

DUMMAGUDEM AND OTHER HYDRO ELECTRICAL PROJECTS ON GODAVARI RIVER

BY T. HANUMANTHA RAO, Former Engineer in Chief
& United Nations (OPS) Consultant
Tel No : 040 – 2340–2048

- 1. Introduction :** Dummagudem Hydro–Electric Project is a “Run of the River” Hydro–Electric project proposed across Godavari River at a place about 25 KM upstream of Bhadrachalam Town in Andhra Pradesh. This gated barrage (not a Major Storage Dam) is already under construction as an irrigation project and the proposed hydropower station, costing about Rs. 2000 Crores is expected to generate 368 MW power. It is reported in the media that this proposal envisages 100% capital contribution of the cost by an Austrian company with a condition that 12% of power generated will be given free of cost to Andhra Pradesh Government and the balance power sold to others provided the Andhra Pradesh Genco does not purchase it. The proposal appears to have been sent by the A. P. State Government to Government of India for approval. Several important issues now arise on these proposals.
- 2. Need for Foreign Capital :** There is no new technology in the proposed Dummagudem Hydro–Power Station. It is similar to the hundreds of “run of the river” Hydro–Power Stations now existing or under construction or proposed in India, especially in Himachal Pradesh or North East Indian States. There is no need to invite foreign capital with such conditions and restrictions as stated above. There is a huge demand for power in A. P. especially in the context of additional requirement of 8000 MW of power required for the ongoing lift irrigation projects in the state. Thus, all the 368 MW power of Dummagudem, is totally required for the State's requirement and hence the conditions that “the foreign company can sell the power to others in case A. P. Government does not purchase” is redundant, since such a situation would never arise. In fact all the power generated should be made totally available to the Andhra Pradesh Government.
- 3. Strategy Suggested :** In the interest of common good and state economy, it would be better for the A. P. State Government to find resources and bear the

whole cost of civil works and the Hydro – Power Plant and utilize all the power generated to meet the huge demand (8000 MW) under Lift Irrigation Sector where free power is contemplated to be supplied. The amount of Rs. 2,000 Crores is relatively too small when compared to the mammoth cost of about Rs 20,000 Crores required for Dummagudem Irrigation Project which needs lifting of water in the irrigation canals. In fact the state Government had already planned for construction of several Hydro–Electric Projects under State Funds across Godavari River and hence, Dummagudem cannot be any exception to this. Another important issue is that supply of free power as contemplated to lift irrigation projects is not possible unless this project is funded under irrigation budget. The present proposal to build it as a commercial project and price the power, can be termed mildly as absurd.

4. **Other Hydro–Electric Projects on Godavari :** In the mid 1990's, the author had suggested a series of barrages on Godavari River named by him as “Step Ladder Technology” for the purpose of sea going vessels navigation, irrigation and hydro–power generation. These Hydro–Electric stations were proposed (starting from upstream to downstream) at a) Pedda Bellala downstream of Kadem River Confluence (300 MW), b) Yellampally, upstream of Pranahita River Confluence (300 MW), c) Storage Dam at Suraram, downstream of Pranahita River Confluence (750 MW), d) Kantalapally (350 MW), e) Edira (350 MW), f) Dummagudem (350 MW), g) Bhadrachalam Down Stream (423 MW), h) Polavaram (423 MW) and i) on Sabari River upstream of Kunavaram Confluence (192 MW). All the above Hydro–Electric Projects, put together would generate 3438 MW of power. Out of the above, A. P. State Government had already taken up items b), d) and f) comprising of a total power of about 1000 MW power. It is advisable to take up the other six Hydro–Electric Power Projects cited in order to obtain an additional hydropower of about 2,438 MW. This is very much needed in order to meet the present demand of additional 5000 MW, required to be supplied free of cost to the various ongoing lift irrigation projects taken up under Jalayagnyam. All the above state Hydro–Electric Projects will have to be completed under the Jalayagnyam Irrigation Budget, since free power will have to be supplied for the projects. It has to be realised that Dummagudem or any of the above 9 Hydro–Electric Projects

cannot be taken up as Commercial Schemes with capital and interest costs recovered through power rates. If this is not done, all the lift irrigation projects would collapse under their own burden of costs, during the operation of the same.