

Chapter 12

Estimates

12.1 General

Major structural works involved in Krishna (Srisailam)-Pennar link project are construction of embankments along the natural streams and construction of mini hydroelectric projects enroute the link.

The estimates are prepared based on the working group report "Guidelines for preparation of detailed project reports of irrigation and multipurpose projects", Govt. of India, Ministry of Irrigation (now Ministry of Water Resources), 1980. The cost of project has been estimated as Rs. 81.29 crore under the following units, considering the prevailing rates for the year 1998-99.

12.2 Unit-I : Head Works

The Krishna (Srisailam) - Pennar link proposal utilises Pothireddipadu head regulator, Srisailam Right Main Canal, Banakacherla cross regulator and escape channel for letting water into the natural streams. These regulators and the channels are constructed by the State Government. New structures are not proposed as the existing structures are proposed to be used for the purpose. Hence, no provision is made under this head.

12.3 Unit-II : Link Canal System

In the initial reaches, it is proposed to utilise Srisailam Right Main Canal system. The major work involved in the project under this sub-head is providing embankments along the natural streams. The total cost under this head works out to Rs. 435 lakh.

A) Direct Charges

The direct charges include the following items

I	Works
II	Establishment
III	Tools and Plants (ordinary)
IV	Suspense
V	Receipts and recoveries on capital account

B) Indirect Charges

The indirect charges include the following

- a) Capitalised value of abatement of land revenue
- b) Audit and accounts charges

12.3.1 Direct Charges

I - Works

A – Preliminaries: This sub-head covers the expenditure on investigation already done and yet to be conducted such as soil surveys, preliminary soil tests and other laboratory tests etc. An amount of Rs. 7.8 lakh at 2% of cost of I-Works (i.e. Rs. 390.20 lakh) has been provided under this sub-head.

B – Land: The total land required to be acquired is 45.5 ha. A provision of Rs. 34 lakh has been made towards the cost of land acquisition for providing embankments along the natural streams.

L - Earth Work: An amount of Rs. 67 lakh has been provided for earthwork, which includes excavation and construction of embankments.

M – Plantation: A provision of Rs. 8.70 lakh has been made under this sub-head towards plantation on the embankment portion to be constructed and its maintenance. The remaining stretches along the bunds are covered with natural vegetation.

O – Miscellaneous: An amount of Rs. 7.8 lakh @ 2% of cost of I-Works is provided under this sub-head.

P – Maintenance: A provision of Rs. 3.5 lakh has been made towards maintenance of flood embankments @ 1% of the cost of I-Works less A-Preliminaries and B-Land.

Q - Special Tools & Plants: A provision of Rs. 860.0 lakh is made for the purchase of equipment for excavation, transportation, compaction, concreting etc. The net amount charged to Q - Special tools & plants is Rs. 250 lakh. This is after deducting 75% of the capital cost of machinery other than inspection vehicles.

R – Communication: Provision made under this sub-head is Rs. 10.5 lakh for laying inspection roads at 2.7% of cost of I-Works, which is adequate. Most of the reaches of the natural streams are approachable through state highways and village roads.

X - Environment and Ecology: No provision has been made under this sub-head, as there is no adverse impact on environment and ecology due to the link.

Y - Losses on Stock: A provision of Rs. 0.9 lakh is made @ 0.25% of cost of I-Works less A-Preliminaries and B-Land, towards losses on stock of material due to natural causes.

II – Establishment :

A provision of Rs. 35.6 lakh @ 10% of cost of I-Works less B-Land is made under this sub-head.

III - Tools & Plants (ordinary)

A provision of Rs. 3.6 lakh @ 1% of cost of I-Works less B-Land is made under this head to cover the cost of survey instruments, office equipment and other small tools.

12.3.2 Indirect Charges

A provision of Rs. 1.7 lakh is made towards capitalised value of abatement of land revenue. Rs. 3.9 lakh is provided towards audit and accounts charges. The capitalised value of abatement of land revenue is assumed as 5% of cost of land required and the audit and accounts charges assumed as 1% of cost of I-Works.

12.4 Unit-III : Hydro Electric Installation

This unit covers the power component comprising a total of 4 mini hydro power houses. The total installed capacity of all the powerhouses is 17 MW and the energy generation that could be achieved from the power stations is 74.784 million units. Total cost of all the four powerhouses and their components worked out to Rs. 7694.36 lakh. The cost provision under the sub-heads of Power plant civil works, Special T&P and Power plant & Electrical system have been worked out based on the detailed project report of a Mini hydel scheme (2 x 1200 kW) on

Nippulavagu canal approved by Non Conventional Energy Development Corporation of Andhra Pradesh (NEDCAP) which is an approving authority for mini hydel schemes.

The provision made under each sub-head is as follows:

12.4.1 Direct Charges

I – Works

A – Preliminaries: The preliminary works cover the expenditure on topographical surveys, geotechnical investigations, preparation of project reports, design engineering consultancy services etc. for which a provision of Rs. 160.00 lakh has been made in the estimate.

B – Land: The land required for powerhouse installation at the four locations is about 24 ha considering 6 ha for each powerhouse. Adopting the rate of Rs. 42000 per hectare, the cost of the land acquisition worked out to Rs. 10.08 lakh.

J – Power Plant Civil Works: A provision of Rs. 2600.00 lakh has been made for all the civil works such as construction of surplus weirs, intake pools, power houses, tail race pools, diversion canals, gates and hoists, excise duties, insurance and central sale taxes etc.

K – Buildings: A lump sum provision of Rs. 40.00 lakh has been made towards construction of buildings.

M – Plantation: A lump sum provision of Rs. 8.00 lakh has been made towards plantation of avenue trees, horticulture etc. The provision includes the cost of maintenance and protection for 2 years.

O – Miscellaneous: A provision of Rs. 20.00 lakh has been provided under this sub-head.

P – Maintenance: A provision of Rs. 40.00 lakh has been made towards cost of maintenance of power installation in the estimate.

Q – Special Tools & Plants: A provision of Rs. 20.00 lakh has been made towards cost of special T&P.

R – Communication (Roads): A provision of Rs. 20.00 lakh has been made for laying inspection roads.

S - Power Plant and Electrical System: A provision of Rs. 4462.50 lakh has been made towards installation of power generating equipment, control equipment, switch yard & switch gear, auxiliaries, spares, tools & plants and power transmission system etc.

Y - Loss on Stock: A provision of Rs. 18.02 lakh has been made towards losses on stock which is 0.25% of cost of I-Works less A-Preliminaries, B-Land and Q-Special T&P.

II - Establishment

A provision of Rs. 147.78 lakh has been made towards establishment charges which is 2% of the cost of I-Works less B-Land.

III - Tools & Plants (ordinary)

A provision of Rs. 73.99 lakh @ 1% of I-Works is made under this sub-head.

12.4.2 Indirect Charges

A provision of Rs. 73.99 lakh is made towards audit and accounts charges @ 1% of the cost of I-Works.