

Chapter - 13

Other Aspects

13.0 General

The DPR of the Ponnaiyar (Nedungal) - Palar link project is taken up on the request and with the consent of Govt. of Tamil Nadu as an intra-state link project. The project envisages an annual diversion of 86 Mm³ of flood water available at existing Krishnagiri dam on Ponnaiyar river through existing Nedungal Anicut to benefit water starved areas of Krishnagiri and Vellore districts. The diversion of water takes place during the months of October, November and December (period of flood occurrence). The objective of this proposal is to stabilise the existing irrigation by recharging the ground water from the diverted water. Various project specific issues are highlighted in this chapter.

13.1 Fixing of Sill Level of the Canal Head Regulator

The existing Nedungal Anicut on Ponnaiyar river situated 16 km downstream of Krishnagiri dam is planned as Head works of the proposed canal. The crest level of the Anicut is + 434.710 m. Two canals namely Barur Feeder Canal and Agaram Feeder Canal are off-taking from the left flank and right flank of the Anicut respectively with their sill level of head sluices as 433.16 m and 432.70 m respectively. These existing canals supply water to system tanks in the vicinity for irrigation and domestic purposes. The committed annual water requirement for these two existing feeder canals is being supplied from regulated releases of the existing Krishnagiri dam.

The Head regulator of the link canal is proposed to be constructed on the left flank of the Nedungal Anicut about 60 m upstream of the existing Head sluice of the Barur Feeder Canal.

Keeping in view the sill level (+ 432.700 m) of the existing canal system under the Anicut, the sill level of Head regulator of the Link canal is considered as + 433.00 m, with canal Bed level as +432.000 m and FSL+434.450 m so as not to affect the existing ayacut under the feeder canals as well as functioning of the existing canal system.

13.2 Canal Top Solar (PV) Power Plant

As a follow up to the policy initiative taken by the Ministry of New and Renewable Energy, Govt. of India installation of Canal Top Solar (PV) Power Plant is being

contemplated on the canals, thereby avoiding the cost of land requirement for installing the PV panels (which form major portion of the cost of installation of Solar power Plants). One such pilot project with an installed capacity of 1 MW has already been installed on the Narmada Branch Canal in Gujarat. Another such project is under way on the Almatti Right Main Canal in Karnataka.

The feasibility of installing the Canal Top Solar (PV) Power Plant on the proposed Ponnaiyar (Nedungal) – Palar intra state link canal in Tamil Nadu has been explored. It is found that over the major portion of its length the alignment (orientation with respect to North direction) of the link canal is not conducive to achieve maximum efficiency of solar power generation. Keeping in view the higher installation costs (even excluding cost of land) and low range of efficiencies involved in case of Solar (PV) power generation, implementation of Canal Top Solar Power Plant on link canal is not considered presently. However, this option could be explored further during preconstruction stage of the project.

13.3 Environmental Impact Assessment Study

As part of preparation of DPR Comprehensive Environmental Impact Assessment studies (CEIA studies) are proposed to be carried out. The CEIA studies include Environmental Impact Assessment study, preparation of Environmental Management Plan (EMP) and also Socio-Economic study of the project. No Project Affected Population (PAP) requiring Rehabilitation and Resettlement (R & R) Plan is involved, as the existing reservoir is proposed to be used in the link project.

The process of obtaining the approval of SEIAA for the draft TOR for carrying out the CEIA studies is under way through the Project Proponent i.e., the Chief Engineer, Plan Formulation, PWD, Govt. of Tamil Nadu. The CEIA studies are to be taken up by the project proponent through outside expert agencies as per the Terms of Reference (TOR) already approved by the State Environment Impact Assessment Authority (SEIAA) of Tamil Nadu. The Chapter-X (Environmental Aspects and EMP) and Chapter-XI (Socio-economic Aspects) of the DPR may undergo changes as per the outcome of CEIA studies by outside agency and public hearing among the stake holders of the project (which forms part of CEIA studies).

13.4 Extension of Link Canal upto Palar

The proposed Ponnaiyar (Nedungal) – Palar link canal is designed to out fall into Kal Ar, a tributary of Godd Ar which in turn joins Palar river. The survey and other

investigation works were carried out over the 54.15 km length of the link canal i.e., from Nedungal Anicut on Ponnaiyar to Kal Ar near Natrampalli. During Chief Engineer level meeting between National Water Development Agency and Water Resources Organisation, Public Works Department, Govt. of Tamil Nadu it is opined that in order to limit the transmission losses of water from Kal Ar to Palar and to ensure maximum possible diversion of water to Palar, the link canal may be extended upto Palar instead of out falling in Kal Ar. However, the cost of extended canal (up to Palar) is estimated on the basis of proportionate length of the canal from the estimated cost of the project arrived by considering the link canal upto Kal Ar i.e., 54.15 km.

13.5 Public Co-operation and Participation

The project after implementation will contribute to overall economic development of the region and reduces the socio-economic imbalance by enhanced agricultural production and employment opportunities. Hence, good public co-operation and whole hearted participation is anticipated from the beneficiary areas.

13.6 Public Awareness

The local people along the link canal alignment in Krishnagiri and Vellore districts are well aware of the scheme. The details of the proposed Link Canal alignment along with the associative benefits and an Index Map of the Scheme has been published in leading News Papers of Tamil Nadu in the project region. The particulars of proposal have also been brought to the attention of the District Collectors of Krishnagiri and Vellore since the canal alignment traverses in these two districts, to make the proposal popular. During field surveys and other Investigation works during the preparation of DPR the details and importance of the scheme to meet the immediate water needs of the region were explained to the local people.