	1.13	6.50	0.00	6.50
Tamil Naidu	**2.60**	**-**	**2.60**	**7.43**	**-**	**7.43**
TANGEDCO	2.60	-	2.60	7.43	-	7.43
Telangana	**0.40**	**0.98**	**1.39**	**2.47**	**4.65**	**7.12**
TGNPDCL	0.02	0.07	0.09	0.10	0.07	0.17
TGSPDCL	0.38	0.92	1.30	2.37	4.58	6.95
Bihar	**1.13**	**0.20**	**1.34**	**4.06**	**1.34**	**5.40**
NBPDCL	0.33	0.00	0.33	0.54	0.00	0.54
SBPDCL	0.81	0.20	1.01	3.52	1.34	4.86
Odisha	**0.01**	**0.02**	**0.03**	**0.05**	**0.29**	**0.34**
TPCODL	0.01	0.02	0.03	0.05	0.29	0.34
West Bengal	**0.17**	**0.20**	**0.37**	**0.90**	**1.30**	**2.20**
CESC	0.17	0.20	0.37	0.90	1.30	2.20
Assam	**0.68**	**0.99**	**1.67**	**2.68**	**5.48**	**8.16**
APDCL	0.68	0.99	1.67	2.68	5.48	8.16
Grand Total	**24.26**	**43.67**	**67.93**	**129.94**	**241.52**	**371.46**

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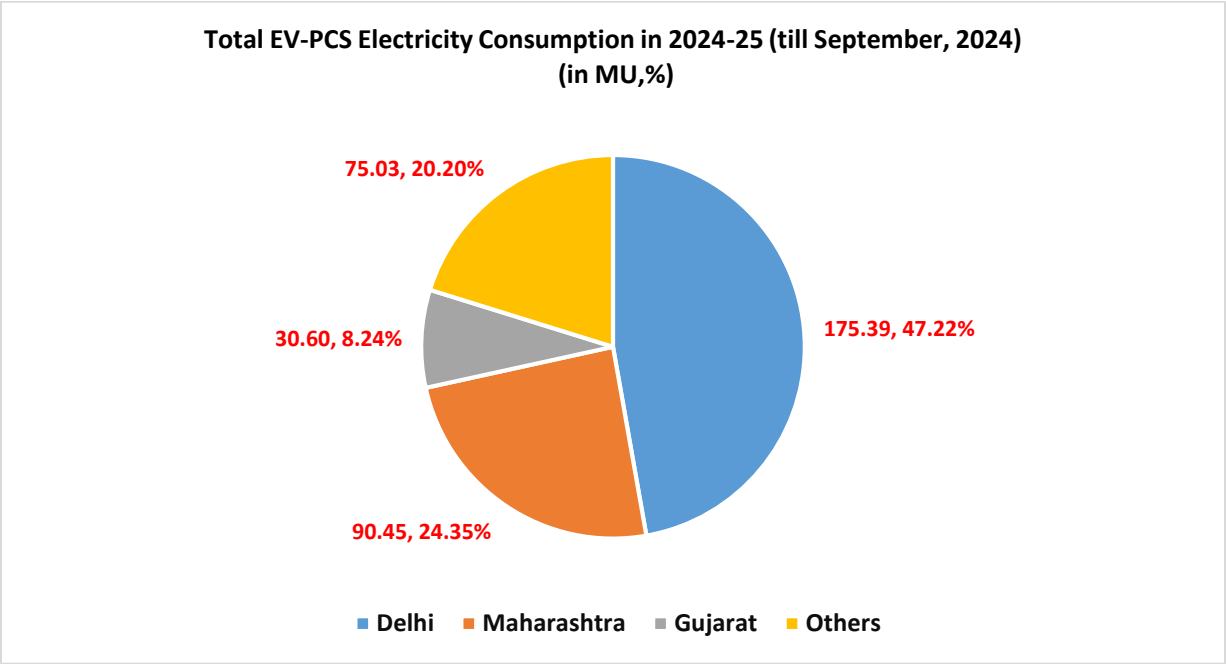
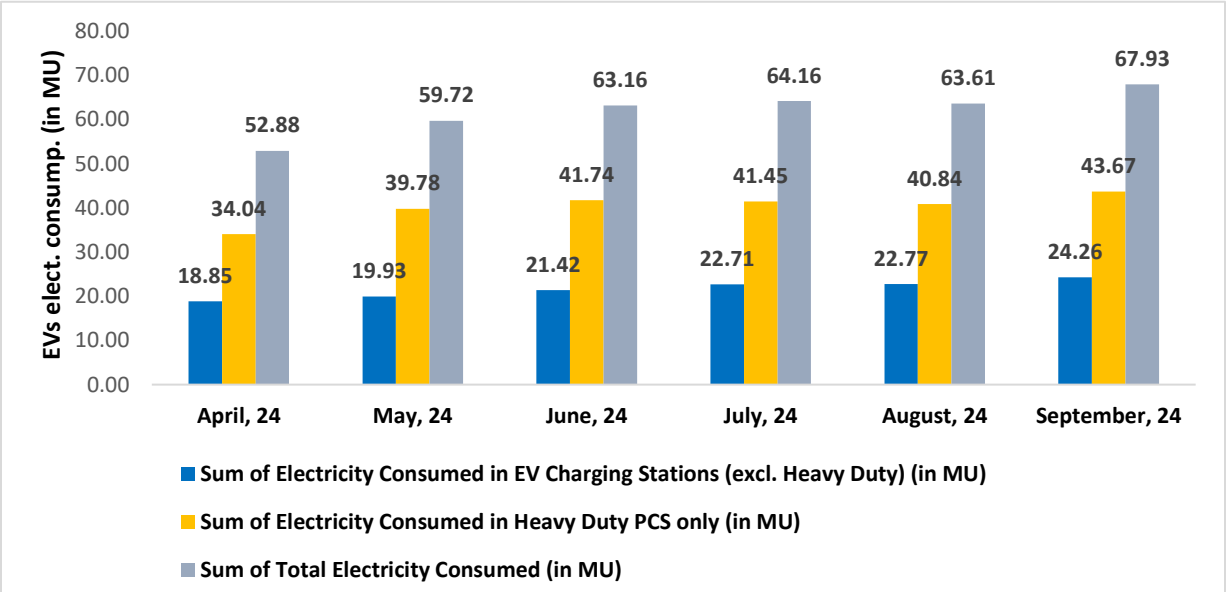
Note: As per the data furnished by State DISCOMs/ Utilities. The electricity consumption in MU has been rounded off to nearest hundredth place.

Graphical representation of consumption by EV - charging stations



It can be seen from above graph that in 2024-25 till September month, Delhi has the maximum electric-vehicles electricity consumption (175.39 MU, 47.22%) followed by Maharashtra (90.45 MU, 24.35%) and Gujarat (30.60 MU, 8.24%).



The above graph shows the electricity consumption by EV charging stations along with Heavy-duty charging stations during the period from April 2024 to September 2024. Total electricity consumption in September 2024 was 67.93 MU whereas in April 2024, it was 52.88 MU.