

## Thotapalli Barrage Project

### ANNEXURE-I

#### 1. PROJECT DETAILS WITH SALIENT FEATURES

##### **HISTORY OF THE PROJECT:**

Thotapalli Barrage Project was proposed across River Nagavali at about 500 M upstream of the existing old regulator near Thotapalli Village of GarugubilliMandal of Vizianagaram District to irrigate an ayacut of 2,10,739 acres including stabilization of existing old ayacut of 64,000 acres under left and right canals of existing old regulator system and open head channels system both on left and right side of the river, and new ID ayacut of 1,31,739 acres through new Right Main Canal and an additional ayacut of 15,000 acres through Gajapathinagaram Branch Canal off taking from Right Main Canal. The new ayacut proposed to contemplate 67,704 acres covering 10 Mandal in Vizianagaram District and 64,035 acres covering 7 Mandal of Srikakulam District. In addition to that the scheme provides drinking water facility by feeding 42 tanks in 24 enroute villages of Right Main Canal runs for a length of 117.89 km.

The total yield available from catchment area at site is 44 TMC and the yield proportionally allocated to Andhra Pradesh state as per Inter State agreement Dated: 15-12-1978 is 16.00 TMC. The Utilization is 15.890 TMC:

Irrigation	-	13.985 TMC
Drinking Water	-	0.320 TMC
Industrial Demand	-	0.640 TMC
Evaporation	-	0.945 TMC

##### **CLEARANCES:**

1. Administrative approval for Rs.450.23Crores in GO.MS No.114/Dated:31.07.2003.
2. Revised Administrative approval for Rs.774.908 Crores in GO.MS No.78/Dated:05.11.2012.
3. Scheme cleared by C.W.C. in 81st TAC meeting on 04.08.2003.
4. Environment clearance by MOEF vide letter No.J-12011/10/2002A/Dated:29.08.2005.
5. R&R clearance of MOTA received vide letter No.20011/11/2004-CF&R/Dated: 1.3.2006
6. Investment clearance received vides letter No. 2 (364)/2003-wr, Dated: 20.3.2006.
7. AIBP Sanction received for Rs. 349.24Crores from Government of India.

##### **COMPONENTS:-**

1. Spillway of 117m with 8 vents.
2. Earth dam of 8.80 Km length.
3. Left and Right link canals and head sluices to stabilize the existing ayacut of 64,000 Acres.
4. Proposed Right Main canal of length 117.890 Kms and it is distributory system to Irrigate 1,31,739 Acres.
5. Proposed Gajapathinagaram Branch canal to irrigate additional ayacut of 15,000Ac.



## **Name of the Project: Kelo Irrigation Project, Chhattisgarh**

### **Project in Brief**

Kelo Irrigation Project of Chhattisgarh envisages construction of an earthen dam with masonry/concrete spillway across river Kelo, a tributary of river Mahanadi. The project is situated near village Danote, 8 km north of Raigarh town in Raigarh district of Chhattisgarh. The project contemplates to provide irrigation benefits to an area of 22,810 ha (Annual Irrigation) in CCA of 24,396 ha in Raigarh and Janjgir-Champa districts of Chhattisgarh. In addition, provision of drinking water of 4.44 MCM to Raigarh town and 4.44 MCM for industrial use is also kept in the project proposal.

### **Components of the project are detailed below:**

#### **Unit-I Head works**

The Project envisages construction of earthen dam with two saddle dams and a concrete spillway as detailed below –

1. Earthen dam of maximum height of 24.22 m with total length of 2.27 km comprising of main earthen dam of 1.27 km, saddle I earthen dam of 90 m and saddle II earthen dam of 910 m.
2. Masonry/concrete gravity dam is provided in saddle I comprising of 142 m overflow portion and 50 m non-over flow portion with 8 no's gates size 14.25mX10.0m.
3. Canal Head Sluice is provided at RD 1.240 km of main earthen dam for designed discharge 24.58 m<sup>3</sup>/s.

#### **Unit-II Canal Systems**

Total length of main canal is 28.31 km and branch canal 16.61 km with head discharge 24.58 m /sec and the length of distributaries and minors are 165 km and 215 km respectively cover a CCA of 24,396 ha. Kelo Project was accepted by the Advisory Committee of MoWR in its 95-meeting held on 20.01.2009. Planning Commission accorded Investment Clearance to the project vide letter o.2(44)/3/2009-WR New Delhi dated 20.02.2009 for an estimated cost of Rs. 598.91 Crore (Price Level 2008) (cost of works components is Rs. 571.91 crore).

### **Techno Economic Clearances:**

Kelo Project has been accepted by the Advisory Committee of MoWR in its 95th meeting held on 20.01.2009. Planning Commission accorded Investment Clearance vide letter No. 2(44)/3/2009-WR New Delhi dated 20.02.2009 for an estimated cost of Rs. 598.91 Crore at 2008 PL (cost of works components is Rs 571.91 Crore). Revised estimated cost of the project, as reported by the project authorities is Rs 972.22 Crore (cost of works components under AIBP & CAD is Rs 808.25 Crore). Revised Administrative Approval for an estimated cost of Rs 891.01 Crore (excluding the estimated cost of CAD&WM works Rs 81.21 Crore) has been accorded by the State Govt. vide their letter no. 1458/F-740/31/S-2/2000 dated 25.03.2019.

The FTPC Proposal of Kelo project for Rs. 972.22 Crore (AIBP Component Cost = Rs. 727.04 Crore) has been approved by CWC vide their letter no. 8/133/FTPC/Kelo/2018/Mon(C)/1628-1638 Dated 14.06.2019. This project is included in 99 Project under PMKSY in the financial year 2016-17. The project was started during the year 2008.

A separate administrative approval for CADWM work has been accorded by Govt. of Chhattisgarh vide letter no.1215/F-7-48/31/S-2/2017 New Raipur Dated 19.02.2018. The construction of CADWM work has been changed from OFD to UGPL therefore revised administrative approval accorded by Government of Chhattisgarh, Water Resources Department by letter 2543/ F-7-48/31/S-2/2017 Nava Raipur Dated 14/06/2021 for amount Rs. 8140.89 lakhs.



## Name of the Project: Gosikhurd National Irrigation Project, Maharashtra

### Project in Brief

The main dam of the Gosikhurd project is situated across Wainganga River near village Gosikhurd in Bhandara District of Maharashtra State.

The project envisages the construction of eight different components as below:

1. Head Works: Includes Main dam and R & R works.
2. Right Bank canal: 99 Km long.
3. Left bank canal: 23 Km long having 2 lift irrigation schemes.
4. Tekepar Lift Irrigation Scheme.
5. Ambhora Lift Irrigation Scheme.
6. Mokhabardi Lift Irrigation Scheme.
7. Nerla (Paghora) Lift Irrigation Scheme.
8. Renovation of existing Asolamendha tank & canal system.

The project will provide irrigation benefits to 2,50,800 ha. The annual irrigable command area of the project is 1,90,000 ha. The project proposes to install Hydropower Plant with power generation capacity of 0.5 MW & 2.5 MW at head regulators of L.B.C. & R.B.C. respectively. The project is providing 23.69 Mm<sup>3</sup> of water to Jawaharnagar Ordnance Factory near Bhandara.

The latest cost of the Project is Rs. 18497.57 crore at 2013-14 price level of PWD, 2012-13 price level WRD, which has the administrative approval of competent authority of the State Govt. FTPC of Gosikhurd Project for the same has been approved vide Gol, MoWR, RD & GR, New Delhi as per Letter No. CWC U. O. No.4/1/2013/NP-II/Vol-VII/1802-1814, Dated 11/12/2017 for Rs 18497.57 crore for the whole project and Rs. 12770.09 crore for AIBP components. The project was given investment clearance by Planning Commission in the year 2008 for Rs. 7777.85 crore. Till December 2008 an expenditure of Rs. 2732.86 crore was incurred before the project was accepted as National project.

### The project components are as follows:

- 1) **Dam:** The length of Dam is 11.35 km and maximum height is 22.55 meters. The gated ogee-shaped spillway, with length 773.90 m and maximum height of 7.32 m, is centrally located to pass design discharge of 67300 cumecs. It has 33 radial gates each of size 18.30m x 16.50m. There are two head regulators one for left bank canal and other for right bank canal at RD 820 m and 7875 m of dam respectively.

### 2) Canals from Gosikhurd Dam:

Sr. No.	Item	Right Bank Canal	Left Bank Canal
1.	Length	99.51 km	22.93 km
2.	Design Discharge	113.26 cumecs	45.22 cumecs

### 3) Lift Irrigation Schemes (LIS):

Sr. No.	Item	Ambora	Mokhabardi	Tekepar	Nerla	Gosi	Akot	Pauni, Sheli & Shivnala
		1	2	3	4	5	6	(7 to 9)
1	Site	Right bank of reservoir	Right bank of reservoir	Left bank of reservoir	Left bank of reservoir	Left bank canal @ RD900 m	Left bank canal @ RD 4170 m	Right bank canal @ RD9460, 21460m&2 2700m m



## EXECUTIVE SUMMARY

**1. Project Features****a. Location**

The Lower Panzara (Medium) Irrigation Project is constructed across the river Panzara, a tributary of Tapi River, near village Akkalpada of Sakri taluka of Dhule district of Maharashtra.

**b. Components**

The project envisages the construction of the following components:

- 1) 3266 m long earthen dam (excluding spillway and non-overflow section) having a maximum height of 31.18 m;
- 2) Centrally located ogee shape spillway of 259 m long on river course portion having 17 no. radial gates each of size 12.00 m x 8.00 m;
- 3) Non-overflow section of 120 m length;
- 4) Two irrigation outlets one each flank, left flank with gate size 1.20 m x 1.20 m and right flank with gate size 1.20 m x 1.80 m, having discharge capacity of 3.41 cumecs and 5.58 cumecs respectively;
- 5) 32.085 km long Left Bank Canal (LBC) to facilitate annual irrigation potential of 5143 ha (UIP) in 21 villages of Dhule district (1 Village from Sakri taluka & 20 villages from Dhule taluka).
- 6) 14.13 km long Right Bank Canal (RBC) to facilitate annual irrigation potential of 1048 ha (UIP) in between Gotane pickup weir & Haranmal tank.
- 7) Intermediate bandharas/percolation tanks on RBC having a command area of 1394 ha (UIP).



Panzara Dam



At RD 300 m of LBC

**c. Benefits**

- 1) The annual irrigation potential of the project is 7585 ha (UIP). Out of which, 6681 ha (88%) is covered under drought-prone area of Sakri & Dhule taluka of Dhule district of Maharashtra.



- 2) The project will also provide 27.88 MCM of water for domestic use to Dhule city & 4 villages in Sakri & Dhule talukas of Dhule District and 8.50 MCM of water for industrial use (MIDC).

**d. Estimated Cost & Year of Approval**

Advisory Committee (TAC) of MoWR on 20.01.2009 accorded acceptance for the project for an estimated cost of Rs. 347.3107 crore (Works Rs. 289.88 crore & Estt. Rs. 57.43 crores) at price level 2005-06 and subsequently Planning Commission, New Delhi vide letter no. 20(13)/2008-WR dated 01.04.2009 accorded investment clearance. The cost of AIBP components was Rs. 132.44 crore. The Fast Track Proforma Clearance (FTPC) acceptance accorded by CWC, New Delhi for the revised estimated cost of Rs. 556.286 crore (Works Rs. 476.204 crore & Estt. Rs. 80.082 crores) at price level 2011-12 and the cost AIBP component is Rs. 294.66 crores.

**e. Inter-state aspects**

There are no Inter-State aspects in this project.

**f. Year of start**

The construction of the project started on 01/2001. The AIBP components as reported by the project authority are completed in 03/2018.

**g. Targeted date of completion**

As per investment clearance accorded by the Planning Commission, New Delhi in 04/2009, the project was targeted to be completed by 03/2011. The project has been included in the priority-I category, which is targeted to be completed by 03/2017.

**h. External source of funding**

There is no external source of funding for this project.

**2. Organisational and Management Aspects**

The construction of the project is being done by Tapi Irrigation Development Corporation (TIDC), Jalgaon with the following organizational set-up.

- a) Executive Director, Tapi Irrigation Development Corporation, Jalgaon at Corporation level;
- b) Chief Engineer (TIDC), Tapi Irrigation Development Corporation, Jalgaon at Project level;
- c) Superintending Engineer, Dhule Irrigation Project Circle, Dhule at Circle level;
- d) Executive Engineer, Dhule Medium project Division No. 1, Dhule at Division level

The division has 02 sub-division to supervise the works are being executed by the contracting agencies.

**3. Progress of AIBP Components**

**a) Physical Progress**

Project authorities reported during the field visit that the AIBP components have been already completed by 03/2018. The details of physical progress achieved in the AIBP components are given below in the table.



## **Name of the Project: Lower Pedhi Irrigation Project, Maharashtra**

### **Project in Brief**

The project is situated in Amravati district of Maharashtra state. The project envisages construction of 8,487 m long earth dam across river Pedhi, a tributary of river Purna, near village Nimbha in Bhatkuli taluka of district Amravati with the maximum height of 19.40 m and central ogee type spillway is 114.50 m long having 6 radial gates each of size (15x12) m. The Canal system of the project comprises 21 Km long Left Bank Canal (LBC) 11 km long Right Bank Canal (RBC) along with DISNET to create ultimate irrigation potential of 12,944 Ha (revised under FTPC) which lies in Bhatkuli and in Murtizapur Taluka. Due to high cost of land acquisition and technical difficulties posed by deep black cotton soils in the command area, it has been proposed to provide pressurized pipe irrigation network in lieu of open canal network.

The proposal of PDN was approved in 69th meeting of VIDC regulatory board on dated 08/03/2018. Revised DPR of CADWM with pressurized PDN and Micro irrigation is submitted for approval to CWC Nagpur. Compliance of points taken by CWC Nagpur vide letter Dt. on 06/05/2020 is in progress. The project will benefit 40 villages in Bhatkuli taluka (13,505 ha.) of Amravati District (MS) and 16 villages in Murtizapur taluka (2,496 ha.) of Akola (MS) District. The whole command area has been declared as drought prone area. The project also has a provision of 7.665 Mm<sup>3</sup> water for domestic use and 5.11 mm<sup>3</sup> water for industrial use. The other benefits include Fisheries and Tourism.

The Latest updated cost of the project is Rs. 1639.43 Cr. The cost of works is Rs. 1484.11 Cr., cost of CAD works is Rs. 58.20 Cr. & ETP is Rs. 97.12 Cr. Total expenditure as on March 2020 is Rs. 990.57 The expenditure on works is Rs. 953.59 Cr. expenditure on ETP is Rs 36.98 Cr. Total balance cost of the Project is Rs. 648.86 Cr. Balance cost of the works included in AIBP + CAD as on 01.04.2020 is Rs. 588.72 crore.

The project was approved by Planning Commission in the year 2008 for Rs. 283.10 crore on 2007 price level vide letter No F No 2 (401)2007/-WR New Delhi Dated 14/08/2008 and later was included in AIBP under PM package for Vidarbha Region during 2008-09. At the time of inclusion of the proposal i.e. in September 2008, only the work of the main dam had just started. The balance works of the earth dam, spillway, head regulators, canal system with DISNET were included in AIBP with a target to create irrigation potential of 17023 ha. Due to change in cropping intensity the present target irrigation proposal is 16001 ha.

### **The project components are as follows:**

- 8610 m long, earthen dam across the river Pedhi, a tributary of river Purna in Tapi Basin. It has maximum height of 19.65 m above river bed level.
- 114.50 m long, Ogee type central spillway having 06 radial gates, each of 15m x 12m to pass the design flood of 9218.71 cumecs. It has maximum height of 39.65 m above deepest foundation level.
- Left Bank Canal (LBC) of 20.71 km long unlined channel off-taking at RD 3270 m, having 4.877 cumecs design discharge at head to irrigate 1896 ha (ICA) area in Bhatkuli taluka of Amravati district and 1155 ha (ICA) area in Murtizapur taluka of Akola district.
- Right Bank Canal (RBC) of 11 km long unlined channel off-taking at RD 6140 m, having 10.436 cumecs design discharge at head to irrigate 5274 ha (ICA) area in Bhatkuli taluka of Amravati district and 1441 ha (ICA) area in Murtizapur taluka of Akola district.
- Additional 426 ha (ICA) area in Bhatkuli taluka of Amravati district through direct private lift(s) from reservoir periphery.



## Project in Brief

### Components of the Project-

- 1200 m long earth dam with the maximum height of 50.63 m across river Wang, a tributary of Krishna River near village Marathwadi in Patan Taluka of Satara district.
- 55.50 m long ogee-shaped spillway on the left flank having 4 radial gates of size 12 m x 5 m to pass flood discharge of 1722 m<sup>3</sup>/s.
- 50 m long non-overflow blocks on left side of spillway and 49.50 m long non- overflow block on the right side of the spillway.
- Irrigation-cum-Power Outlet (ICPO) on left flank with discharging capacity of 5.95 m<sup>3</sup>/s to release water in the river from the reservoir.
- A powerhouse with the installed capacity of 3 MW (2 X 1.50 MW) to generate hydropower.
- A series of 10 KT weirs at the d/s of dam on Wang river through which water would be lifted to provide an annual irrigation to 7068 ha in Patan and Karad talukas of Satara district.

### Techno Economic Clearances:

Parameter	As approved by Planning Commission in September, 2007 at (PL 2005-06)	As per FTPC at PL (2012-13)	As per proposed FTPC at PL (2017-18)
Estimated cost: as a whole	Rs.162.78 crore	Rs.209.79 crore	Rs.410.03 crore
Works (Total)	Rs.140.78 crore	Rs.178.806 crore	Rs.371.009 crore
Works (AIBP components)	Rs.73.88 crore	Rs.111.92 crore	Rs.304.12 crore
CCA	8547 ha	8547 ha	8547 ha
ICA	----	6200 ha	6200 ha
Annual Irrigation	7068 ha	7068 ha	7068 ha

The 5th Revised Administrative approval by the State Government was accorded vide Government Resolution No. RAA-2019/PNIO6/9/Mp, Dt. 19/09/2019. Accordingly, a proposal for Fast Track Proforma Clearance in respect of Wang Medium Irrigation for Estimated cost Rs. 410.03 Cr (AIBP