



ABSTRACT

Water Supply - Setting up of two 60 MLD Capacity Desalination plants one each at Kuthiraimozhi in Ramanathapuram District and at Alanthalai in Thoothukudi District – Administrative Sanction – Orders - Issued.

MUNICIPAL ADMINISTRATION AND WATER SUPPLY (WS-II) DEPARTMENT

G.O.(MS) No.110

Dated 28.07.2015

Read:

1. From the Managing Director, Tamil Nadu Water Supply and Drainage Board, Chennai Letter No.090513/AE7/PDC/2015, Dated 06.02.2015.
2. Tamil Nadu Infrastructure Development Board B.P.No.88, dated 20.04.2015.
3. From the Managing Director, Tamil Nadu Water Supply and Drainage Board, Chennai Lr.No.090513/AE7/PDC/2015, Dated 08.05.2015.

ORDER:-

The Honourable Chief Minister of Tamil Nadu had announced, to set up 100 MLD Desalination Plants each in Ramanathapuram and Thoothukudi Districts, under Rule 110, during 2013-14. Government of Tamil Nadu had accorded permission to take up investigation and to prepare the Detailed Project Report by engaging Consultant vide G.O.(Ms) No.132, Municipal Administration and Water Supply (WS2) Department, dated 06.09.2013.

2. The Managing Director, Tamil Nadu Water Supply and Drainage Board in his letter third read above has stated that the Pre Feasibility Report has been prepared by M/s.Tamil Nadu Water Investment Company Limited, Chennai for Setting up of Desalination plant of 60 MLD Capacity at Kuthiraimozhi in Ramanathapuram District at a cost of Rs.675 crore to install with O&M cost of Rs.37.05 per KL and for setting up of desalination plant of 60 MLD capacity at Alanthalai in Thoothukudi District at a cost of Rs.680 crore to install with O&M cost of and Rs.37.05 per KL.

3. The project area for the proposed Desalination Plant at Kuthiraimozhi comprises of 4 Town Panchayats and 437 Rural Habitations in 5 Unions in Thoothukudi District and 1 Municipality, 1 Town Panchayat and 543 Rural Habitations in 2 Unions in Ramanathapuram District and for the proposed Desalination Plant at Alanthalai comprises of 10 Town Panchayats and 651 Rural Habitations in 11 unions in Thoothukudi District.

The Cost of the Scheme is detailed below:-

Abstract Estimate for 60 MLD SWRO Desalination Plant-Alanthalai

S.No	Description	Amount Rs in Crore
1.	Engineering cost	20.40
2.	Intake through Dredging	71.71
3.	Intake Pump Station and Intake Screens	6.57
4.	Lamella along with Chemical Dosing	13.37
5.	Dual Media Filter	10.35
6.	Ultrafiltration	45.18
7.	Reverse Osmosis (RO)	78.24
8.	Potabalization	6.27
9.	Product water pumps and Disinfection system	1.82
10.	All mixing equipments and dosing equipments including Valves for dosing lifting equipments	15.05
11.	Electrical SS 110/11 KV Inc. MRSS(G1)	27.78
12.	Electrical and cabling	22.49
13.	Instrumentation, Instruments including all controls	9.83
14.	Total Electrical & Mechanical	308.66
15.	Total Civil	126.47
16.	Contingencies @3%	13.05
17.	Freight and Packing, Insurances @2.5%	7.72
18.	Cost of Insurance ,Guarantees	6.79
19.	Erection @ 5%	15.43
20.	Testing , Commissioning @ 2.5%	7.72
21.	Third party Inspection @ 0.3%	0.92
22.	Pre-Operative Expenses	0.50

23.	VAT@5% +1%(Composite)	29.24
24.	Escalation @8%	38.98
	Basic Cost as per PFR -SUB TOTAL I	575.88
	Contingencies @ 1.0 %	5.76
	Unforeseen items @about 2.5%	14.17
	SUB TOTAL II	595.81
	Centage @ 13 % rural &TP	77.46
	SUB TOTAL III	673.27
	Labour Welfare Fund @ 1 % on Sub Total III	6.73
	GRAND TOTAL in Crore	680.00

Abstract Estimate for 60 MLD SWRO Desalination Plant—Kuthuraimozhi

S.No	Description	Amount Rs in Crore
1.	Engineering cost	20.40
2.	Intake through Dredging	71.71
3.	Intake Pump Station and Intake Screens	6.57
4.	Lamella along with Chemical Dosing	13.37
5.	Dual Media Filter	10.35
6.	Ultrafiltration	45.18
7.	Reverse Osmosis (RO)	78.24
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12.	Electrical and cabling	22.49
13.	Instrumentation, Instruments including all controls	9.83
14.	Total Electrical & Mechanical	308.66
15.	Total Civil	126.47
16.	Contingencies @3%	13.05
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19.	Erection @ 5%	15.43
20.	Testing , Commissioning @ 2.5%	7.72
21.	Third party Inspection @ 0.3%	0.92
22.	Pre-Operative Expenses	0.50
23.	VAT@5% +1%(Composite)	29.24
24.	Escalation @8%	38.98
	Basic Cost as per PFR -SUB TOTAL I	575.88
	Contingencies @ 1.0 %	5.76
	Unforeseen items @about 2.5%	14.67
	SUB TOTAL II	596.31
	Centage @ 13 % rural & TP and 5% for Municipality	72.01
	SUB TOTAL III	668.32
	Labour Welfare Fund @ 1 % on Sub Total III	6.68
	GRAND TOTAL in Crore	675.00

4. The Board in its Resolution No: 2.1 dated 8.01.15 has resolved to recommend to the Government through the Empowered Committee, to accord Administrative Approval for the above proposal.

Based on the recommendation of the Tamil Nadu Water Supply and Drainage Board, the Empowered Committee after careful consideration **RESOLVED**

- 1) to recommend to Government to accord Administrative Approval for the proposal for setting up of two Desalination plants of 60 MLD Capacity each in Kuthiraimozhi in Ramanathapuram District and Alanthalai in Thoothukudi District with the following cost details and funding.

Sl. No	Location	Capital Cost (Rs. in Crore)	O&M Cost (Rs./KL)	80% of Capital Cost (Rs. in Crore)	20% of Capital cost as annuity for period of 25 year (Rs. in Crore)	Funding
1	Alanthalai	680.00	37.05	544	17.44	Additional Central Assistance from Govt sanctioned for Rs.128.00 crore. For the balance, various Financing options can be considered including budgetary support and loan from various sources namely LIC, HUDCO, other Banking Institutions etc., through TNUIFSL as arranged for Vellore Water Supply Scheme.
2	Kuthiraimozhi	675.00	37.05	540	17.32	
Total		1355.00				

Further Resolved recommend to Government

1. to implement SWRO Plant separately with EPC cum 25 years O&M Contract model by following the Transparency of Tender act and adopting the base rate for Plant as estimated in the Prefeasibility report prepared by Tamil Nadu Water Investment Company Limited for the Tender purpose.
2. To compare/evaluate the bid with following criteria;
 - a) levelised cost worked out for 25 Years O&M period with an assumption that water demand of 60 MLD
 - b) 80% of project cost paid to the contractor during construction stage based on value of work done.
 - c) balance 20% amortised over the O&M Period(25 years) as deferred annuity with a Discount rate of 12%.
3. to contract the transmission system separately with EPC model and to implement by Tamil Nadu Water Supply and Drainage Board.
4. to pay 80% of project cost as upfront to the contractor during construction stage based on value of work done and balance 20% to be amortised over the O&M Period as deferred annuity. Discount rate of 12 % can be specified in the bid documents as followed in Minjur Desalination Plant. Accordingly the Bidder should submit their quote for EPC (80% cost + Annuity for 20% Cost) and O&M Cost year wise.
5. to involve M/s. Tamil Nadu Water Investment Company Limited as Owner's Engineer in this Project.
6. to call for modified proposal from Tamil Nadu Water Investment Company Limited on cost estimation of Owner's Engineer and same will be vetted by the committee formed by the TNUIFSL for the reasonableness of the rate quoted by the Tamil Nadu Water Investment Company Limited.

7. to appoint a third party independent consultant as PMC during construction.
8. to seek separate sanction of funds towards annuity (20% of the project cost) and O&M for every year during maintenance period.

Also directed,

1. to ensure that the execution of transmission system work is completed before completion of SWRO Plant.
2. For transmission system, to convey the product water from the Desalination Plant, separate Detailed Project Report will have to be prepared by the Tamil Nadu Water Supply and Drainage Board. Tamil Nadu Water Supply and Drainage Board has to follow the regular official procedure for obtaining Administrative Sanction for the above Detailed Project Report.
3. Tamil Nadu Water Investment Company Limited / IL&FS Group Companies not to bid as single entity or jointly for any of the contracts related to the above project components since Tamil Nadu Water Investment Company Limited will be the Technical Advisor (Owner's Engineer) for this project implementation.
4. Tamil Nadu Water Supply and Drainage Board has to take immediate action for land alienation and to get enter upon permission for the sites fixed for Desalination Plants at Kuthiraimozhi in Ramanathapuram District and Alanthalai in Thoothukudi District.
5. Tamil Nadu Water Supply and Drainage Board has to take immediate action for getting environmental clearance from CRZ for setting up of Desalination Plants at Kuthiraimozhi in Ramanathapuram District and Alanthalai in Thoothukudi District by engaging consultant.

5. Accordingly the Managing Director, Tamil Nadu Water Supply and Drainage Board has sent proposal to Government to issue necessary orders to implement the above said scheme.

6. As recommended by the Empowered Committee and as requested by the Managing Director, Tamil Nadu Water Supply and Drainage, the Government after careful consideration, accord Administrative Approval for the proposal for setting up of two Desalination plants of 60 MLD Capacity each in Kuthiraimozhi in Ramanathapuram District and Alanthalai in Thoothukudi District with the following cost details and funding.

Sl. No	Location	Capital Cost (Rs. in Crore)	O&M Cost (Rs./KL)	80% of Capital Cost (Rs. in Crore)	20% of Capital cost as annuity for period of 25 year (Rs. in Crore)	Funding
1	Alanthalai	680.00	37.05	544	17.44	Additional Central Assistance from Gol sanctioned for Rs.128.00 crore. For the balance, various Financing options can be considered including budgetary support and loan from various sources namely LIC, HUDCO, other Banking Institutions etc., through TNUIFSL.
2	Kuthiraimozhi	675.00	37.05	540	17.32	
	Total	1355.00				

As per the orders issued by Tamil Nadu Infrastructure Development Board in TNIDB B.P.No.88 dt.20.04.2015, Tamil Nadu Water Supply and Drainage Board will be the implementing agency for setting up of Sea Water Reverse Osmosis Desalination Plant of 60 MLD capacities each in Alanthalai in Thoothukudi District and Kuthiraimozhi in Ramanathapuram District.

Further Government permit Tamil Nadu Water Supply and Drainage Board

1. to implement SWRO Plant separately with EPC cum 25 years O&M Contract model by following the Transparency in Tenders Act, 1998 and adopting the base rate for Plant as estimated in the Prefeasibility report prepared by Tamil Nadu Water Investment Company Limited for the Tender purpose.
2. to compare/evaluate the bid with following criteria;
 - a) levelised cost worked out for 25 Years O&M period with an assumption that water demand of 60 MLD
 - b) 80% of project cost paid to the contractor during construction stage based on value of work done.
 - c) balance 20% amortised over the O&M Period(25 years) as deferred annuity with a Discount rate of 12%.
3. to contract the transmission system separately with EPC model and to implement by Tamil Nadu Water Supply and Drainage Board.
4. to pay 80% of project cost to the contractor during construction stage based on value of work done and balance 20% to be amortised over the O&M Period as deferred annuity. Discount rate of 12 % can be specified in the bid documents as followed in Minjur Desalination Plant. Accordingly the Bidder should submit their quote for EPC (80% cost + Annuity for 20% Cost) and O&M Cost year wise.
5. to engage M/s Tamil Nadu Water Investment Company Limited as Owner's Engineer in this Project as Tamil Nadu Water Investment Company Limited is already nominated as Programme Management Agency (PMA) in G.O (Ms) No.132,Municipal Administration and Water Supply (WS3) Department, dated 31.12.2012.
6. to call for proposal from Tamil Nadu Water Investment Company Limited on cost estimation of Owner's Engineer. The Proposal should be vetted by a committee formed by the TNUIFSL for the reasonableness of the rate quoted by the Tamil Nadu Water Investment Company Limited and got approved in the Board.
7. to appoint a third party independent consultant as PMC during construction.
8. to seek separate sanction of funds towards annuity (20% of the project cost) and O&M for every year during maintenance period.

Further Government direct Tamil Nadu Water Supply and Drainage Board,

1. to ensure that the execution of transmission system work is completed before completion of SWRO Plant.

2. to prepare separate Detailed Project Report for transmission system, to convey the product water from the Desalination Plant and to get Administrative Approval separately.
3. to ensure that Tamil Nadu Water Investment Company Limited / IL&FS Group Companies not to bid as single entity or jointly for any of the contracts related to the above project components since Tamil Nadu Water Investment Company Limited will be the Technical Advisor (Owner's Engineer) for this project implementation.
4. Tamil Nadu Water Supply and Drainage Board should send land alienation proposal for the sites fixed for Desalination Plants at Kuthiraimozhi in Ramanathapuram District and Alanthalai in Thoothukudi District to the respective District Administration. The District Collectors Ramanathapuram and Thoothukudi have to take action to alienate the land and also to issue permission to enter upon the land after observing the official procedures.
5. Tamil Nadu Water Supply and Drainage Board has to take immediate action for getting CRZ clearance for setting up of Desalination Plants at Kuthiraimozhi in Ramanathapuram District and Alanthalai in Thoothukudi District by engaging consultant.
6. This order issues with the concurrence of Finance Department vide its U.O.No.39803/2015, dated 27.07.2015.

(BY ORDER OF THE GOVERNOR)

**K.PHANINDRA REDDY
PRINCIPAL SECRETARY TO GOVERNMENT**

To:-

The Managing Director,
Tamil Nadu Water Supply and Drainage Board, Chennai – 5
The Principal Secretary / Chairperson & Managing Director, TNUIFSL, Chennai-17
The Director of Municipal Administration, Chennai-5
The Director of Town Panchayats, Chennai-108
The Director of Rural Development, Chennai - 15
The Accountant General, Chennai – 18
The District Collector, Ramanathapuram District
The District Collector, Thoothukudi District
M/s. Tamil Nadu Water Investment Company Limited, Chennai-32.
The Local Bodies concerned (Through the Director of Rural Development)

Copy To:-

Chief Minister's Office, Chennai-9.
The Senior Personal Assistant to Hon'ble Minister for Municipal Administration, Rural Development, Law, Courts & Prisons, Chennai – 9
The Principal Private Secretary to Principal Secretary to Government,
Municipal Administration and Water Supply Department, Chennai-9.
The Rural Development & Panchayat Raj Department, Chennai-9
The Planning Development & Special Initiatives Department, Chennai-9

The Finance (MA&WS/Infrastructure Cell) Dept, Chennai - 9
The Municipal Administration and Water Supply (WS1,WS3 & WS4)Department, Chennai-9
Stock File/Spare copies

// FORWARDED BY ORDER //

Section Officer.