

CHAPTER

I

Introduction



The Kaleshwaram Project is a multi-purpose and multi-stage lift irrigation project which seeks to lift water from the River Godavari at Medigadda and convey it across 13 districts of Telangana up to Hyderabad and adjoining areas. Divided into 7 Links and 56 packages, the Kaleshwaram Project comprises of three barrages, 14 reservoirs, 31 lifts and 1,832 kilometres of canals, tunnels and pipelines. The Project seeks to lift 215 thousand million cubic feet (TMC) of water from the River Godavari to irrigate 18.26 lakh acres of new Command Area (CA) in 13 Districts and to supplement water to an already existing CA of 4.71 lakh acres¹ of four other existing projects where water availability is now falling short of requirement. During the process, water is lifted from a height of 100 metres above Mean Sea Level (MSL) at Medigadda and through a series of multiple lifts, carried to a height of 618 metres above MSL at the highest elevation point at the Kondapochamma Sagar reservoir, thus, lifting water by 518 metres, overall. The Project envisages utilisation of a total of 240 TMC of water, with 195 TMC of water lifted from the River Godavari at Medigadda, 20 TMC of Godavari water lifted from the pre-existing Sripada Yellampally reservoir and 25 TMC supplemented through ground water. The Project is intended to provide 169 TMC of water for irrigation, 16 TMC of water for industrial use, 30 TMC of drinking water to Hyderabad and 10 TMC of drinking water to the villages enroute². The cost of the Project as approved by the Central Water Commission (CWC) in June 2018 was ₹80,190.46 crore.

1.1 Background

In May 2007, the Government of the erstwhile combined State of Andhra Pradesh had formulated the Dr. B.R. Ambedkar Pranahitha-Chevella Sujala Sravanthi Lift Irrigation Project (PCSS Project). This project contemplated lifting 160 TMC³ of water from the River Pranahitha to provide irrigation facilities to 12.21 lakh acres of Command Area (CA) in six districts. The project cost was estimated at ₹17,875 crore. The Government later revised (December 2008) the scope of the PCSS project to enhance the targeted CA to 16.40 lakh acres in seven districts⁴ by supplementing 20 TMC of water from

¹ The four existing projects are – Sri Ram Sagar Project (SRSP) Stage-I (9,68,640 acres) and Stage-II (4,40,000 acres), Nizam Sagar Project (2,34,330 acres), Singur Project (40,000 acres) and Flood Flow Canal of SRSP (2,00,000 acres) thus adding up to 18.83 lakh acres. The Detailed Project Report of Kaleshwaram Project considered 25 per cent shortage of water in these projects. Hence, it is deemed that supplementation would be done for 25 per cent of 18.83 lakh acres i.e., 4.71 lakh acres under these projects

² In addition, there would be evaporation losses of 12 TMC. Utilisation of the remaining 3 TMC of water was not explained in the DPR

³ TMC means Thousand Million Cubic Feet

⁴ The erstwhile Karimnagar, Medak, Warangal, Nalgonda, Rangareddy, Nizamabad and Adilabad Districts

the river Godavari (The original PCSS project line diagram is given at *Appendix 1.1*). Correspondingly, the project cost was increased to ₹38,500 crore⁵. The project had seven links and 28 packages and these works were awarded to different contractors during 2008-2009. An expenditure of ₹11,642.85 crore (30.24 *per cent*) was incurred up to the end of March 2016, with none of the components completed.

After the re-organisation (June 2014) of the Andhra Pradesh State and the formation of Telangana State, the Government of Telangana reviewed (June 2016) the ongoing irrigation projects, including the PCSS project. Noting deficiencies like short availability of water at the source and insufficient reservoir storage capacities in the original project, the Government decided (June 2016) to re-engineer the PCSS project. Post re-engineering, the project was divided into two separate projects, *viz.* – the Dr. B.R. Ambedkar Pranahitha Project (Pranahitha) and the Kaleshwaram Project.

The re-engineering substantially changed the scope of the command area (CA) to be irrigated as well as the cost of the Pranahitha and the Kaleshwaram Projects. The two projects together planned to provide irrigation to a new CA of 20.26 lakh acres⁶ and stabilise⁷ 4.71 lakh acres of the CA of four existing projects⁸ at an estimated cost of ₹85,651.81 crore.

The PCSS project had 7 links. During re-engineering, the Link-I of the PCSS Project (comprising of five packages) was separated and re-named as Dr. B.R. Ambedkar Pranahitha Project. Package-5 was deleted and the remaining four packages (comprising of three canals and one barrage) were planned to draw 20 TMC of water near Tummidihetti to irrigate two lakh acres of new CA in the erstwhile Adilabad District. The aggregate cost of the 4 packages was ₹2,759.13 crore. As of end of March 2022, an expenditure of ₹1,727.44 crore has been incurred on the Pranahitha project.

The remaining six Links (Links II to VII) of the PCSS Project, were brought under the new Kaleshwaram Project. Out of the 23 packages in these links, four packages⁹ were deleted and the remaining 19 packages, with some changes, were included in Kaleshwaram Project. The source of water of this project was shifted to Medigadda, about 20 Km downstream of Kaleshwaram village where the River Pranahitha joins Godavari. Three barrages and 17 reservoirs were proposed to increase the storage capacity of the project. The Kaleshwaram Project alone proposes to provide irrigation to a new CA of 18,25,700 acres, supplement water to 4.71 lakh acres of pre-existing CA of other projects which were facing water deficit and to provide drinking and industrial water to Hyderabad, Secunderabad and en-route villages.

In addition to the 19 package works of the earlier PCSS Project brought under the Kaleshwaram Project, 28 new works resulting from re-engineering were awarded to

⁵ This is the cost as per the administrative approval given in December 2008. In the DPR of the project submitted to CWC later in April 2010, the project cost was worked out at ₹40,300 crore

⁶ Kaleshwaram Project: 18.26 lakh acres and Pranahitha Project: 2 lakh acres

⁷ Supplement water to the already created irrigation command, which is currently facing a deficit

⁸ Please see footnote-1 on page 1

⁹ Packages – 23, 24, 25 and 26

various contractors during July 2016 - November 2019. The line diagram of the Kaleshwaram Project as per the Detailed Project Report submitted (February 2017) to the Central Water Commission is given at **Appendix 1.2**. Even after re-engineering, nine more works were awarded to contractors during March 2019 to June 2020 taking the total number of works awarded to 56 (Chart 1.1).

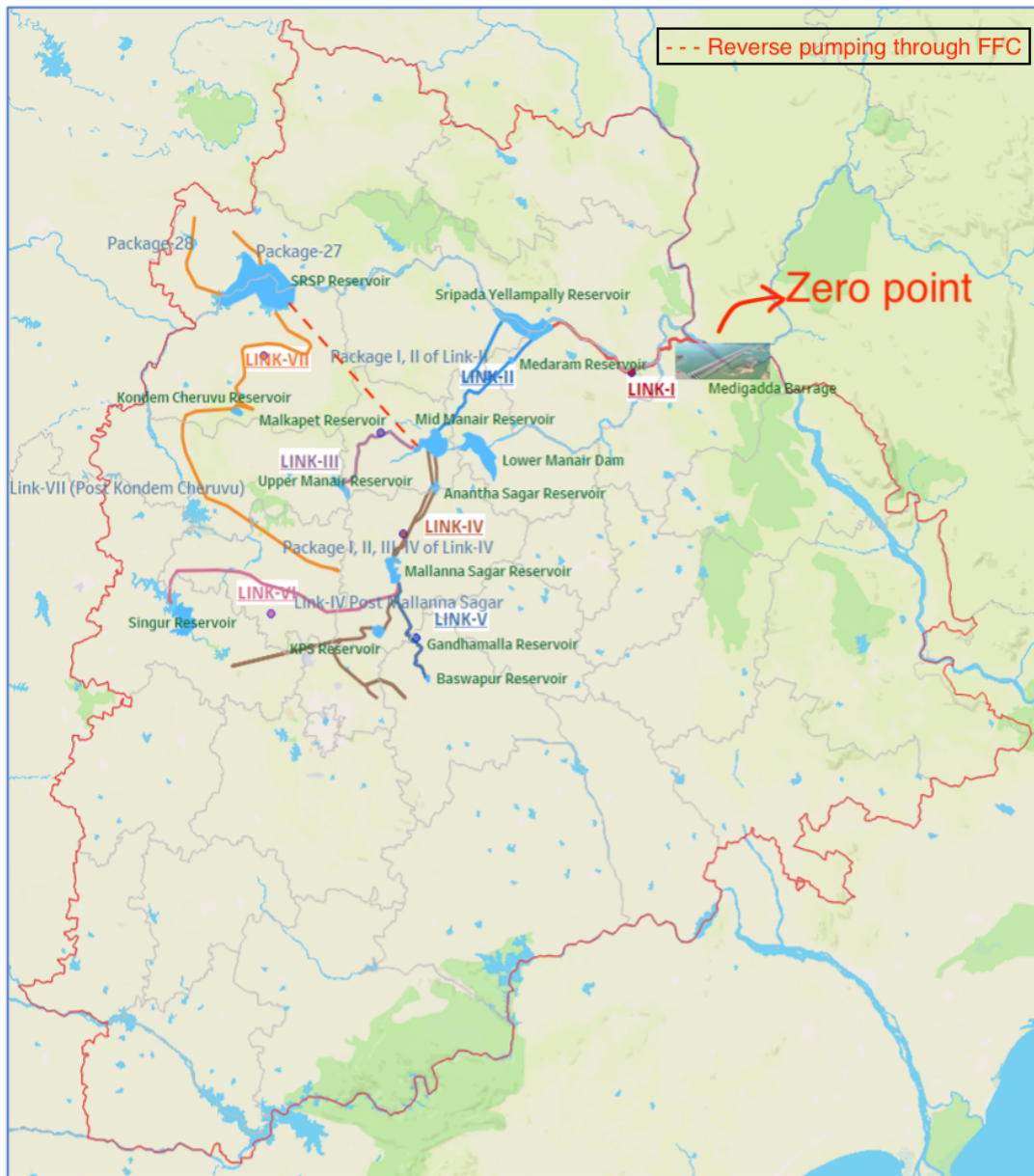
Chart 1.1 – Details of the 56 works under the seven links of Kaleshwaram Project

Project Links			
LINK-I ----- From Medigadda Barrage on Godavari River to Sripada Yellampally Project (6 Packages)	LINK-III ----- From Mid Manair Reservoir to Upper Manair Reservoir (3 Packages)	LINK-V ----- From Anicut to Chityala (4 Packages)	LINK-VII ----- From SRSP Foreshore to Bhoompally reservoir canals and to Dilwapur and Hangarga villages (6 Packages)
LINK-II ----- From Sripada Yellampally Project to Mid Manair Reservoir & Additional 1.1 TMC works (7 Packages)	LINK-IV ----- From Mid Manair Reservoir to Konda Pochamma Reservoir & Additional 1 TMC works (27 Packages)	LINK-VI ----- From Sri Komaravelli Mallana Sagar to Singur Reservoir (3 Packages)	
Package Works (Total 56 Packages)			
Link-I	3 Barrages works (Meddigadda, Annaram & Sundilla) and 3 Lift works (Meddigadda, Annaram & Sundilla)		
Link-II	Package No. 6, 7, 8 & Additional 1.1 TMC works: Package No. I, II, III & IV		
Link-III	Package No. 9, Malkapet Reservoir & Additional Ayacut Lift		
Link-IV	Package-10, Ranganayak Sagar, Package-11, 12, Sri Komaravelli Mallanna Sagar (4 works), Package-13, 14, Konda Pochamma Sagar (2 works), KPS Canals (11 works) & Addl 1 TMC works: Package-I, II, III, IV		
Link-V	Package No. 15, Gandhamalla Reservoir, Package No. 16, Baswapur Reservoir		
Link-VI	Package No. 17, 18 & 19		
Link-VII	Package No. 20, 21, 21-A, 22, 27 & 28		

Source: Records of the I&CAD Department

The line diagram of the Kaleshwaram Project as being executed now is given at **Appendix 1.3** (also refer the map at Figure 1.1). The aggregate cost of the 56 works of Kaleshwaram Project was ₹1,02,267.99 crore. As of end of March 2022, an expenditure of ₹86,788.06 crore has been incurred on the Kaleshwaram Project.

Figure 1.1 – Index map of the seven links of Kaleshwaram Project

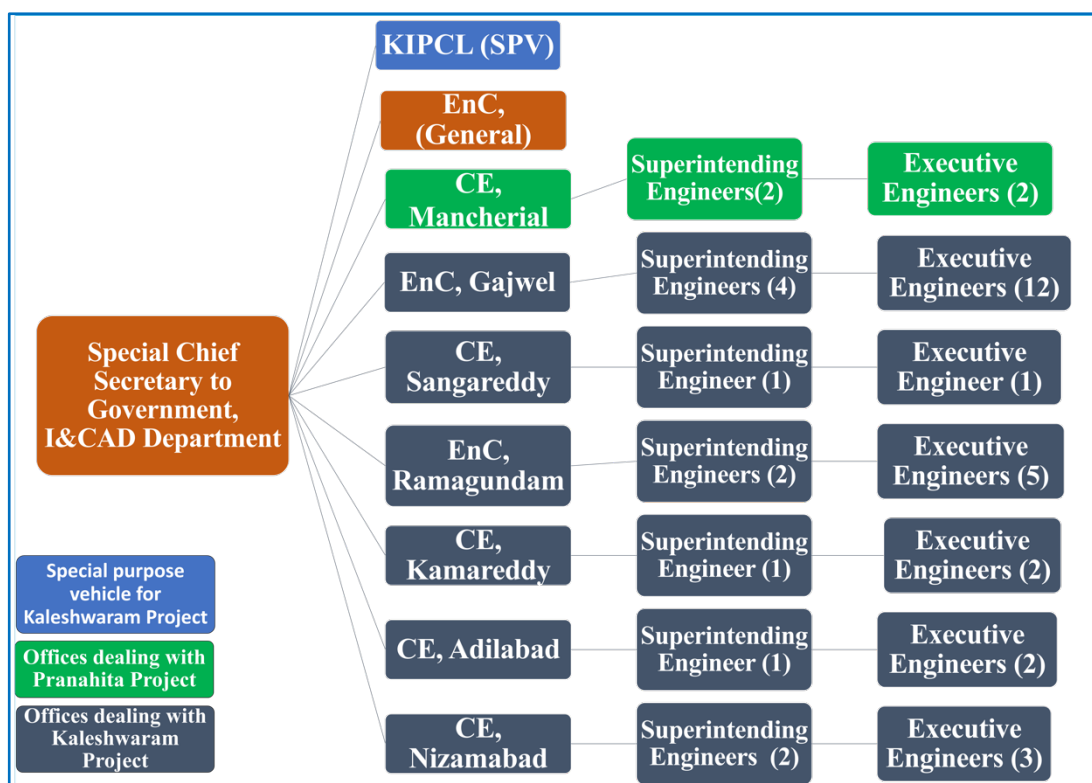


Source: Index map prepared by Audit based on the information collected from the Departmental records. Zero point is the location of Medigadda barrage.

1.2 Organizational setup

Irrigation and Command Area Development (I&CAD) Department, headed by the Special Chief Secretary at Secretarial level, is responsible for irrigation related activities in the State. Eight Engineers-in-Chief (EnCs)/Chief Engineers (CEs), 13 Superintending Engineers (SEs) at Circle level and 27 Executive Engineers (EEs) at Divisional level oversee the execution of Kaleshwaram and Pranahitha Projects. A Special Purpose Vehicle (SPV), the Kaleshwaram Irrigation Project Corporation Limited (KIPCL) under the chairmanship of Special Chief Secretary was created to finance the Kaleshwaram Project cost. All the assets created will be capitalised under the ownership of KIPCL. Chart 1.2 depicts the organizational structure of the offices dealing with the Kaleshwaram and Pranahitha Projects.

Chart 1.2 – Organizational chart of the offices of the I&CAD Department dealing with the Kaleshwaram and Pranahitha projects



Source: As per the information collected from the I&CAD Department