

FACTUAL NOTE ON POLAVARAM PROJECT

The Government of A.P. under JalaYagnam has grounded Polavaram Project in the year 2005 on River Godavari to complete the same within 4 years with the following salient features.

1. Administrative Sanction	Rs 10287.38 Crores (Rs. 26,000 Crores Now)
2. Utilization of water	301 TMC
3. Live Storage	75 TMC
4. Ayacut proposed	3.284/7.21 Lakh Acres
5. Total Land to be acquisitioned	1,67,000.00 Acres
6. Persons to be affected	1.80 lakh Nos.
7. Villages to be affected (Tribal's)	276 No's
8. Families affected	45,000 No's

On close and analytical scrutiny of the proposal it can be noticed that, it is based on irretrievable deficiencies and full of shortcomings as discussed in the subsequent paras

Headworks:

It comprises of Earth cum Rock fill Dam, Plastic diaphragm wall, Pilot Channel, Spill way, Spill Channel, Approach Channel, Saddle Dams, Navigational Tunnels, Navigational Canal, Locks, Irrigation Tunnels, Regulators etc.

Water conveyor System:

1. Right Main Canal of 170 kms length costing about 2000 Crores.
2. Left Main Canal of 182 kms length costing about 1900 Crores.

The Proposed Construction of Polavaram Project as a Dam has been studied by different Eminent Engineers/ Experts at different times and they have made the following observations.

Sir Arthur Cotton with his vast experience in taming River Godavari in Coastal Andhra area has preferred for a barrage at Polavaram for Irrigation as well as for Power generation.

Dr. K. L. Rao's Observations:

Dr. K.L. Rao an Eminent Irrigation Engineer and the then Union Minister for Irrigation has categorically observed that for Polavaram project foundation rock was available at more than 200 ft below the river bed. He also warned that strategy for diversion of river flows during construction would pose a formidable danger even for a normal flood of 5 lakh cusecs and a possible maximum flood of 20 lakh cusecs. During the first five year plan the Government of India examined the views of experts, officials and then abandoned Ramapadasagar dam at Polavaram. In place of the Dam they proposed a barrage for

reasons of high cost and also the complexities involved in the foundation of such a high dam at that location.

Khosla Commission:

Govt. of India subsequently appointed a commission headed by Dr. A. N. Khosla to study the optimal utilization of waters of Godavari, Krishna and Pennar rivers. Dr. Khosla studied extensively and submitted a report in 1953. He stated in his report, if Ramapada sagar dam is not built but a storage should be built some ware upstream of either on Godavari itself or some of its tributaries and only a diversion barrage can be built at Polavaram site. The contribution of Godavari River to Krishna basin to an extent of 142 TMC will remain unaffected.

White paper on “Krishna- Godavari” waters.

The Andhra Pradesh state Government published a white paper on “Krishna-Godavari waters-optimum economic utilization” in 1961. In concluding remarks of the white paper, the Andhra Pradesh State Govt. stated (wide para 73) that the only practical scheme for diversion of Godavari waters to Krishna basin in the lower reaches is by construction of “**Ichchampally Dam and Ramapada Sagar Barrage**”. Thus the state of Andhra Pradesh expressed its decision through white paper to build a big Dam at Ichchampally and a Barrage at Polavaram, so that the continuous of flow of water from Ichchampally can be diverted into Krishna river through Polavaram Barrage.

Gulhati Commission:

The Union Government has appointed a technical commission under the chairman ship of N. D. Gulhati to study the optimal utilization of water in Godavari and Krishna rivers and feasibility of diverting any surplus water from Godavari into Krishna river basin. Gulhati commission submitted a report in 1967-68 in its report on Godavari river has preferred for construction of Barrages instead of Dams as the soils are not suitable for the foundation of Dams. The Commission further stated in the report that there is a large amount of water supplies of more than 10 M.Ac.ft (Million acre-feet) available from the power projects proposed across rivers Pranahita, Indravati, Sabari and tributaries. This surplus water can be diverted into Krishna basin river by the following to link canals.

- (a) A link canal from Godavari near Albaka or Singa Raddi to Pulichintala for transfer of 95 TMC at the cost of Rs 40 Crores.
- (b) A link canal from Godavari at Polavaram to Vijayawada to transfer about 211 TMC at a cost of Rs. 40 Crores.

Ichchampally Project (Dam):

The Andhra Pradesh state Govt. had published the project report on Ichchampally Dam in June 1970. Under para 30 of this report, it is stated that “the last project proposed in the lower Godavari basin is a Barrage at Polavaram, which is located a few miles below Ichchampally Dam, the canals of the Polavaram Barrage scheme follow on the same alignment as envisaged in the Ramapadasagar project of 1951”. The requirement for the canals taking of from Polavaram Barrage as well as the supplies at the existing

Godavari delta system will be met from the regulated releases of the power house at Icchampally, with the F.R.L. of 390.00 ft fixed for the Icchampally reservoir.

Mitra Commission:

The Government of India has appointed a commission headed by Sri. Mitra during the Floods in Godavari in the years 1968-70 to study and recommend the precautions to be taken to manage the floods situation in future. The Commission has studied in-depth about the nature of floods and suggested for the construction of Barrages instead of Dams across river Godavari.

Batchawat Tribunal

The Batchawat Tribunal which was constituted by Govt. of India to resolve the inter-state water disputes of 5 states has constituted an experts committee in 1971 to study the projects to be constructed across river Godavari in Andhra Pradesh. After a deep study into the nature of the catchment area, soil conditions and the rainfall records. The experts committee recommended for the construction of Barrages in the lower stream.

Sri T. Hanumantha Rao observations:

Sri T. Hanumantha Rao, Former Engineer in Chief, Government of A.P. and Consultant of United Nations (ops) on irrigation projects has studied extensively about all the major rivers in the state and country. According to many specialist on projects Sri. Hanumantha Rao is considered as the best technical expert. Sri. Rao has taken a special interest on the studies of Polavaram and suggested several occasions that the construction of series of Barrages is suitable across Godavari instead of a Dam at Polavaram. The studies also indicated that the Dam at Polavaram technically has dam break risks and, it is not cost effective and without sea vessel navigation utility.

Prof. T. Shivaji Rao's observations:

Prof. T. Shivaji Rao is a director of "Center for environmental study" at GITAM UNIVERSITY, Visakhapatnam is a specialist on "safety check Flood" and associated with many Dam designs in the world. Prof. Rao conducted several studies on Polavaram Dam and observed that the Polavaram site is at the head of the plains area of Godavari delta, Since it is suitable only for a Barrage and not at all suitable for a Dam with a storage reservoir because the stored water on failure of the Dam gets automatically converted into man-made flood flow of 24 Lakh cusecs, which gets added to the already flowing peak floods of about 36 Lakh cusecs. He further observed that this fury of floods is like adding fuel to the fire to transform it into a highly destructive conflagration. Naturally all the Cities, Towns and villages below the Dam will have to face a peak flood of 60 Lakh cusecs for the safe containment of which extreme floods of Godavari embankments have not at all been designed and consequently 50 lakh people down the extreme will face a watery grave for no fault of theirs. So, Polavaram site is unfit for locating a big Dam unless CWC chooses it as a prescription for a major man-made disaster to promote the vested interests of the officials and politicians who are generally influenced by the business interests who want to make a fast buck at any cost in a very short time.

When so many experts opinion is unanimously against the construction of dam, without any tangible technological development to overcome the expert's opinion, it is not known

what is making the Government to stick to their stand of dam is a **thousand million dollar question.**

The Governments of Orissa and Chattisgadh have raised objections against the construction of a dam. The past experience with Orissa says that even after acceptance to share the Janjavathi river water equally by both the states of A.P. and Orissa, the balance work of gorge closure of Janjavathi Project could not be completed even after 20 years of Project execution as Orissa government is playing to the Gallery. Similarly with the objection of Orissa Government even Vamshdhara Project stage II, is also kept uncompleted for more than 20 years. On a petition by Sri. Laxman Munda, the Orissa High Court has directed that Polavaram can be constructed without displacement

of public and effecting any submergence in Orissa state due to backwater effect or floods. In order to meet the court direction there is no alternative than going for barrages. When the experience is so bitter for two earlier projects, which are comparatively small in size and effects, the Government's hurried action of going ahead with such a huge Project, without sorting interstate issues will be adding another Project to the list of incomplete and ever pending Projects. It is not known what hidden agenda is forcing the Government to act now and repent later after spending huge amount from public exchequer.

It is crystal clear that by changing the water holding system into 3 low barrages the following positive benefits can be accrued.

- 1. Submergence in A.P. will get reduced substantially. The effected villages will come down to 66 Nos. from 280 Nos. There will not be any submergence in the states of Orissa and Chattisgadh.**
- 2. Rehabilitation and resettlement can be avoided significantly. 200 tribal villages can be saved from submersion.**
- 3. The Tribals who are likely to be displaced will be benefited by Irrigation facility, to an extent of 1 lakh acres, which would go under submersion as per the earlier proposal.**
- 4. Project cost is optimized due the reduced quantum of rehabilitation.**
- 5. The risk of dam breaking is avoided.**
- 6. The aggregate storage of barrages will be more than the single dam storage. Part storage is at higher elevation which is acts as storage of energy also.**
- 7. One of the biggest, famous and popular pilgrimage centers of Lord Sri Rama temples at Bhadrachalam constructed by a staunch devotee Ramadas during King Tanisha regime can be saved from submergence.**
- 8. Similarly famous, beautiful and scenic Papikondalu hillocks and the adjoining wild life sanctuary can also be saved from submergence.**
- 9. All the benefits of the old proposal (dam) can be obtained without any reduction with several additional advantages such as navigation of sea going vessels etc.**

Clearances:

Major Irrigation Projects needs about 18 clearances from Central as well as State Government authorities from their respective Directorates before execution. It is a hasty and immature step to ground a mammoth project like Polavaram, without minimum clearances and detailed study of the pros and cons, particularly when two lift Irrigation

schemes for the same ayacut are also already grounded and are in progress. Out of the scheduled 18 clearances still half a dozen are yet to be received even after a lapse of 5 years from grounding.

The so called clearances so far obtained are all conditional clearances and fulfilling those conditions such as satisfying the Orissa Government by constructing flood banks and barrages to avoid submergence in their state is a myth. The logic of concluding that if the headwork is changed from dam to barrages, lot of time will be required to obtain the fresh clearances is unfounded. By switching head works construction from dam to barrages most of the ticklish and irresolvable issues, involved in obtaining the clearances will get avoided. Obtaining of all the clearances afresh, as per the guidelines issued, in 2002 will not take more than 6 to 12 months, if properly pursued and attended. In fact it will hasten up the construction of Polavaram project in real time and true sense.

Floods in Godavari:

The possible maximum flood (PMF) has been assumed as 50 lakh Cusecs based on the maximum flood recorded at Polavaram in Godavari in the last hundred years. The spillway of the proposed dam is designed for a PMF of 50 lakh Cusecs. The studies of recent floods in Krishna Basin (2009 October floods) have indicated that PMF in Godavari can be 90 lakh Cusecs. In such a situation breaching of dam is inevitable and the lives of about 50 lakh people living in Godavari delta and around will be in danger. This danger can be avoided by switching over to barrages instead of a dam as headworks.

AYACUT:

It is contemplated to irrigate 7.21 lakh acres through Polavaram Project by utilizing 193 TMC of water apart from using 23.5 TMC for drinking and industrial purposes. It is also contemplated to divert 85.00 TMC to Krishna River, which also includes evaporation losses. Out of the above 7.21 Lakh acres contemplated ayacut, 3.92 lakh acres are irrigated by Puskaram and Tadipudi lift Irrigation schemes, which have been commenced under Jalayagnam and commissioned recently. After detailed localization and deleting the ayacut covered by APSIDC lift Irrigation schemes and minor irrigation sources, which are also Government funded sources, the net ayacut to be irrigated by Polavaram Project will be about 2.5 lakh acres. If it is looked from the angle of economical and fiscal viability it is a white elephant thrust on public exchequer for meeting the fancy desire of water greedy farmers of a particular region. The real requirement of an irrigated area can be met from an appropriate and optimum sized barrage/Project and the in fructuous outlay proposed to be spent on this mammoth project could have been utilized for better purpose of expediting the construction of projects in water starved areas/regions. Are we justified to incur huge expenditure of more than 10,000 Crores and add one more project to the list of in complete and long pending projects? Even assuming that 7.2 lakh acres will have to be irrigated, the same thing is possible through the alternative 3 low barrages, since the combined live storage in these barrages would be more than that of the dam.

Constraints in execution:

The main constraint in execution of Project headworks and water conveyor system is the land required. The acquisition of balance land is pending due to the litigation in motion in the respective courts. It may take more than a decade to sort out the entire litigation and need another two to four years for completing the held up works and commission the

project. It is not known how the Government is going to face and counter the likely litigation from the construction agencies who have agreed to complete the project works on EPC basis.

The project works are let out to the construction agencies on EPC basis to avoid time over run and cost over run. Now after five years i.e. after the lapse of entire construction period of 4 years plus another one year the Government is closing the works of two agencies that are entrusted with two major packages of head works. Everyone is under loss to understand why the Government is terminating the two EPC contracts and revising the estimates and trying to entrust the works to a new agency at a higher cost of about 130 to 150% extra. Why should the Government do such blunder and burden the exchequer.

Normally in a Multipurpose Project the civil works/Irrigation component will be executed by Irrigation department and Power component works will be executed by APGENCO because of their expertise in their respective fields. Based on the understanding that power component works will be executed by APGENCO the DPR is prepared and has been submitted to Central Electric Authority for their clearance. The CEA is yet to decide the generating capacity of the power component and studying the hydrological data. In the absence of firming up of specifications it is not clear why Government wants to sign on the dotted lines and expose the Government for subsequent undue exploitation. It is not clear why the Government is drawing the pre-qualification requirements to suit a single and particular agency by throwing away the competitive spirit of the tendering system.

In the light of the above facts it is imperative to revisit the project head works as dam and take necessary decision to safe guard the lives of project affected poor Tribal people as well as Godavari delta people who face live burial if the dam breaches at night time.

Madam, there is a serious debate about Irrigation projects in the state. We the Congress Leaders are genuinely concerned about this debate. When late Dr. Y. S. Rajashekhar Reddy started a mission called Jalayagnam, everybody welcomed and appreciated the concept. Undoubtedly the Jalayagnam mission was a noble concept and it could catch the imagination of the people. Unfortunately, this mission was hijacked by vested interests particularly contractors and contractors turned politicians.

All ready there is a severe criticism stating that the massive projects are taken up without proper and defined investigation. The cost of the projects are being escalated enormously, some times more than 100% and 125 to 150% over night. The EPC system became a big monster to the exchequer. Under this system the contractor has to conceive acquire, plan, survey and execute. The contractors are sticking to that but to suit their interest, not the public. The lifts Irrigation schemes proposed and conceived are starting for funds and for Telangana particularly the power supply which is a basic ingredient. The lift irrigation schemes will be added the list of abandoned schemes with all the inclusion of power component in the project.

Madam, regarding Polavaram Project it one goes to chronology of this controversy, it is self explanatory. The experts with extraordinary technical skills which are internationally acknowledged right from Dr. K. L. Rao to T. Hanumantha Rao, not one or two, but dozen of them had advised, suggested and cautioned against the construction of a Dam. All of the decisively told the Govt. to construct Barrages instead of Dam.

It is the astonishing to note that why the Govt. of Andhra Pradesh is keen to go ahead with the decision to built Dam at Polavaram is their confidence based on the designs of the present engineers or any other consideration.

If the Government has more confidence in the capacity and skills of the present set of engineers. It is preferable to change the design of headworks of project from a high dam to three low barrages, since this alternative technical proposal, not only would give all the benefits of the old dam proposal, but also has several other advantages like saving 225 tribal villages from submersion, irrigating 1 Lakh acres of tribal lands after saving them from submersion, providing in and sea vessel navigation and all these without the risk of lives of 46 Lakh people living in Godavari delta due to "Dam break". We request that suitable directions may kindly be arranged to be issued to A.P State Government, Ministry of water resources GOI, and the CWC to adopt the advantageous alternative technology.

A note on the "need for the alternative design", prepared by the author of these proposal is already submitted to the Ministry of Water Resources and CWC, for perusal. But they have not taken any decision so far on this. So far the state Government or CWC have discussed with Sri T. Hanumantha Rao regarding his proposals on the pressure of Political Contractors, local Chief Engineer and Principal Secretary Irrigation. There fore we request Government of India to appoint an experts committee with engineers who are not concerned with Andhra Pradesh to Discuss with Sri T Hanumantha Rao regarding his proposal this will save 40% expenditure and 75% submersion and create inland navigation facility. Then there will be no objection from Orissa or Chattisgadh.