Chapter-III

Cross Border Trade of Electricity

1. Background

The cross border trade of electricity (import or export of electricity between India and its neighbouring countries) between India and Nepal and between India and Bhutan has been taking place for more than fifty years. The cross border trade with Bangladesh and Myanmar was respectively started in the year 2013 and year 2017, respectively.

The cross border trade of electricity has mainly been taking place under bilateral Memorandum of Understanding/ Power Trade Agreement. The South Asian Association for Regional Cooperation (SAARC) countries envisaged the need for cross border electricity cooperation and signed the SAARC Framework Agreement for Energy Cooperation on 27.11.2014, recognizing the importance of electricity in promoting economic growth and improving the quality of life in the region. In order to facilitate and promote cross border trade of electricity with greater transparency, consistency and predictability in regulatory approaches across jurisdictions and minimize perception of regulatory risks, the Guidelines on Cross Border Trade of Electricity had been prepared by the Inter-Ministerial Working Group in consultation with various stakeholders.

The Ministry of Power (MOP) issued the Guidelines on Cross Border Trade of Electricity on 5.12.2016, which was subsequently substituted by the 'Guidelines for Import/Export (Cross Border) of Electricity-2018' issued on 18.12.2018, to promote cross border trade of electricity with neighbouring countries. Following the guidelines, the Central Electricity Regulatory Commission issued the CERC (Cross Border Trade of Electricity) Regulations, 2019 on 8.03.2019. The Central Electricity Authority (CEA) issued 'Draft Conduct of Business Rules of the Designated Authority' on 25.04.2019 for facilitating the Cross Border Trade of Electricity. In continuation to the draft business rules, CEA notified the 'Procedure for Approval and Facilitating Import/Export (Cross Border) of Electricity by the Designated Authority' on 26.2.2021. With a view to facilitate

transfer of power through Real Time Market (RTM) segment of Indian power exchanges under clause 5.3 of the Guidelines, the CEA, on 31.7.2023, issued certain modifications in the Procedure for Approval and Facilitating Import/Export of Electricity by the Designated Authority.

Under the CERC (Cross Border Trade of Electricity) Regulations 2019, the sale and purchase of electricity between India and the neighbouring countries is allowed through mutual agreements between the local entities and the entities of the neighbouring countries, through bilateral agreements between two countries, bidding route or through mutual agreements between entities. Any Indian trader, after obtaining approval from Designated Authority, can trade in Indian Power Exchanges on behalf of any entity of neighbouring country complying with these regulations.

2. Cross Border Trade of Electricity between India and its Neighbouring Countries

Presently, India is a net exporter of electricity to Bangladesh, and Myanmar, and a net importer of electricity from Bhutan and Nepal. Table-35 and Figure-39 below provide the details on Cross Border Trade of Electricity between India and its neighbouring countries during the period from 2013-14 to 2024-25. It can be observed from the Table-35, that India was a net importer of electricity from 2013-14 to 2015-16, and became a net exporter of electricity from 2016-17 onwards.

Table-35: Cross Border Trade of Electricity between India and its Neighbouring Countries (MU), 2013-14 to 2023-24

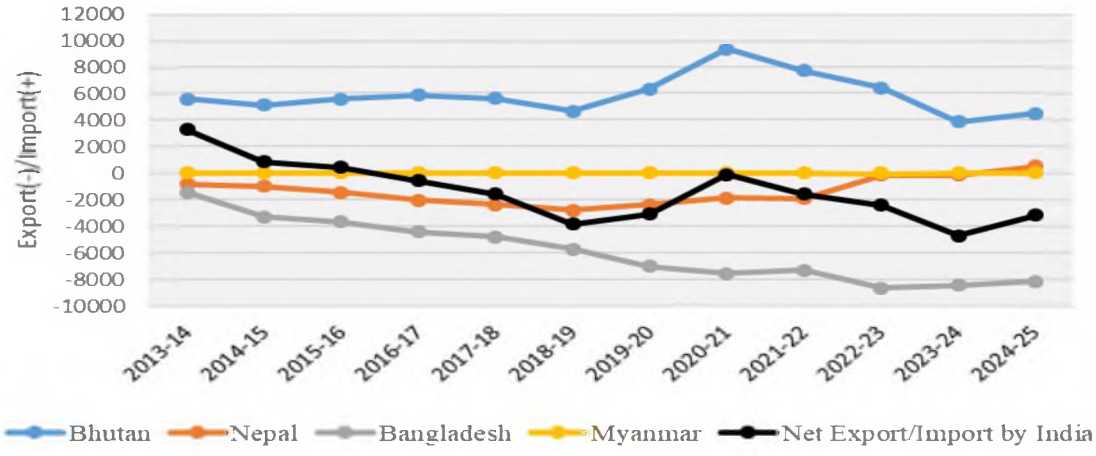
Year	Bhutan	Nepal	Bangladesh	Myanmar	Net Export/ Import by India
2013-14	5555.18	-840.37	-1448.19	0.00	3266.62
2014-15	5109.48	-997.17	-3271.89	0.00	840.42
2015-16	5555.07	-1469.59	-3654.4	0.00	431.08
2016-17	5863.58	-2021.21	-4419.61	-3.23	-580.47
2017-18	5611.14	-2388.96	-4808.83	-5.07	-1591.72
2018-19	4657.07	-2798.84	-5690.31	-6.67	-3838.75
2019-20	6310.73	-2373.06	-6987.94	-8.61	-3058.88
2020-21	9318.17	-1865.05	-7551.99	-9.24	-108.11

2021-22	7670.34	-1921.09	-7301.74	-8.8	-1561.29
2022-23	6379.95	-158.05	-8622.14	-9.8	-2410.04
2023-24	3862.78	-154.08	-8413.52	-8.47	-4713.29
2024-25	4466.45	497.29	-8118.27	-9.01	-3163.54

(-) Export; (+) Import

Source: Grid-India Monthly Reports

Figure-39: Net Volume of Electricity Traded between India and its Neighbouring Countries (MU), 2013-14 to 2024-25



3. Cross Border Trade of Electricity through Power Exchanges

The Cross-Border Trade of Electricity commenced in the Day Ahead Market of IEX in 2021-22. The trade with Nepal commenced on 17.04.2021, whereas the trade with Bhutan commenced on 01.01.2022. Cross-Border Trade in Real Time Market commenced from October 2023. Table-36 below presents the details of cross-border trade with Nepal and Bhutan through power exchanges for the period 2021-22 to 2024-25. During the last two years i.e. 2023-24 and 2024-25, Nepal and Bhutan purchased electricity at lower price and sold electricity at higher price, therefore, both the countries gained through cross border trade of electricity at IEX. There was no cross border trading undertaken at PXIL and HPX during the period.

Table-36: Cross Border Trade of Electricity at IEX, 2021-22 to 2024-25

Year	Nepal				Bhutan			
	Buy		Sell		Buy		Sell	
	Volume Traded	Weighted Average Price	Volume Traded	Weighted Average Price	Volume Traded	Weighted Average Price	Volume Traded	Weighted Average Price
	(MU)	(₹/kWh)	(MU)	(₹/kWh)	(MU)	(₹/kWh)	(MU)	(₹/kWh)
2021-22	785.84	3.59	32.04	3.20	240.11	2.89	-	-
2022-23	1035.69	5.95	1357.77	5.14	318.84	4.39	-	-
2023-24	1310.81	4.43	1556.33	5.61	1299.42	3.74	40.28	5.78
2024-25	1365.08	3.50	1606.37	4.22	1097.90	3.06	239.78	4.94

Source: IEX

Note: The volume traded represents the volume traded in both DAM and RTM.

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