

CONFIDENTIAL

Encl-2

F.No.18/7/64-Trans.Vol.XI
Government of India
Ministry of Power & NED
Department of Power

Dated 28th January, 1992

Subject: Minutes of the meeting taken by Secretary (Power) to consider issues relating to 400 Kv Dulhasti-Kishenpur-Srinagar transmission lines associated with Dulhasti Hydroelectric Power Project (390 MW) and 800 Kv Kishenpur-Moga transmission line.

1. List of participants is annexed.
2. At the outset, Chairman & Managing Director, National Power Transmission Corporation Ltd., gave a brief background of the problems being faced in taking up the execution of 400 Kv Dulhasti-Kishenpur transmission lines in Jammu & Kashmir particularly for want of funds and the fact that there is no certainty whether the Russians would be able to execute these lines on a turn-key basis and enhance the commercial credit for the project. As regards the only other alternate proposal, received from M/s. CEGELEC (French organisation), the cost quoted by them is found to be on a very high side i.e. over Rs.1000 crores, further they have stipulated several conditions related to work and contractual issue. The final offer from M/s. CEGELEC is expected to be received by midFebruary 1992. CMD, NPTC, further mentioned that it would not be possible to construct the lines so as to match their commissioning with the coming up of the first unit of Dulhasti Generation Project in July, 1994. In order to avoid bottling up of power from the Generation Project, there is an urgent need to take up construction of the transmission line on the Dulhasti-Kishenpur segment for the purpose of evacuation of power from sometime in mid 1994. NPTC has considered an alternate and a contingency plan in this regard. The plan is to construct a 220 Kv Double Circuit line between Dulhasti and Kishenpur. CMD, NPTC, informed that cost of the line will be less than the initial, already approved cost of the project i.e. Rs.166.57 crores. It is mentioned that the first unit of Dulhasti Generation Project is targeted for completion by July, 1994. Thus, NPTC, in this alternate proposal, would have to ensure completion of the proposed 220 Kv line by that time for evacuation of power from the project. This line will be completed in about three years time. In addition to the line, an expenditure of about Rs.35 crores would be required for construction of a step down substation for terminating the 220 Kv line as the arrangements made at the switchyard of the Generation Project is for terminating 400 Kv line.

3. Discussions were also held regarding the capacity of the proposed 220 Kv line to carry power from Dulhasti project. CMD, NPTC, was of the view that the line would be able to carry about 350-400 MW. However, Chairman, CEA, expressed his view that after taking into account the losses, it would be possible to flow 300-350 MW of power over the line and the additional power would have to be evacuated through the existing 132 Kv line between Udhampur-Sarna.

4. Chairman, Central Electricity Authority, was of the view that taking up the construction of 220 Kv line is only a contingency plan and will be a sub-optimal solution to the problem as the 400 Kv transmission system evolved by CEA is based on the long-term transmission planning perspective. He mentioned that we have been facing transmission constraints, particularly, in Northern Region due to sub-optimal solutions and the 400 Kv system is a must for meeting the future requirements of the Srinagar valley and to take care of the requisite redundancy aspects as well.

5. Advisor (PAD), Planning Commission, opined that in view of the present budgetary situation, it would be cheaper to construct two 220 Kv Double Circuit lines as compared to the 400 Kv option. He suggested that keeping in view the urgency for evacuation of power from Dulhasti Generation Project in July, 1994, a 220 Kv Double Circuit line may be taken up for execution immediately and thereafter construction of another line of 400 Kv could be considered later on. He further suggested that PIB approval may be obtained for taking up a 220 Kv line on an immediate basis after obtaining CEA's approval to its cost estimates. CMD, NPTC, was of the view that as the 220 Kv line can be taken up for construction within the approved cost estimates i.e. Rs.166.57 crores of the project, necessary approval for its execution may be given by CEA and Department of Power since it will take time in obtaining PIB/CCEA approval. Secretary (Power) requested the representative from Department of Expenditure to express his views in the matter. Shri Arun Sharma, Director (Plan Finance), Department of Expenditure, mentioned that it would suffice if approval of Secretary (Expenditure)/Finance Minister is obtained to the proposal. However, Advisor (PAD), Planning Commission stated that Department of Power had obtained CCEA's approval for execution of 400 Kv Dulhasti-Kishenpur-Srinagar transmission line on a turn-key basis from Russia. It would, therefore, be necessary that cost estimates of the proposed 220 Kv line are got approved from PIB/CCEA. After detailed discussions, it was decided that cost estimates of the proposed 220 Kv line would be processed for PIB/CCEA approval on an immediate basis after it is techno-economically cleared by CEA.

6. Thereafter issues relating to Planning Commission's suggestion to consider the alternatives to the 400 Kv system i.e. to construct 220 Kv lines in Dulhasti-Kishenpur, Kishenpur-Srinagar segments immediately, and to consider construction of 400 Kv lines later on after taking into account the power required to be evacuated from the Generation Projects coming up/lively to come up in Jammu &

Kashmir, were considered at length. Secretary (Power) was of the view that 400 Kv system for Dulhasti-Kishenpur-Srinagar was planned taking into account the power to be evacuated from Baglihar, Sawalkot and Dulhasti Projects and the 220 Kv system would not be adequate to meet the evacuation requirements. Availability of corridors for taking up of two 220 Kv Double Circuit lines as suggested by Planning Commission, have to be considered particularly in respect of Kishenpur-Srinagar segment as the Government of Jammu & Kashmir is constructing a 220 Kv line on it. CMD, National Hydroelectric Power Corporation, was also of the view that later no corridor will be available, if a 220 Kv line as suggested by Planning Commission, is taken up on the corridor already finalised for the 400 Kv line. On this, Secretary (Power) agreed that it would not be possible to construct any additional line later over the Banihal pass which is in very difficult terrain. He was, therefore, of the view that a concrete proposal would be required to be submitted by NPTC for taking up another 220 Kv or 400 Kv line in future for Government approval after looking into availability of corridor and this has to be specifically mentioned in the PIB note to be submitted immediately for taking up of one 220 Kv Double Circuit line between Dulhasti-Kishenpur. Further, he observed that the 220 Kv option would not be adequate to meet the evacuation requirements.

7. 800 Kv Kishenpur-Moga transmission line project was also discussed. The need to have two 800 Kv Single Circuit lines between Kishenpur and Moga was considered keeping in view the power to flow over it from Kishenpur which is a pooling point for transmitting power to Northern Region. In summer power flows from the Generation Projects coming up/likely to come up in Jammu & Kashmir and vice-versa to the valley in winter. Taking into account the 400 Kv line under execution between Chanera-Moga section, Planning Commission was of the view that instead of taking up of two 800 Kv Single Circuit lines in Kishenpur-Moga section, it would be cheaper to have a 400 Kv Double Circuit line in the first stage as this will meet the immediate evacuation requirements from generation projects other than Baglihar. The other portion can be considered for 800 Kv class later on. At this, it was mentioned by CMD, NPTC, that the two 800 Kv Single Circuit lines have been planned after taking into account the transmission needs on the basis of a long-term system planning criteria. As regards the economics, he pointed out that the cost involved per kilometre in 800 Kv is Rs.1 crore whereas the cost involved per kilometre in taking up two 400 Kv lines is Rs.90 lakhs. As such, the difference in cost per kilometre of both the systems is marginal and the 800 Kv system is also the best alternative to take care of the basic redundancy aspect and additional expenditure involved in locating additional corridors as well as their availability for 400 Kv lines. CEA have gone into detailed study and it was opined that the 800 Kv system planned is a must. CMD, NPTC, further mentioned that the Kishenpur-Moga transmission line has already been tied up with the World Bank loan and at this stage, it would be difficult to split up the project into two parts as suggested by Planning Commission from budgetary constraints.

point of view. If the project is split up, it would require preparation of a fresh proposal and involve re-appraisal by the World Bank which will take considerable time that would result in cost/time over-runs. As regards 400 Kv D/C Chanera-Moga line under execution, it was mentioned that this line has been designed for evacuation of power from Chanera I & II Generation Projects. This would also help in evacuation of some power from Kishenpur which is proposed to be connected to Chanera-I through a 400 Kv D/C system.

8. In the alternate contingent plan, it is proposed that under the Chanera II project there is a section of line proposed for construction between Chanera I and Kishenpur. The construction of this line will be taken up immediately so that power from Dulhasti brought to Kishenpur could flow to Chanera I and from thereon over the almost completed Chanera-Moga line to Moga.

9. Intervening in the discussions, Secretary (Power) stated that the two 800 Kv Single Circuit lines planned between Kishenpur-Moga are technically as well as economically justified as they would be sharing the required loads and would also take care of the redundancy aspect and transmission capacity in the whole area that is to be catered to. As regards economics for taking up 800 Kv and 400 Kv lines, it was mentioned by CMD, NPTC, that Rs. 400 crores would be required for taking up 800 Kv system which is to be initially operated at 400 Kv level, and Rs. 380 crores would be involved in taking up two 400 Kv Double Circuit lines.

10. After detailed discussions, it was decided to split up the 400 Kv Dulhasti-Kishenpur-Srinagar transmission project to meet the immediate requirements, and the following decisions were taken:

(i) To take up execution of one 220 Kv Double Circuit line on Dulhasti-Kishenpur segment in order to meet the urgent requirement for evacuation of power from Dulhasti Generation Project, the first unit of which is targetted for completion by July, 1994, and NPTC to submit a proposal in this regard to CEA for their clearance and thereafter its processing for P.E. CEA approval on an immediate basis. The need to have another 220 Kv or 400 Kv line may be considered later on based on technical requirements and availability of corridors.

(ii) NPTC to submit another proposal for taking up the execution of a 400 Kv Double Circuit line on Kishenpur-Srinagar segment with Russian assistance on commercial credit terms for evacuation of power from Kishenpur to Srinagar and vice-versa after taking into account the following:

(a) Power flow over the existing 132 Kv Udhampur-Srinagar transmission line; and

(b) 220 Kv D/C Udhampur-Fanpore line under execution in State sector.

(iii) Taking up of the proposed 400 kv Double Circuit line between the Chanera- Kishenpur segment. This along with (i) earlier will constitute the alternate contingency plan to reach Dulhasti power to Moga.

(iv) NPTC to submit a supplementary note for PIB on 800 kv Kishenpur-Moga transmission system in view of the decisions taken in the meeting.

It was decided that NPTC would submit the above proposals to Department of Power immediately for processing of PIB/CCEA approval. In the note for PIB, a background note may be incorporated inter-linking all these split up projects indicating their planning criteria on the pooled system after finalising the same with Planning Commission and CEA.

LIST OF PARTICIPANTS

DEPARTMENT OF POWER

1. Shri S. Rajgopal, Secretary In-chair
2. Dr. J.P. Singh, Special Secretary
3. Shri A.H. Jung, Joint Secretary (Systems)
4. Shri R.K. Nair, Joint Secretary (PC)
5. Shri T. Sethumadhavan, Joint Secretary (Finance)
6. Shri R.C. Meena, Deputy Secretary (TD)
7. Shri M.R. Rajoria, Desk Officer (Trans.)

CENTRAL ELECTRICITY AUTHORITY

8. Shri Krishna Swarup, Chairman
9. Shri H.C. Mittal, Member (Power Systems)

DEPARTMENT OF EXPENDITURE

10. Shri Arun Sharma, Director (PF-II)

PLANNING COMMISSION

11. Dr. U.K. Kohli, Advisor (PAD)
12. Shri M. Rajagopal, Deputy Advisor (PAD)

NATIONAL POWER TRANSMISSION CORPORATION

13. Shri P.K. Narayan, Chairman & Managing Director
14. Shri R.K. Madan, General Manager
15. Shri S.S. Rao, Deputy General Manager

NATIONAL HYDROELECTRIC POWER CORPORATION

16. Shri M.A. Hal, Chairman & Managing Director