24<sup>th</sup> May 2021 Pune

To, Shri. Ghanshyam Prasad Joint Secretary, Government of India and Convenor of the Committee on NEP

# Subject: Comments and suggestions on draft the National Electricity Policy published by the Ministry of Power on 27th April 2021 vide Letter No.23/23/2018-R&R.

Dear Sir,

The Ministry of Power constituted an Expert Committee to prepare and recommend National Electricity Policy (NEP) 2021, and has solicited suggestions and comments on the same. Vide notification dated 15th May 2021 the last date for submission of comments and suggestions has been extended till 25th May 2021. In response to this notification, please find attached our comments and suggestions regarding the proposed draft. Due to paucity of time, our comments and suggestions are limited to issues pertaining to hydropower sector and its socio-environmental impacts.

The said notification puts a restriction of formulating the submission in 1000 words. We feel that 1000 words may not be sufficient to substantiate the points we wish to make. In order to comply with the restriction, we are presenting a brief summary of our key suggestions in 1000 words and annexing all the relevant details and information for the committee's perusal in an annexure.

We request the committee to accept our submission on record and to allow us to make further submissions in this regard, if any.

Thanking you

Sincerely

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# Comments and suggestions on the proposed Draft National Electricity Policy

24<sup>th</sup> May 2021

Summary of the Submission:

- 1. In order to enable meaningful engagement of all concerned stakeholders, the committee should publish all the data, analysis and assumptions that it has used in arriving at its suggestions and recommendations. This is especially necessary in case of hydropower sector.
- 2. While discussing optimal generation mix, the committee has emphasised on the need to add hydropower capacity on account of its certain inherent characteristics. However, such recommendations do not seem to factor the actual performance and cost-benefit analysis of Indian hydropower sector. It will be helpful if the committee can publish the data and assumptions that have led to such recommendations.
- 3. Since 2002-2020, a paltry 19GW of hydropower capacity has been added at the country level. During this period, the renewable energy based capacity addition was around 85 GW and coal based capacity addition was 143 GW. During this period, all India peak and energy deficit reduced from 12.2% and 8.81% in 2002 to 0.69% and 0.51% in 2020 respectively. This shows that hydropower capacity addition has played an insignificant role, if any, in reducing peak deficits or improving grid stability during a period of rapid increase in renewable energy capacity.
- 4. Several studies undertaken by the MoP and the CEA highlight this minimal role of hydropower in the coming years as well. Notably, the MoP published report "GREENING THE GRID: Pathways to Integrate 175 Gigawatts of Renewable Energy into India's Electric Grid, Vol. I—National Study" observes that "*Availability of Hydro Neither Helps Nor Hinders RE Integration*". Similarly, the study published by the CEA to assess the least cost generation capacity mix to meet the projected Electricity Demand for the year 2029-30, projects a hydro capacity. Such insignificant level of capacity addition can hardly be deemed important in the context of capacity addition targets of 430 GW for renewable energy sources by 2030.
- 5. Presently, a little over 14 GW of hydropower capacity is under construction. Out of this 14 GW, around 12.8 GW has been delayed for at least 5 years and 6.4 GW has been delayed for more than 10 years. The National Electricity Plan published by the CEA in January 2018 had projected that out of this capacity under construction, around 6.8 GW would be commissioned by 2021-22. However, till date only 136 MW of this capacity has been commissioned.
- 6. The committee rightly identifies delays and lack of financial viability as the root cause of hydropower sector failures, but it strangely suggests measures that are already enshrined in the existing policies and have achieved little in terms of enabling project viability or reducing delays. There is no analysis to explain why a slew of policy changes, tax reductions, relaxation of various norms and requirements, regulatory certainty of cost recovery along with a fixed rate of return on investment, and repeated financial restructuring and bailouts, have resulted in precious little capacity addition in the last two decades. The committee also does not provide any economic rationale to support its recommendations.

- 7. The hydropower projects that are presently under construction have recorded cost increases ranging from 80%-150% of the original cost estimate. The actual cost increase at the time of commissioning is likely to be much higher than this. Given such inefficiencies in hydropower project development, imposing hydropower purchase obligation would be a very imprudent policy measure and the committee should highlight this.
- 8. While pushing for unviable hydropower projects that may never materialise (think of Maheshwar for instance), might do little harm to the power sector given their negligible quantum –it can cause grave and irreversible damage to the country's precious forest reserves and river ecosystems, and can significantly jeopardise the already precarious financial condition of Discoms that will have to buy this power.
- 9. Discoms are waking up to this reality and are terminating such unviable contracts. Examples of this are the recent termination of the Maheshwar PPA by the MP government and the lack of approval for PSA for Teesta III project by the Punjab State Electricity Regulatory Commission.
- 10. Apart from excessively increasing the cost, 5-10 years of delays renders such capacity meaningless from the Discom's demand-supply point of view. Such capacity is therefore inevitably likely to turn into non-performing assets, but the committee fails to highlight this eminent danger.
- 11. In light of the above, we submit that the committee should **not** recommend *any* new hydropower capacity addition. Given the delays and cost overruns of under-construction projects and to avoid future NPAs, the committee should recommend the MoP to direct the CERC to undertake a thorough review of this stranded hydropower capacity and to undertake its cost-benefit analysis. There needs to be an undertaking from the concerned Discoms regarding their willingness to buy this power after accounting for the delays and cost-overruns, in the absence of which such projects should be scrapped.
- 12. The committee's optimism regarding lack of social and environmental impacts of off-river PSPs seems misplaced. More nuanced and site-specific data and evidence is necessary to validate such claims.
- 13. The committee has recommended that Basin wise cumulative environment impact assessment and carrying capacity studies to be undertaken for all the river basins in the country so that e-flows can be known in advance and delays in project execution can be minimised. Such studies already exist for several river basins, but they lack in rigour and quality. It will be more useful if the committee makes a qualified recommendation that such studies should be undertaken for all the river basins in the country in a scientific and rigorous manner.
- 14. To address the issues of delays and difficulties in obtaining right of way in developing transmission corridors, it is our suggestion that the transmission perspective plan should take into consideration ecologically critical areas and define no-go routes / stretches (e.g. elephant corridors, ecologically sensitive zones, etc.) to ensure smoother planning of transmission corridors.

### **Annexure-1: Detailed submission**

### Comments and suggestions on the proposed Draft National Electricity Policy 24<sup>th</sup> May 2021

The Ministry of Power constituted an Expert Committee to prepare and recommend the National Electricity Policy (NEP) 2021, and has solicited suggestions and comments on the same. Vide notification dated 15<sup>th</sup> May 2021 the last date for submission of comments and suggestions has been extended till 25<sup>th</sup> May 2021. In response to this notification, please find attached our detailed comments and suggestions regarding the proposed draft.

- 1. Lack of background data and analysis: It is commendable that after a gap of more than 15 years, the Government has taken up the important task of reviewing and updating the National Electricity Policy (henceforth referred to as NEP). It is hoped that the changes would be proposed keeping in mind a time horizon of the next 5-10 years. Unfortunately, the background analysis that the committee might have relied on in arriving at this draft has not been published along with the draft policy. Notably, the proposed draft is not accompanied with analysis of trends in source-wise, ownership-wise capacity addition or state-wise segregated demand, or financial and operational performance of distribution companies along with the future trajectories for these parameters that the committee might have considered while formulating the draft policy. Neither are the assumptions in this regard stated clearly. Sound policy making needs to be based on sound data and analysis. Only when such underlying data, analysis and assumptions are made public can the stakeholders make informed comments and suggestions. Therefore, our first suggestion is that the committee should publish all the data and analysis that it has relied on and also clearly state its assumptions. This can be in the form of an annexure and the relevant data should be made available in excel sheet format.
- 2. Issue of Optimal Generation Mix: In the section 5 of the proposed draft, the committee notes that though there has been significant increase in the total installed capacity, the share of hydro power-based capacity has reduced from 26.12% to 12.35%. After noting this and without elaborating on whether and why this should be a cause of concern, the draft policy jumps to the conclusion of the need for encouraging more hydropower capacity, especially of pumped storage type. The only possible rationale for this is provided in an indirect way by stating the general and inherent characteristics of hydropower capacity, but the Indian hydropower sector's distinct features such as the poor operational performance of existing hydropower capacity<sup>1</sup> and the huge delays and excessive cost-overruns of the proposed projects, do not seem to be taken into account.

<sup>&</sup>lt;sup>1</sup> Analysis by South Asia Network on Dams, Rivers and People (SANDRP), 2012 shows that more than 50 percent hydro projects have a 90 percent dependable energy production that is not even half of the projected level. Similarly, as per the Forum of Load Despatchers India report on "Operational Analysis for Optimization of

3. Lack of financial viability of hydropower projects that are presently under construction: There are serious issues with financial viability of hydropower projects that have been recently commission and also those that are presently under construction. Refer Table 1. As can be seen from the table, projects for which data is available in the CEA report show average delay of more than 10 years for central and private sector projects and cost overruns of over 150%. The per MW cost increase in Rs Cr for private sector hydropower projects is comparable to the figures that are often assumed in the sector for a new project, implying doubling of costs. The proposed Etalin project, which is one of the many projects under consideration, demonstrates this point well. As our analysis of this project shows<sup>2</sup>, at the time of CEA concurrence in 2013 its levelized tariff was computed as ₹ 4.32/kWh considering a construction period of 7 years. But the project is already delayed by 6 years. Considering this delay and using a more realistic estimate for e-flows, the tariff for this project would be in the range of ₹ 7 to 9 /kWh. This tariff increase is of course an underestimate because when and if the project starts actual construction there are likely to be further delays and cost overruns. Similar is the case of the recently commissioned Teesta III project. The power from this project at the time of its construction was promised to be ₹1.92 /kWh, but when the project was finally commissioned after a long delay and significant cost overrun, the provisional tariff shot to more than ₹ 6/kWh and the final tariff is likely to be even higher. This was in spite of the fact that in order to facilitate viability, tariff was rationalised with back loading by increasing project life to 40 years, not allowing cost claims for which evidence was not submitted and the Government of Sikkim significantly increasing its equity share using loans from PFC and REC. Leaving aside the debatable prudence of such refinancing of economically unviable projects, what the Teesta III example highlights is that hydropower projects that do get commissioned are very likely to turn into non-performing assets. As the data in Table 1 highlights, Teesta III or the proposed Etalin project are the norms and not an exception.

Sector	Capacity#	Average delay in no of months	Cost overrun Rs Cr	Percent increase over proposed cost \$	Cost increase in Rs CR per MW
Centre	5,484	142	32,496	158%	5.93
State	2,025	105	5,840	75%	2.88
Private	1,466	126	12,403	157%	8.46

Table 1: Time and cost overruns for hydropower projects under construction as reported by the CEA in Quarterly Review 103 (Oct-Dec 2020)

Source: https://cea.nic.in/wp-content/uploads/hpm/2021/02/QTY%20103.pdf

# The capacity indicated above is excluding the capacity of 5182 MW for which cost overrun information is not available.

\$ The cost overruns are estimates and do not reflect the actual increase in the costs of a given project, which are bound to be much higher than this considering further delays and potential geological

Hydro Resources & facilitating Renewable Integration in India" there is a potential of 4200 MW of additional peaking support from the existing fleet of hydro generation at national level which has not been utilised.

<sup>&</sup>lt;sup>2</sup> <u>https://www.manthan-india.org/submission-to-the-ministry-of-power-regarding-the-financial-viability-</u>related-issues-for-the-proposed-etalin-hydro-electric-project-ehep/

surprises. Also, updated cost figures are not available in case of many of these projects, so even these estimates do not reflect the real increase in costs as on December 2020.

- 4. Considering such data that highlights the lack of financial viability of existing as well as proposed hydropower projects, one feels compelled to question the rationale for imposing hydropower purchase obligations (HPO) that would force Discoms to buy such excessively high-cost power. But the committee has not touched upon this important issue. There is no analysis in this regard. On the contrary, there seems to be a stronger push for such unviable projects, though the basis for such recommendations or the economic rationale to support these ideas is not clearly spelt out.
- 5. Given the huge issues with financial viability and construction delays, it is no surprise that for the past two decades the performance of hydropower sector in India has been abysmal. The more important fact is that this has hardly had any impact on the overall growth and development of the country's power sector, see Figure 1. As can be seen, during the period of 2002-2020 only about 19 GW of hydropower capacity was added whereas for the same period renewable energy based capacity addition was to the tune of over 85 GW (roughly 4.5 times more than hydropower capacity addition). Coal based capacity addition for this period was 143 GW. In the last 3 financial years, renewable energy based capacity addition has been higher than that of coal based capacity. It is interesting to note that during this period of abysmal hydropower capacity addition, all India peak and energy deficit reduced from 12.2% and 8.81% in 2002 to 0.69% and 0.51% in 2020 respectively. It is also important to note that today the average grid frequency hovers between 49.98 Hz to 50.02 Hz for most time. This data suggests that hydropower capacity addition has played an insignificant role, if any, in reducing peak deficits or improving grid stability during a period of rapid increase of renewable energy capacity, which is variable and intermittent in nature.

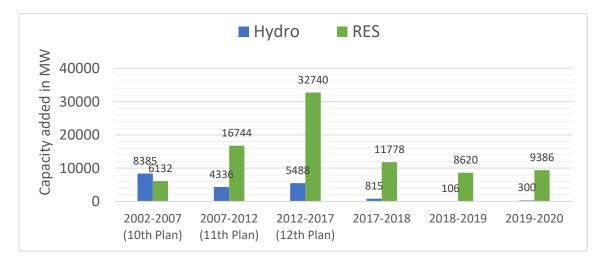


Figure 1: Cumulative capacity addition in hydropower and renewable energy sectors since 2002

6. Supporting the above data and emphasising a minimal and insignificant role for hydropower in future as well, the report published by the MoP titled "GREENING THE GRID: Pathways to Integrate 175 Gigawatts of Renewable Energy into India's Electric Grid, Vol. I—National Study" says as follows in this regard:

#### Availability of Hydro Neither Helps Nor Hinders RE Integration

Table 31 summarizes the results of the 100S-60W scenarios with low and high hydro. High hydro generation displaces fossil based plants (mostly coal), leading to lower costs and emissions. Low hydro generation has the opposite effect, with a higher impact to costs, indicating the use of more expensive generation relative to what was displaced in the high-hydro year. However, **RE curtailment has a negligible** change across all sensitivites, indicating that these weather years do not significantly help or hinder **RE** integration. The reason for this null result is that hydro generation, even when changed significantly, stills only accounts for a small change to the total generation mix. (Emphasis added)

7. Similarly, the study published by the CEA to assess the least cost generation capacity mix to meet the projected Electricity Demand for the year 2029-30, projects a paltry hydro capacity addition of about 9.4 GW by 2030 and addition of 10 GW of pumped storage hydro capacity. Such insignificant level of capacity addition can hardly be deemed of any significance in light of the capacity addition targets of 430 GW for renewable energy sources by 2030. Depending on the assumptions being made for cost of new hydropower capacity and for battery based energy storage systems, even the projected requirement of 9.4 GW of large hydropower capacity and 10 GW of pumped storage hydro systems can be debated. This is underscored by the fact that in the draft version of this study the model that was used by the CEA only selected battery based energy storage systems from the year 2026-27 onwards, due to the reduction in cost of solar and battery energy storage systems. Notably, the model did not select any new hydro plants, apart from those that were already under construction.

Given such existing analysis and projections, it is difficult to understand what kind of data and/or analysis prompted the committee to push for hydropower capacity addition.

- Since 2002-03 there have been several concerted policy and regulatory efforts to boost hydropower capacity addition in the country and to encourage private sector participation. In this regard consider the following:
  - a. 50,000 MW initiative: In May 2003 the Government of India launched a scheme formulated by the CEA for preparation of Preliminary Feasibility Report (PFRs) of 162 New Hydro Electric Schemes totalling to over 50,000 MW. All the PFRs were targeted to be completed by September, 2004. Most of these projects have either not started construction or are stuck on account of various reasons.
  - b. **National electricity policy 2005**: Similar to the currently proposed draft, the existing NEP encourages hydropower development by proposing to address issues of long-term financing, encouraging private sector participation and providing guidelines for improving financial viability of hydropower projects.
  - c. **National Hydropower policy 2008**: In 2008 the Ministry of Power launched an ambitious and comprehensive policy agenda which aimed at: harnessing the balance hydropower potential, inducing private sector investments, improving rehabilitation and resettlement, and facilitating financial viability. It also enabled the project developers to recover additional costs through merchant sale of up to a maximum of 40% of the saleable energy. The policy introduced a 3-step process to facilitate faster development of central sector hydropower projects.
  - d. **Mega Power Projects Policy, 2008**: Inter-state hydropower projects with a capacity above 500 MW were accorded the status of a 'mega power project' (qualification

relaxed to 350 MW for projects in the northeast region). The policy extended the benefit of a 10-year tax holiday to the projects identified in the policy, with no customs duty on imports of equipment, etc.

- e. **CERC (Ancillary Services Operation) Regulations, 2015:** Aimed at restoring and maintaining the frequency of electricity supply at desired levels by providing commercial incentives for both ramp up and backdown of ancillary services, these regulations opened a new market for power generation, especially hydropower, given the supposed ability of hydro schemes to provide ancillary support.
- f. **National Tariff Policy, 2016:** In an effort to boost private sector participation in hydropower development, the NTP provided exemption to the hydropower sector from competitive bidding till 2022, thus providing regulatory certainty of cost recovery and assured return on the investment for the entire term of the PPA.
- g. **Measures to promote Hydropower sector 2019:** In March 2019 the Ministry of Power further announced slew of policy changes to further promote hydropower capacity by proposing following measures:
  - i. Declaring large hydropower projects (greater than 25 MW) as renewable energy sources
  - ii. Introducing Hydropower purchase obligation (HPO) as a separate entity within non-solar renewable purchase obligation (RPO)
  - iii. Tariff rationalisation measures for reducing hydropower tariff
  - iv. Budgetary support for flood moderation or storage type hydropower projects and;
  - v. Budgetary support for managing cost of enabling infrastructure such as roads, bridges etc.
- 9. What is remarkable is that this slew of policy changes, tax reductions, relaxation of various norms and requirements, regulatory certainty of cost recovery along with a fixed rate of return on investment, and repeated financial restructuring and bailouts, have resulted in precious little capacity being added on ground. Presently, a little over 14 GW of hydropower capacity is under construction. As highlighted earlier, out of this 14 GW, around 12.8 GW has been delayed for at least 5 years and 6.4 GW has been delayed for more than 10 years. The National Electricity Plan published by the CEA in January 2018 had projected that out of this capacity under construction, around 6.8 GW would be commissioned by 2021-22. However, till date only 136 MW of this capacity has been commissioned.
- 10. Considering the fact that the concerted policy and regulatory efforts listed above, which have been underway for the last two decades, have largely failed to generate any satisfactory results, the proposed draft NEP's optimism in terms of realising different outcomes by proposing same policy measures is indeed perplexing. In addition to suggesting measure that are already prescribed in the existing policies, the draft NEP makes some curious recommendations to overcome some of the challenges. One such example is the advice to reduce the delay in project execution by adopting advance technological tools for minimising the risk of geological surprises. This begs the question that whether such tools are already available and the CEA/project developers are not using them? If so, rather than a policy recommendation a stronger regulatory instrument maybe necessary to bring about such changes. Another example is the advice to the central and state government agencies involved in the construction of hydropower projects to review their procedures to ensure speedy execution. Is the committee implying that the existing processes are not streamlined

or efficient, if so, what specific improvements can help? The lack of clarity in terms of the recommendations makes it difficult to understand how they can be implemented or how they differ from the existing policies.

- 11. While suggesting more of the same policy measures to push for unviable hydropower projects that may never materialise might do little harm to the power sector because as we have seen this capacity is too small to make any dent on the overall power sector growth or functioning it can cause irreversible damage to the country's precious forest reserves and river ecosystems, and it can significantly jeopardise the already precarious state of Discom finances, especially of those Discoms which would be forced to buy this high-cost power. In this regard, consider the following points:
  - a. On the issue of delays, it is interesting to note that in its submission to the CERC in response to the public process conducted for formulating the 2019 tariff regulations<sup>3</sup>, the promoter of the proposed Etalin hydropower project, i.e. EHEPCL has submitted as follows:

It is known fact that Hydro Projects takes 10-12 years for completion in best scenarios without surprises (3 years investigation and DPR, 1.5 years in CEA, 1.5-2.5 years in Environment & Forest, 4-6 years of construction). This time is twice/thrice to construction of Thermal Projects and 5-10 times for construction of solar projects. (emphasis added)

This submission from a private sector hydropower developer makes it evident that while delays in commissioning are implicitly assumed, their actual cost impacts are not explicitly accounted for in the project proposals. They only become apparent at the time of commissioning.

- b. Because costs on account of delays and geological surprises are not considered explicitly and upfront, the contracts for sale of power for a proposed hydropower project are often based on unrealistic assumptions that make them seem like lucrative and economical options. However, when the real costs became apparent, (as in the case of say, Teesta III) the Discoms and the concerned state governments are forced to rethink such decisions. In this regard, the recent examples of termination of the high cost Maheshwar project by Madhya Pradesh government<sup>4</sup> and the reluctance of Punjab and Rajasthan Discoms to buy the high-cost power generated by Teesta III, are particularly worth noting. It is understood that the Punjab State Electricity Commission had not approved the Power Sale Agreement (PSA) for this buying this power<sup>5</sup>. In future more states are likely to follow this route to safeguard their own financial interests.
- c. As noted earlier, the huge difference in the promised and actual tariff of hydropower projects is forcing Discoms to revaluate these purchase decisions. Additionally, delays of more than 5-10 years render this capacity meaningless in

<sup>&</sup>lt;sup>3</sup> <u>http://www.cercind.gov.in/2019/draft\_reg/StakeholdersDraft%20Tariff%20Reg2019/41\_EHEPCL.pdf</u>

<sup>&</sup>lt;sup>4</sup> As per the termination order dated 18<sup>th</sup> April 2020 the cost of power from the Maheshwar project was estimated to be in the range of Rs. 18 per unit and above.

<sup>&</sup>lt;sup>5</sup> CERC Order dated 9th January, 2020 in Petition No. 249/GT/2016

terms of the concerned state Discom's demand-supply situation. With increasingly ambitious renewable energy purchase targets and falling demand on account of sales migration to open access and captive consumption, Discoms are already facing issues of surplus high-cost (presently mostly coal based) capacity. Adding excessively high-cost and unreliable hydropower to the Discoms' power purchase basket only makes things worse.

- d. Most of the push for new hydropower capacity is in the north eastern region, which is also home to about one-fourth of the country's forests. Development of hydropower capacity in this region would inevitably come at the cost of loss of irreplaceable forests and rich biodiversity. However, if this power is sourced from other environmentally benign sources such as wind, solar and battery storage systems, the forests and the biodiversity can be preserved without any impact to the power sector.
- 12. Taking into account the above points and considering the high likelihood of the Discoms terminating such excessively high-cost contracts in future, it would be highly imprudent to push for any hydropower project without an explicit undertaking from the concerned beneficiaries regarding their intention to buy this electricity, in spite of the delays and further cost increases. Presently, there is no regulatory mechanism to check the need or cost effectiveness of a given hydropower project after it receives concurrence from the CEA and till it becomes fait accompli or a non-performing asset. The long periods of delay do not get accounted for in the Discoms' planning processes and the resultant cost increases do not get factored in to facilitate any mid-course correction which can avoid potential NPAs. The committee should highlight this important regulatory lacuna and suggest ways to prevent this.
- 13. The above points highlight that the measures suggested in the proposed draft NEP for promoting hydropower capacity addition are same as those that are already included in existing policies and have repeatedly failed to deliver satisfactory results. More importantly, they are not supported with any data or economic analysis. Instead of pushing for more of the same measures that are likely to achieve little in terms of improving the power sector performance or stability, but are highly likely to cause severe and irrecoverable damage to the environment, river ecosystems and Discom finances, we urge the committee to review the need and cost-competitiveness of both, the planned and under construction the hydropower capacity. Such cost-competitiveness needs to be established in light of the sharply reducing costs of alternate and environmentally more benign technologies such as wind / solar coupled with battery storage systems, which can provide similar performance in more reliable manner. Given the financial viability issues, the committee should also evaluate the appropriateness of HPO and suggest appropriate changes.
- 14. In the absence of any data to support financial viability and/or cost-competitiveness of the hydropower capacity vis-à-vis the alternative sources such as wind, solar and battery systems, the committee should not recommend any new hydropower capacity addition. In fact, similar to the exercise undertaken by the MERC in case of MSPGCL's planned and upcoming coal-based capacity<sup>6</sup>, it is our suggestion that the committee should recommend

<sup>&</sup>lt;sup>6</sup> MERC order dated 27th March 2018 in case no 42 of 2017 - Suo moto review of status and requirement of upcoming Generation Projects of Maharashtra State Power Generation Co. Ltd.

the Ministry of Power to direct the CERC to commission a thorough review of the hydropower capacity that is currently under construction and to undertake its cost-benefit analysis. Given the delays and cost overruns of these projects and to avoid future NPAs, there needs to be an undertaking from the concerned Discoms regarding their willingness to buy this power after accounting for the delays and cost-overruns. In the absence of such an undertaking, such projects should be scrapped.

- 15. Regarding "off the river PSP": In point 5.12 of the proposed draft NEP the committee has stated that off the river PSPs do not involve issues such as optimal development of river basin or e-flow studies or inter-state issues. The committee has suggested that such projects involve minimal environmental and R&R issues and hence should be explored and developed. However, we believe such optimism regarding off the river PSPs is unjustified and the committee should support such claims based on rigorous data and analysis. Since the "off-river" water sources are linked to other water systems, it is difficult to imagine that there would not be any environmental and social impacts due to such projects. More nuanced and site-specific data and evidence is necessary to validate such claims. Till such data and evidence is not made available in the public domain to support its claims, the committee should refrain from making such suggestions.
- 16. In point no 5.13 of the proposed draft NEP the committee has recommended that Basin wise cumulative environment impact assessment and carrying capacity studies should be undertaken for all the river basins in the country so that e-flows can be known in advance and delays in project execution can be minimised. In this regard we wish to bring to the committee's notice that Basin wise cumulative environment impact assessment and carrying capacity studies have been done for several river basins of the country, but their quality remains extremely poor. The e-flow recommendations in these reports are also ad-hoc, inadequate and non-scientific in many respects. So instead of simply recommending that such studies be done, it will be more helpful if the committee can make a qualified recommendation that suggests that Basin wise cumulative environment impact assessment and carrying capacity studies should be undertaken for all the river basins in the country in a scientific and academically rigorous manner.
- 17. Lastly, highlighting the issues of delays and difficulties in obtaining right of way in developing transmission corridors the committee has made certain suggestions in point nos 6.1 and 6.3 of the proposed draft NEP. In this regard, it is our suggestion that the transmission perspective plan should take into consideration ecologically critical areas and define no-go routes / stretches (e.g. elephant corridors, ecologically sensitive zones, national parks, etc.) to ensure smoother planning of transmission corridors. This can help in minimising environmental damage and reducing conflicts with the local population.

We request the committee to accept our submission on record and to allow us to make further submissions in this regard, if any.

Thanking you

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