

BEFORE THE HARYANA ELECTRICITY REGULATORY COMMISSION AT PANCHKULA

Case No. HERC/Petition No. 17 of 2024

Date of Hearing : 08.05.2024
Date of Order : 14.05.2024

In the Matter of

Petition under Section 86(1)(b) of the Electricity Act, 2003 read with the Haryana Electricity Regulatory Commission (Conduct of Business) Regulations, 2019 seeking approval of source and grant of unconditional consent to schedule power by HPPC for the procurement of 500 MW from Chutka Nuclear Power Project (2x700 MW) to be set up in the State of Madhya Pradesh and 900 MW from Mahi Banswara Nuclear Power Project (4x700 MW) to be set up in the State of Rajasthan by Anushakti Vidyut Nigam Limited (Ashvini), a joint venture of NPCIL and NTPC.

Petitioner

Haryana Power Purchase Centre, Panchkula (HPPC)

Respondent

National Thermal Power Corporation Ltd. (NTPC)

Present on behalf of the Petitioner

1. Ms. Sonia Madan, Advocate
2. Ms. Seema Sidana, Xen, HPPC

Present on behalf of the Respondent

1. Shri Dharam Vir Jassi, DGM
2. Shri Ashish Chander Sharma, Manager

Quorum

Shri Nand Lal Sharma
Shri Naresh Sardana
Shri Mukesh Garg

Chairman
Member
Member

ORDER

Brief Background of the case

1. The present petition has been filed by Haryana Power Purchase Centre (HPPC), seeking the source approval and unconditional consent for procurement of 500 MW from Chutka Nuclear Power Project (2x700 MW) to be set up in the State of Madhya Pradesh and 900 MW from Mahi Banswara Nuclear Power Project (4x700 MW) to be set up in the State of Rajasthan by Anushakti Vidyut Nigam Limited (Ashvini), a joint venture of NPCIL and NTPC at the tariff to be notified by the Department of Atomic Energy.

2. Petitioner's submissions:-

HPPC has submitted as under:-

- 2.1 That the Government of India announced at the Climate Change Conference held in Glasgow that India will achieve net zero emissions by 2070. Amongst the efforts taken to achieve the

same, a Joint Venture Agreement has been executed between NTPC Limited and Nuclear Power Corporation of India Ltd. (NPCIL) for development of Nuclear Power Projects. NTPC and NPCIL have together formed a Joint Venture Company named Anushakti Vidyut Nigam Limited ('ASHVINI'). In a meeting chaired by the Minister of Power, New and Renewable Energy, it has been decided that the JV company shall develop two Pressurized Heavy-Water Reactor (PHWR) projects, Chutka Madhya Pradesh Atomic Power Project (2x700 MW) (hereinafter to be referred to as 'Chutka Project') and Mahi Banswara Rajasthan Atomic Power Project (4x700 MW) (hereinafter to be referred to as 'Mahi Banswara Project').

- 2.2 That the expected commercial operation year of the 'Chutka Project' and 'Mahi Banswara Project' is 2028-2029. The indicative tariff of nuclear power projects being completed by NPCIL at present is around Rs. 6.50 per KWH at generator bus bar. However, the actual tariff for the Chutka and Mahi Banswara Project shall be as per tariff notification issued by the Department of Atomic Energy.
- 2.3 That NTPC Ltd. vide its letter dated 13.09.2022 sought consent of the HPPC for availing power from these projects. It was mentioned that the power from Chutka and Mahi Banswara Projects is being offered for signing of PPA as per tariff regulation notified by Department of Atomic Energy.
- 2.4 That the above referred proposal of the NTPC Ltd. was considered by the petitioner in the 68th SCPP meeting held on 14.03.2023, wherein it was decided that consent may be given to NTPC to purchase 500 MW from Chutka Nuclear Power Project and 900 MW from Mahi Banswara Nuclear Power Project. Accordingly, HPPC vide letter dated 05.05.2023 communicated their consent to NTPC Ltd. subject to the approval of said sources by this Hon'ble Commission, after allocation of power by the Ministry of Power.
- 2.5 That pursuant thereto, NTPC Limited vide their letter dated 06.06.2023 intimated that since Nuclear Power Projects are capital intensive projects, for taking investment decision, unconditional commitment/comfort from the interested buyer is required.
- 2.6 That the aforesaid request of NTPC Limited was deliberated by the Petitioner in the 70th SCPP meeting, wherein it was decided as under:

"The action taken on the minutes of 69th SCPP meeting was apprised and noted by the committee. However, in 68th SCPP meeting held on 14.03.2023, vide agenda no.9, consent for purchase of 1400 MW power from Chutka (500 MW) & Mahi Banswara (900 MW) Nuclear Power Plant, subject to approval of HERC was sent to NTPC. Now NTPC requested for unconditional consent and after deliberation, SCPP approved to file a petition before HERC as required by law and policy, for source approval of 1400 MW power from Chutka (500 MW) & Mahi Banswara (900 MW) Nuclear Power Plant and directed that NTPC may be apprised

regarding Petition being submitted in Hon'ble HERC. Further, file be submitted for orders of Govt. to grant "in-principle" approval of NTPC's request."

In compliance to the *ibid* decision taken by SCPP, in-principal approval has been accorded by Government of Haryana.

2.7 That it is a matter of fact that variable renewable energy sources such as wind and solar alone cannot meet the grid requirement fully without support of baseload low carbon technologies such as hydro and nuclear power. Nuclear power plants operate at much higher capacity factors than hydro sources. Further, hydro power sources come with other environment issues. Noting that net zero targets are expected to be met through a combination of clear energy sources, including nuclear power, the government plans to increase India's present nuclear power capacity of 6,780 MW to 22,480 MW by 2031. Considering the increasing pattern of demand and future carbon free power supply requirement, Nuclear Power is going to be the backbone of Indian Grid supplying the baseload requirement.

2.8 That considering all tied up sources as of now, the contracted capacity for the State of Haryana is 14026.68 MW and the source-wise detail is tabulated below:

Sr No	Source	Capacity in MW	%age of Total Capacity
1	Hydro (Large) (MW)	3060.47	21.8%
2	Thermal-Coal (MW)	8138.84	58.0%
3	Nuclear (MW)	100.93	0.7%
4	Gas (MW)	569.1	4.1%
5.a	Solar	1201.92	8.6%
5.b	Wind	714.65	5.1%
5.c	Sugarmill	95.2	0.7%
5.d	Biomass	72.37	0.5%
5.e	Small Hydro	73.2	0.5%
5	RES (MW)	2157.34	15.4%
	Total	14026.68	100.0%

2.9 That the detail of year wise capacity addition upto FY2028-29, considering those projects whose PPAs bear the approval of this Hon'ble Commission is tabulated hereunder:-

S N	Sources of installed capacity	2023-24		2024-25	2025-26	2026-27	2027-28	2028-29	2029-30
		Existing	Expected	Expected	Expected	Expected	Expected	Expected	Expected
1	State Owned Project (HPGCL)	2582.4	0	0	0	0	0	800	0
2	Shared Projects-BBMB	846.14	0	0	0	0	0	0	0
3	Central Sector Share	3221.09	0	235.39	43	18.4	350	700	350
4	Independent Power Producers	7377.05	0	832.8	0	0	0	0	0
5	Renewable Energy Sources		626.9	966	240	0	0	0	0
Total		14026.68	626.9	2034.19	283	18.4	350	1500	350
			14653.58	16687.77	16970.77	16989.17	17339.17	18839.17	19189.17

2.10 That considering the above-mentioned additions in the existing long-term capacities for the State of Haryana, without considering any possible retirement of the long-term power projects on completion of their life, a demand-supply projection for the State evinces a deficit of 500 MW to 6000 MW for the period from FY 2027-28 to FY 2037-38, which is depicted hereunder:-

Year	Demand - Availability Scenario considering all sources	
	Yearly Average Deficit (in MW)	Average of Deficit (in MW)
2027-28	-500	-2080
2028-29	-110	-2038
2029-30	-849	-2947
2030-31	-1369	-3601
2031-32	-2033	-3928
2032-33	-2635	-3337
2033-34	-3262	-3646
2034-35	-3917	-4323
2035-36	-4600	-5029
2036-37	-5312	-5312
2037-38	-5968	-5968

A detailed Demand-Supply Projection Chart up till 2037-38 is also appended.

OTHER PROJECTS IN PIPELINE:-

2.11 That the petitioner has also accorded consent for procurement of 800 MW power from various Thermal Power Plants owned by Damodar Valley Corporation (A joint venture of GOI, Jharkhand & West Bengal) Plant, the details of which are as under:-

Sr. No.	Name of Generator	Name of Plant	Offered Capacity in MW	Tentative date of CoD	Capacity approved for consent (in MW)
1.	Damodar Valley Corporation (DVC), (A joint venture of GOI, Jharkhand & West Bengal)	Raghunathpur TPS PH-II	1320	FY 2028-29	300
		Koderma TPP	1600	FY 2028-29	300
		Durgapur TPP	800	FY 2028-29	200

The Ministry of Power vide letter dated 26.06.2023 has allocated the above mentioned 800MW power to the State of Haryana subject to the PPAs entered by DVC with the State Power Utilities and also subject to the beneficiaries ensuring compliance with the financial and commercial terms (including coverage for LC) of the PPA signed with DVC, the tariff notification, any tripartite/bi-partite agreement signed with DVC and any other directive/guidelines issued by the GoI/CERC from to time. The petitioner is in the process of finalization of terms and conditions of PPA, pursuant to which an appropriate petition shall be filed before the Hon'ble Commission.

2.12 That SCPP has recommended procurement of 800 MW power from Super Critical Thermal Power Plant (2 x 800 MW) of Mahanadi Coal Limited (MCL) at Odisha, the tentative year of Commercial Operation of the which is 2026-27. The recommendation has been made subject to approval of source by this Hon'ble Commission.

2.13 That various Hydro Projects, which are under consideration with the petitioner, subject to approval of Hon'ble Commission, are tabulated below: -

Sr. no	Name of Generator	Name of the plant	Location of the Plant	Quantum approved by SCPP (in MW)	Tentative COD	Levelized Tariff (Rs/kWh)
1	NHPC	Teesta-VI	Sikkim	100	Aug'26	4.07
		Rangit- IV	Sikkim	100	May'25	4.37
		Dibang	Arunachal Pradesh	400	Feb'32	4.73
		Rattle HEP	J & K	250	May'26	3.92
		Dugar HEP	Himachal Pradesh	100	Aug,28	4.46
2	SJVNL	Luhri HEP Stage-I	Himachal Pradesh	25	Jan'26	5.84
3	CVPPPL	Pakaldul HE Project	J&K	250	Sep'26	4.28
		Kwar HE Project	J&K	200	Nov'26	4.44
		Kiru HEP	J&K	624	Mar'26	4.64
4.	NVVN (Cross Border Power)	200	July'24	

2.14 That it is further pertinent to mention that considering the indicative tariff of Rs. 6.50 per kWh, the tentative landed cost of power offered by NTPC Ltd from Chutka and Mahi Banswara Nuclear Power Projects, at Haryana periphery after considering PoC charges and transmission losses shall be approximately Rs. 7.20/kWh.

2.15 That Discoms are under a statutory obligation to supply 24x7 uninterrupted power supply in its licensed area. The Electricity (Rights of consumers) rules notified by Ministry of Power, Gol, also strive to establish that the consumers have the right to get reliable services and quality electricity from the distribution licensee(s) of his area. Accordingly, HPPC is making all the necessary steps and gear up it sources to ensure quality service and un-interrupted power supply in its licensed area.

2.16 That sourcing of nuclear power from Chutka and Mahi Banswara Nuclear Power Projects will help the petitioner to combat the deficit and add clean energy to its portfolio at a feasible tariff which will be in the overall interest of State of Haryana.

2.17 The following prayers have been made: -

- a) Grant source approval for procurement of 500 MW power from Chutka Nuclear Power Project (2x700 MW) to be set up in the State of Madhya Pradesh and 900 MW from Mahi

Banswara Nuclear Power Project (4x700 MW) to be set up in the State of Rajasthan by Anushakti Vidyut Nigam Limited (ASHVINI), a joint venture of NPCIL and NTPC.

- b) Allow HPPC to accord unconditional consent for procurement of 500 MW power from Chutka Nuclear Power Project (2x700 MW) and 900 MW from Mahi Banswara Nuclear Power Project (4x700 MW); and
- c) Pass any other order(s) and or direction(s), which the Hon'ble Commission may deem fit and proper in the facts and circumstances of the case.

Proceedings in the Case

- 3. The case was heard on 08.05.2024, in the courtroom of the Commission, wherein the petitioner mainly reiterated the contents of its written submissions, which for the sake of brevity has not been reproduced here.

Commission's Analysis and Order

- 4. The Commission heard the arguments of the parties at length as well as perused the petition filed by HPPC seeking source approval and unconditional consent for procurement of 500 MW from Chutka Nuclear Power Project in Madhya Pradesh and 900 MW from Mahi Banswara Nuclear Power Project in Rajasthan by Anushakti Vidyut Nigam Limited (Ashvini), a joint venture of NPCIL and NTPC at the tariff to be notified by the Department of Atomic Energy (expected to be around Rs. 7.20 per kWh at Haryana periphery after considering PoC charges and transmission losses), with CoD expected to be achieved by the FY 2028-29.
- 5. During the hearing, the petitioner submitted that the tariff is only indicative and the final tariff will be notified by Department of Atomic Energy (DAE). The Commission was further informed that taking into consideration of the past trends of such large-scale projects, the actual CoD is likely to be delayed. Upon the emphasis of the petitioner that the present power is required in order to increase the share of nuclear power in its bucket, the Commission enquired from the petitioner about the mandate, if any, given by the Government to buy a certain percentage of power from Nuclear. However, it was informed that no such mandate has been given. Thus, there is no obligation on the Haryana Discoms to enter into PPA with such Nuclear power plants with high tariff. Whereas, the Haryana Discoms are obligated to procure 1400 MW power out of upcoming 2800 MW from Gorakhpur Nuclear Power Plant in District Fatehabad, Haryana. The project was expected to be completed by 2025. However, the deadline has now extended to 2032. Regarding the averments of the petitioner that Nuclear Energy is one of the cleanest/reliable and affordable sources of energy, the Commission observes that HPPC has filed another petition regarding procurement of 800 MW renewable power with energy storage system from SJVNL @ Rs. 4.52/unit (including trading margin), for approval of the

Commission, which prima-facie appears to be more affordable. HPPC has itself submitted that the renewable power offered by SJVN shall be at a minimum CUF of 70% which is equivalent to PLF of a thermal power plant. Further, the SJVN shall be obligated to supply the Contracted Capacity with the Firm and Dispatchable RE power configuration, keeping at least 90% availability during Peak Hours (04 hours – 2 hours in morning and 2 hours in evening) on monthly basis. The project is expected to come up within 3 years. The Commission is of the considered view that with the proliferation of better energy storage techniques, more such offers are likely to come up at cheaper rates, which will enable Haryana Discoms to supply affordable electricity to its consumers. The Commission has also taken note of the fact that the Discoms are already burdened with deferred 'Fuel and Power Purchase Adjustment Surcharge' amounting to Rs. 7672 crore as on 31.03.2023. The higher power purchase cost will increase this bucket of 'deferred Fuel and Power Purchase Adjustment Surcharge' to a level which will be difficult to realize from the consumers without giving them a tariff shock. The Discoms should endeavor to reduce the 'peak load' by taking appropriate demand side management measures.

6. The Commission is of the considered view that due to the present global scenario and supply chain disruption imported coal based power plant like CGPL (Mundra) may be facing some difficulty due to exorbitant high price of imported coal. However, given the initiative and the directive issued by the Central Government under Section 11 of the Electricity Act, 2003, power from this source is likely to be available. Further, the tariff in power exchange (s) is also expected to come down in long term with the proliferation of cheaper sources of power and downward pressure on the cost of imported coal.
7. The petitioner has also averred that the average deficit will range from 500 MW in 2027-28 to 6000 MW in the FY 2037-38. The Commission has considered the submissions and agrees with the petitioner that given the long gestation period in setting-up a power plant, the Discoms ought to plan ahead. However, the power sector is undergoing a structural shift with various rules notified by the Ministry of Power, GOI, including Green Open Access, mandatory setting-up of 40% of solar power corresponding to the setting-up of any new thermal capacity, solarization of AP feeders, saving in energy consumption by energy efficient equipment, likely shift in demand of C&I consumers away from the Grid to RE Captive and Open Access mechanism etc.
8. The Commission observe that a lot of uncertainty exists in nuclear projects which leads to delay in commissioning and cost overrun leading to the issues of viability of such projects. In order to address such issues, it is directed that the EoI may be invited for base load from Thermal/Hydro/Hydro with Pumped Storage/Renewable Energy with Storage power plants

already commissioned or in an advanced stage of commissioning, to rein in the average power purchase cost for supplying affordable power to the consumers of the State.

9. Consequently, this Commission, while exercising its powers vested with it under Section 86 (1) (b) of the Electricity Act, 2003 i.e. to regulate electricity purchase and procurement process of distribution licensee including the price at which electricity shall be procured from the generating companies or licensees or from other sources through agreement for purchase of power for distribution and supply within the State, decides that the proposal under consideration is failing to find favour in all the fronts viz. providing affordable power, certainty on CoD of the project and compulsion to procure such power. In such a scenario, it would not be appropriate to grant unconditional consent to procure power. Accordingly, the present petition is disallowed.
10. Needless to add that the petitioner may assess the power demand and supply position on a continuous basis and make suitable arrangements for ensuring adequate availability of power at affordable rate, during peak period.
11. In terms of the above order, the present petition is disposed of.

This order is signed, dated and issued by the Haryana Electricity Regulatory Commission on 14.05.2024.

Date: 14.05.2024
Place: Panchkula

(Mukesh Garg)
Member

(Naresh Sardana)
Member

(Nand Lal Sharma)
Chairman