

Chapter - 11

Construction Programme, Manpower and Plant Planning

11.1 Construction Programme

Though the Polavaram – Vijayawada link project is itself does not include the construction of head works viz., dam and appurtenant works at Polavaram, it is obvious that the implementation of the project will necessarily be preceded by the construction of the dam and other related works at Polavaram as contemplated by the State. As such the construction of the Polavaram – Vijayawada link project is to be so programmed as to complete the works simultaneously with that of the Polavaram dam. Keeping this aspect in view the Polavaram – Vijayawada link project is proposed to be completed in 12 years.

During the first year of construction period, the infrastructural works such as land acquisition, construction of buildings, laying of electrical lines, purchase of machinery will be taken up. The construction of buildings needed along with various camp colonies as per the administrative set up is proposed to be completed by the fourth year in a phased manner.

During the second year, canal excavation in deep cut and heavy embankment portions will be started and will be completed by seventh year. The construction of major structures, across Yerra Kalva, Gunderu, Tammileru river etc., along with other minor structures, will be started in third year and will be completed by ninth year. The construction of canal in balanced reaches also is programmed to be started in second year and is to be completed by tenth year. The lining work of the entire canal length will be started in third year and will be so planned as to be completed by twelfth year. The distributary system as well as drainage including command area development are programmed to be taken up by ninth year and can be completed by twelfth year. By the twelfth year, the dam and other appurtenant works would also have to be completed and the proposed diversion to Krishna will be started by the end of twelfth year.

Modernisation of Krishna delta is considered to be a concurrent activity and is proposed to be taken up in fifth year and is to be completed by twelfth year.

11.2 Material Planning

All the construction materials like soil for embankments, sand, coarse aggregate, bricks, etc., except cement and steel are available within close vicinity of the link canal alignment. These materials could be obtained easily. As regards cement and steel, these could be easily transported to the site of work from the supply points through the well connected rail and road communications throughout the canal alignment.

11.3 Plant and Machinery Planning

Special T & P and other machinery that will be required for the construction of Polavaram – Vijayawada link canal project are given in Table 11.1.

Table 11.1
Special T & P and other machinery required

Description	Nos.
Special T & P (Machinery)	
Excavator Hyd. 3.8 m ³	18
Excavator Hyd. 2.84 m ³	3
Rear dumper 35 T	110
Wagon drills	10
Air compressors 40 cft	10
Concrete Mixture 1077 cft	5
Concrete Mixture 1 m ³ with weight batcher	10
Dozer 320 HP	4
Water tanker 7500 Lts	17
Water Pump 10 HP	7
Vibrator rollers	4
Truck 8 – 10 T	33
Motorised water tanker 7500 Lts	50
Trailors 25 T	2
Trailors 40 T	2
Pneumatic tractor 50 HP	30
Trailors 7.5 T	30
Crane 10 T	1
Generator 75 KVA	4
Water pump	10
Dewatering equipment	10
Workshop equipment	90
Explosive van	2
Inspection and transportation vehicles	
Jeeps	100
Cars	8
Ambulances	2
Buses	2
Station wagons	30
Jeep Trailors	33

11.4 Manpower Planning

Based on the construction programme as explained above and various other norms, the administrative set up is worked out. It is proposed to have 5 construction Circles under a Chief Engineer, with 5 Divisions under each Circle, which will be suitably located along the canal alignment for effective execution of the project. There will also be one Designs and Quality Control Circle as well as Mechanical Circle. There will be two Pay and Accounts Officer's offices and also two Special Deputy Collector's Offices. All these offices will be suitably located for effective monitoring and control over the execution of project. The Chief Engineer's office will be located at Eluru, which happens to be nearly at the middle of the canal length. The requirement of special tools and plants etc., and buildings for the Polavaram – Vijayawada link project is estimated based on the above administrative set up and construction programme.

11.5 Programme of Year wise Expenditure

The cost of Polavaram – Vijayawada link canal has been worked out to be Rs.148391 lakh. The year-wise expenditure as per the above construction programme is given in Table 11.2.

Table 11.2
Year wise expenditure

Year	Expenditure (Rs. in lakh)
1	3369
2	6621
3	12501
4	18159
5	17294
6	16469
7	14670
8	13621
9	13040
10	15634
11	11313
12	5700
Total	148391