VA Tech Wabag

DOLAT CAPITAL

CMP: Rs 1,284 | Target Price: Rs 1,382 | Accumulate

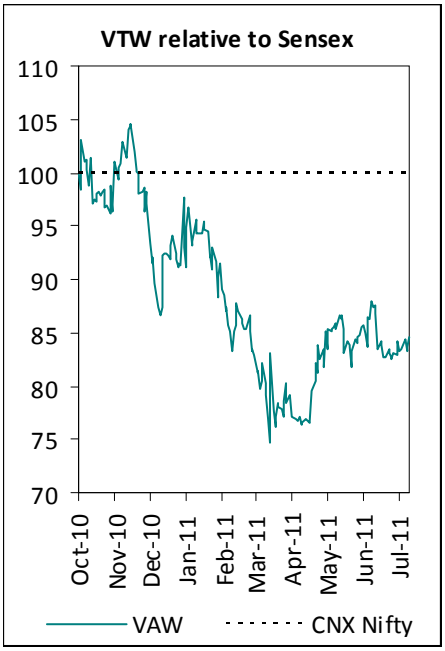
BSE Sensex	18,436
NSE Nifty	5,542

Scrip Details

Equity	Rs.53mn
Face Value	Rs.5/-
Market Cap	Rs 14bn
	USD 301mn
52 week High/Low	Rs. 1807 / 1131
Avg. Volume (no)	4,083
BSE Code	533269
NSE Symbol	WABAG
Bloomberg Code	VATW IN
Reuters Code	VATE.BO

Shareholding Pattern as on Mar'11(%)

Promoter	31.0
MF/Banks/FIs	19.6
FIIs	24.5
Public / Others	24.9



We recently visited the Nemmeli Sea Water Desalination project of VA Tech Wabag (VTW) in Chennai. The project execution is going as per schedule. It will get commissioned by March 2012 and will commercialise latest by June 2012. This is a 100 MLD (Million Liters per Day) capacity plant with total project cost of Rs 10.3 bn (Construction - Rs 5.3 bn and 7 years O&M- Rs 5 bn) of Chennai Metropolitan Water Supply & Sewerage Board (CMWSSB).

We had detail discussions with the project engineers on each stage of the project to understand the technical aspects and role of VTW. More than 50% of the On-shore part of the civil construction is completed. Electro-mechanical equipments, pipes, membranes required for filtrations have started reaching the site. The most important Off-shore work of laying under-sea pipeline is schedule to begin in January 2012. VTW is better prepared this time after taking clues from earlier unsuccessful attempt to lay down under-sea pipeline. VTW has enumerated the steps taken to make this attempt successful and expressed its confidence to complete this part of the project on time.

Key takeaways

- **Well geared up to execute time specific critical stage of under-sea pipe laying**

The most critical part of the entire project is laying under-sea pipeline to fetch sea water for desalination plant. VTW's earlier attempt was unsuccessful on account of rough sea -- Bay of Bengal witnessed a series of cyclones last year-- and technical breakdown of dredgers. The window available for this operation is for limited days between January to March in a year, as sea remains calm during this period. VTW has constructed break walls, going for higher capacity dredgers with stand-by options and has taken clue from earlier failure. Our interaction suggested that water wave height should not be more than 0.5 meters for successful execution of this stage. However, VTW has raised the preparation level to face rough climatic conditions. The company might explore near term small window available during the month of September, given there are no rains.

- **VTW's role is critical as a designer of the project and O&M contractor**

VTW is executing the project on design, build and operate basis (DBO). It has adopted a new technique to reduce power consumption. Resorting to Disc and Ultra filtration technique will reduce the permeability to 0.1 micron. With the aid of backwash technique used in this plant, the life of the membrane used in Reverse Osmosis (RO) is estimated to go up to 5 years as against 3 years. The Saline Density Index (SDI) will be less than 3% for this project. Mineralization of distilled water (coming out of RO chamber) is an important and critical process in the entire desalination process. VTW's in-house expertise in this field will be of great value addition. Its role as Operation and Maintenance (O&M) contractor is crucial.

Financials *(Consolidated)*

Year	Net Sales	% Growth	EBIDTA	EBITDA (%)	Net Profit	Growth %	EPS (Rs.)	PER(x)	EV/EBITDA (x)	ROANW(%)	ROACE (%)
FY10	12,237	8.0	1,114	9.1	448	6.0	47.8	26.9	9.2	11.6	24.9
FY11	12,330	0.8	1,122	9.1	526	17.4	49.8	25.8	9.6	10.8	21.9
FY12E	14,225	15.4	1,473	10.4	861	63.8	81.5	15.8	7.1	14.2	21.8
FY13E	16,517	16.1	1,875	11.4	1,073	24.7	101.6	12.6	5.2	15.5	24.1

Figure in Rs.mn

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- **Better design to aid power savings**

VTW is implementing ERI's (Energy Recovery Incorporation) pressure exchanger which will allow substantial savings in the power consumption for RO operations.

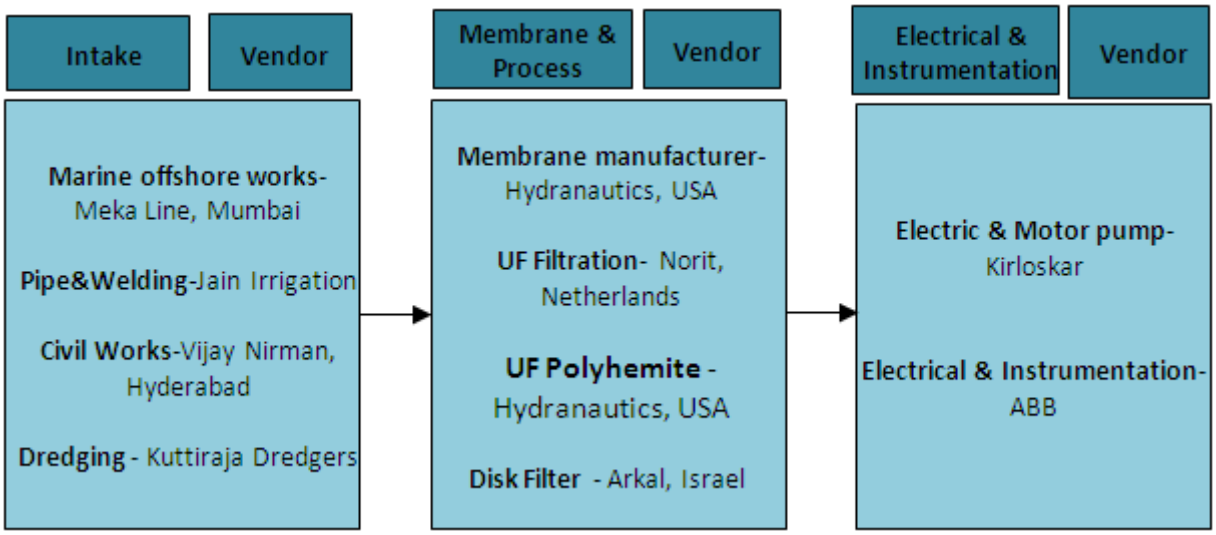
- **On -shore work is in full swing and on schedule**

The On-shore construction for all the stages of the project is going on simultaneously and more than 50% of the work is completed. The execution is on schedule and the company has expressed confidence to commission the project by March 2012.

- **Vendors tie ups are in place and equipments reached the site**

VTW has roped in Mekaline for Off-shore operations for under sea pipe laying. The civil construction and On-shore piping has been awarded to Vijay Nirman and Jain Irrigation respectively. ABB is their electric equipment supplier. Hydranuatics of US will supply RO membranes while Norit from Netherlands will supply Ultra filtration membranes. Most of these equipments have already reached the site.

Vendors for various equipments and services



Source : Company, Dolat Research

- **Comparing with existing desalination plant at Minjur**

VTW plant (Location – Nemmeli) is the second desalination plant in Chennai. The first plant (Location – Minjur) was constructed by IVRCL-BEFESA. Both are 100 MLD Reverse Osmosis plants. However, there are few differences between them. Nemmeli plant is on DBO (Design, Build and Operate) basis with O&M tenure of 7 years while Minjur plant is on BOOT basis for 25 years. VTW has in-house designing capability and technology. VTW has used ERI's pressure exchanger to reduce power cost in Nemmeli plant.

They have used Disc Filter and Ultra Filtration technology as against 40 Dual membrane filter used in earlier plant. This will result in reducing the Saline Density Index (SDI) to less than 3% as against less than 4% in earlier plant. Nemmeli plant has resorted to Ultra Filtration & Backwash treatment which will extend the life of RO membrane up to 5 years as against normal life of 3 years. Nemmeli plant is funded by Government of India while Minjur plant was not. There is no financial risk in Nemmeli plant as entire O&M is contracted for Rs 5 bn for 7 years while Minjur plant has some element financial risk.

- **Positive margins surprise on cards**

VTW might complete the project at a lower cost than originally envisaged. This has been indicated in the latest annual report where it has mentioned that the project has witnessed a margin expansion due to close monitoring and cost control. Out of total construction cost of Rs 5.3 bn, 50% has been invoiced in FY11. VTW expect to improve contribution margin on this project by 500-700 bps to from 13% to 18- 20%, mainly on account of:

a) Efficient equipment procurement – This was due to better negotiations with ABB, the sole vendor (turnkey vendor) for complete electrical, control and instrumentation solution. This contract has saved the cost for VTW as it eliminated multi-ordering from different vendors and reduced lead time. Rupee appreciation also augured well in bringing the costs down. The import cost envisaged was Rs 1.5 bn. The cost of desalination technology and equipments is going down.

b) Better designing and engineering have helped VTW to save raw material cost.

c) It has not resorted to high cost (interest rate: 13.5%) customer advance from the client.

d) Bank Charges for performance guarantee to be given for defect liability period, has been negotiated downwards successfully.

Valuation and recommendation

VTW is a global technology leader in the entire water treatment spectrum, with a strong execution track record. It is managed by experienced, professional and dynamic technocrats. It has a unique asset-light business model which is scalable. VTW is an EPC company with strong in-house R&D. It is exposed to a huge global opportunity landscape, which enables de-risking of revenue concentration from one region or segment.

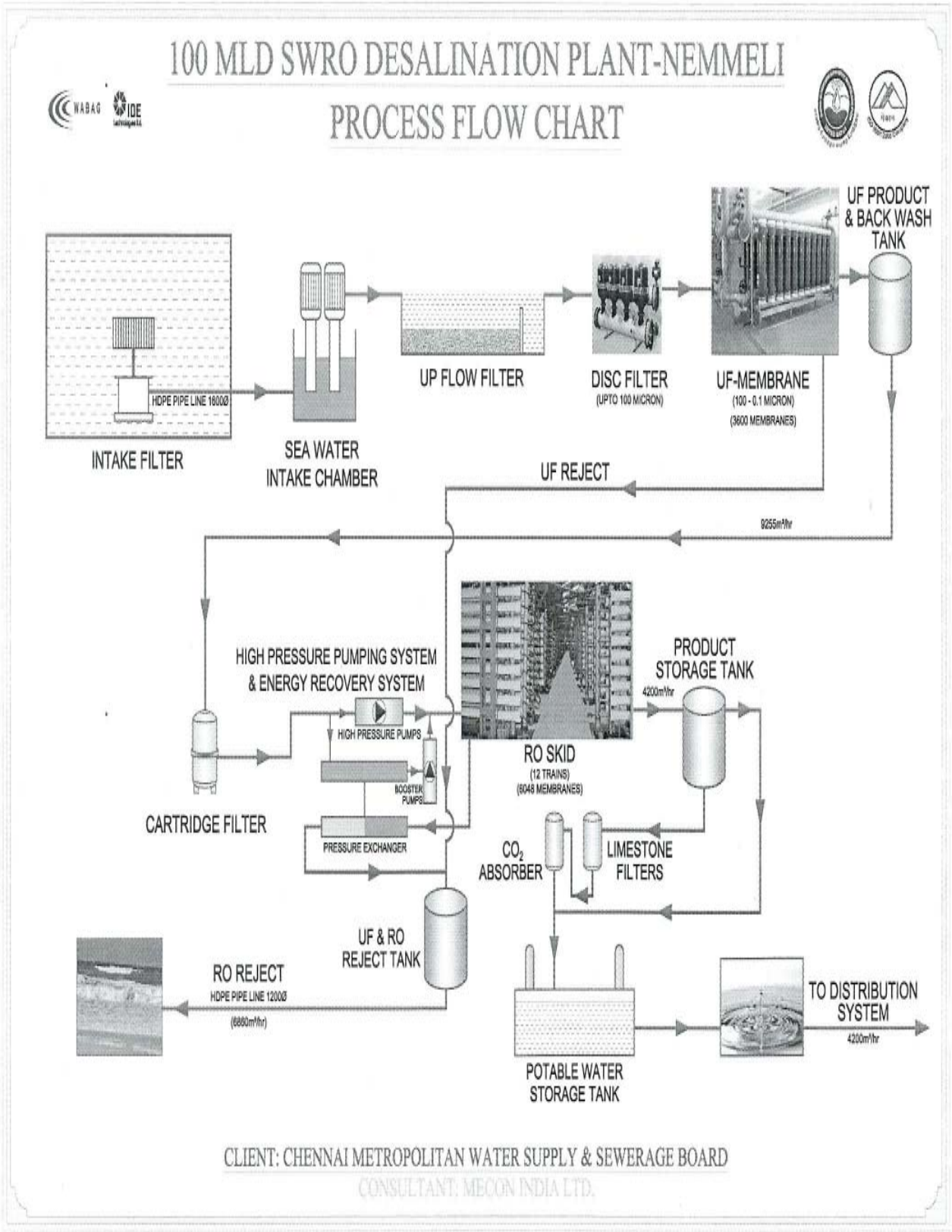
It has a diversified revenue stream, zero net debt; around Rs 3.5 bn of strategic funds on hand, higher ROIC and surging margins. We believe the contribution from new regions could offset the adverse revenue impact from MENA. More focus on the high-margin, long duration annuity-type O&M contracts improves revenue visibility.

VTW is expected to report revenue CAGR of 16% and PAT CAGR of 43%, with margin expansion between FY11 and FY13E. We believe, it should trade at the higher end of the PE range of EPC companies, given its net debt-free balance sheet, higher ROIC and potential up tick in margins. At CMP of Rs 1,284, the stock trades at 15.8x FY12E earnings and 12.6x FY13E earnings. We recommend an **Accumulate** on the stock with a target price of Rs 1,382, which discounts FY12E earnings by 17x.

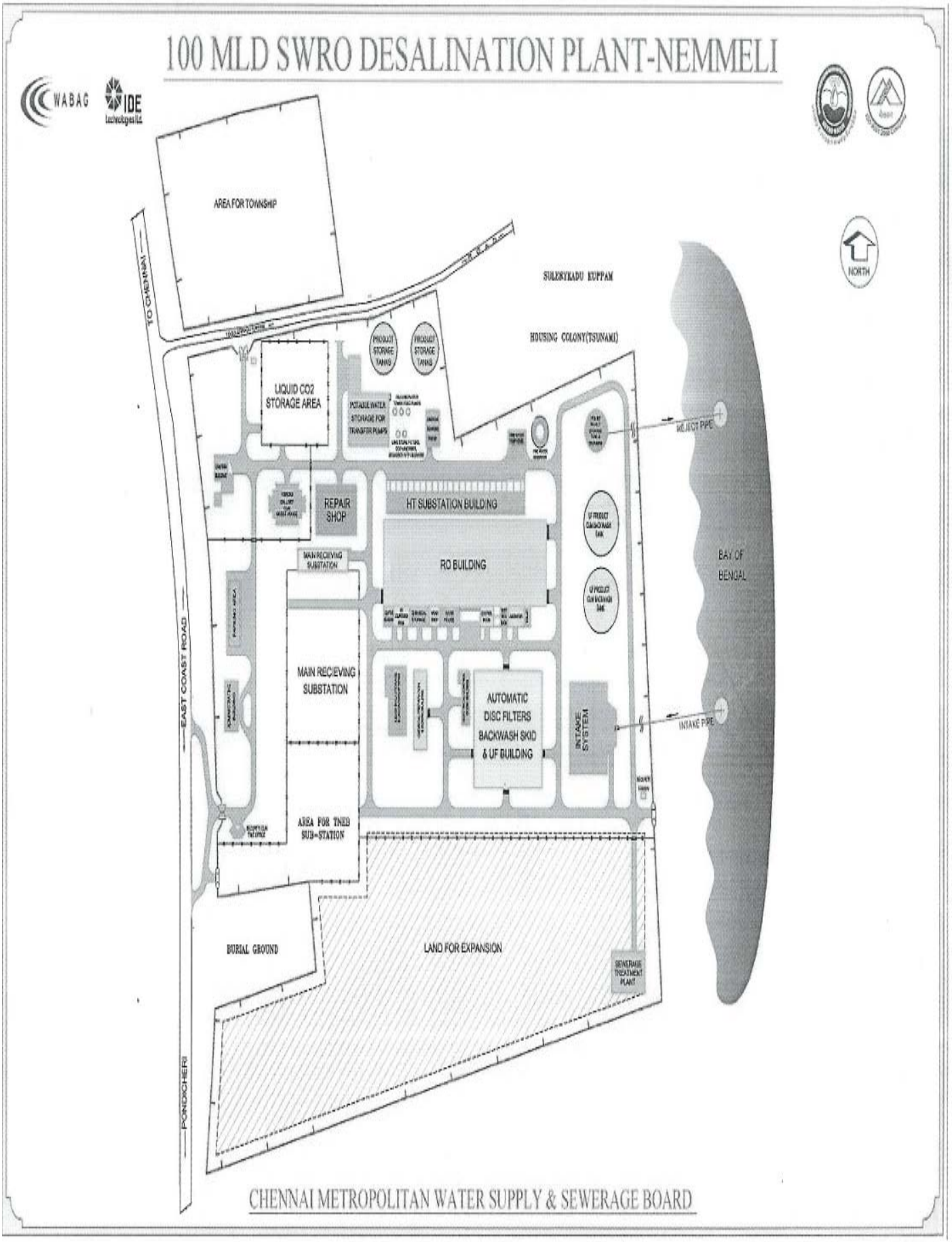
Project Snapshots

Particulars	Description	Particulars	Description
Project	Desalination of seawater into fresh potable water	**JV Partner**	IDE Technologies, Israel
Location	Nemmeli, 35 km south of Chennai	**VTW's Share in SPV**	70%
Client	Chennai Metropolitan Water Supply & Sewerage Board	**Technology**	Reverse Osmosis
Project Cost	Construction - Rs 5.33 bn and O&M - Rs 5 bn (Total - Rs 10.33 bn)	**Project Type**	DBO (Design Build Operate)
Broad Break up of project cost	Equipment - Rs 1.50 bn, Power cost - Rs 3.50 bn (Pass-through)	**Equipment Vendor**	ABB, Norit, Arkal, Jain Irrigation, Meka Line
Capacity	100 MLD (Million Liters Per Day)	**No of bidders**	7
Construction completion date	March-12	**Highest bid**	Rs 18.58 bn
Area of plant	40 acres	**Lowest bid**	Rs 10.33 bn

Plant design



Project Layout



Current Status of the project

Stage 1 – Preparations for laying under sea pipeline is going on

A sea water bund is created. In the surf zone laying pipeline is difficult and hence break walls are constructed to reduce the water wave action. The under-sea pipeline is 1042 meters long and 1600 mm diameter connecting Intake Filter, which is 7.2 meter below sea level in the sea water, to Sea Water Intake Chamber on the shore, which is 14 meters below the sea level. It will facilitate use of gravitational force to fetch water from sea. The pipe intake capacity is 11060 cubic meters of water/hour. This translates into 265 million liters per day (MLD). Out of which 165 MLD will be rejected as waste water and 100 MLD will be passed on as desalinated water.

Stage 2 – Sea Water Intake Chamber and UP Flow Filter

The sea water coming in Sea Water Intake Chamber passes through the bar screens for residue removal. In this section, two automatic bar screen cleaners remove large solids from the raw water. The action of the bar screen equipment is adjusted according to the amount of incoming solids and the flow rate. The sea water intake chamber is connected to Up Flow Filter (Sand Filter) through a slope which can generate 10 cubic meter water with natural pressure of 1 bar in sea. Up Flow Filter is 25 meters in length, 7.1 meters in depth and 65 meters in breadth. It takes in 265 MLD of sea water for filtration. In Up Flow Filter, water moves from downside to upside through sand membranes.

Stage 3 – Disc Filter and Ultra Filtration Membrane

Disc Filter: Form Up Flow Filter the water is transported to Disc Filter (DF). The DF consists of several discs, up to 15 in the larger machines, each made up from sectors which are clamped together to form the disc. The sectors are ribbed towards the neck and designed for a high capacity drainage rate. **One of the main features is that the required floor space taken up by disc filters is minimal and the cost per square meter of filtration area is the lowest when compared to other vacuum filters.** In this process up to 100 microns residual suspended solids is being passed to the next stage.

Ultra Filtration: Ultra Filtration (UF) will remove high molecular-weight substances, colloidal materials, and organic and inorganic polymeric molecules. Low molecular-weight organics and ions such as Sodium, Calcium, Magnesium Chloride, and Sulfate are not removed. Because only high-molecular weight species are removed, the osmotic pressure differential across the membrane surface is negligible. Low applied pressures are therefore sufficient to **achieve high flux rates from an ultra filtration membrane.** Flux of a membrane is defined as the amount of permeate produced per unit area of membrane surface per unit time. The filtered water is passed on to UF product and backwash tank.

Thus, we get the clean water from this process but it remains salinated.

Stage 4 – UF Product and Back Wash Tank

There are two UF product and Backwash tanks with volume of 13800 cubic meters each. This process is primarily used in cleaning Reverse Osmosis (RO) membrane filters. It would enable to increase the life of RO membrane up to 5 years as against normal life of 3 years.

Stage 5 – Cartridge Filter

Cartridge Filter (CF) captures particles and contaminant through – a) the total thickness of the medium and b) by blocking particles on the surface of the filter. There are two types of CF – Depth type Filters and Surface type Filters (that are usually made of thin materials like papers, woven wire, and cloths).

Stage 6 – Reverse Osmosis Plant

Reverse Osmosis (RO) stage takes clean but salinated water from earlier stage. This stage consumes huge amount of electricity. The water needs to be injected with lot of pressure from one end to pass it through RO membranes to get desalinated water at the other end. VTW is implementing an innovative electricity saving technique for its high pressure pumping system. This is Energy Recovery System (ERS) which uses a pressure exchanger turbine that allows substantial savings (VTW estimates up to 50%) in the power consumption for RO stage. The desalinated water generated from RO plant is distilled water which needs mineralization which is done in the next stage.

Stage 7 - Product Storage Tank

The desalinated distilled water gets stored in this tank before it goes to the next stage of minerlisation to make it potable.

Stage 8 – Mineralisation Stage

This stage is very critical and assumes great importance as water needs to be mineralized, to make it potable for human being. In this stage, controlled dosages of chemicals used to make water potable. VTW is an experience player in O&M and posses requisite expertise of this process. From RO stage, water passes to permeate storage tank where lime dosing is done and Carbonization process is done to bring pH of water to the desired level. NaOH is used for disinfection. This brings pH level to 6.5-8.5. The disinfection chamber water requirement is 80 cubic meter per hour.

Stage 9 – Potable Water Storage Tank

The potable water will be stored in the tank from where it will be distributed to Chennai. The final tank for pumping and pipeline laying to Chennai Metro will be done by L&T. There are four basement tanks that is being planned in Chennai city at location viz Thiruvanmiyur, Akari, Velacheri and Neelanga RA extension. The pipeline length will be of 69 kms.

HT Substation Building

Main Receiving Substation

The electrical and instrumentation work is done by ABB. The power substation is supplied by TNEB (Tamil Nadu Electricity Board) for 50MVA in capacity and the operational requirement is around 40 MVA. The cost of power is Rs.3.5/ kwh. The main receiving substation has 2X25 MVA where only 35- 40 MVA is used in operations. The electricity consumption will require 3.83kwh/cubic meter. Hence, annual power cost of running the plant is estimated at Rs 490 mn. VTW has implemented Energy Recovery System and using pressure exchanger to save power consumption at RO stage. Margin improvement is possible due to this. Estimated savings in the power will be up to 50% for RO stage.

Administrative Block

Equipments at site

Overview

INCOME STATEMENT Rs.mn

Particulars	Mar10	Mar11	Mar12E	Mar13E
Net Sales	**12,237**	**12,330**	**14,225**	**16,517**
Other income	57	88	18	14
Total Income	12,295	12,418	14,243	16,532
Total Expenditure	11,123	11,208	12,752	14,642
Cost of sales and Service	8,537	8,820	10,029	11,438
Employee Expenses	1,690	1,716	1,808	1,935
SG & A Expenses	897	673	915	1,269
EBIDTA (Excl. Other Income)	**1,114**	**1,122**	**1,473**	**1,875**
EBIDTA (Incl. Other Income)	**1,171**	**1,210**	**1,491**	**1,889**
Interest	257	148	114	129
EBDTA	**914**	**1,063**	**1,377**	**1,760**
Depreciation	139	100	119	168
Profit Before Tax & EO Items	775	963	1,257	1,592
Extra Ordinary Exps/(Income)	(31)	(129)	(5)	(15)
Profit Before Tax	744	834	1,252	1,577
Tax	303	316	401	512
Net Profit	441	518	852	1,064
Minority Interest	7	8	9	9
Net Profit	**448**	**526**	**861**	**1,073**

BALANCE SHEET

Particulars	Mar10	Mar11	Mar12E	Mar13E
Sources of Funds				
Equity Capital	47	53	53	53
Share Premium	1,267	2,509	2,509	2,509
Other Reserves	2,702	3,148	3,873	4,884
Net Worth	**4,016**	**5,710**	**6,435**	**7,446**
Secured Loans	391	427	427	477
Loan Funds	**391**	**427**	**427**	**477**
Minority Interest	**0**	**0**	**0**	**0**
Deferred Tax	(181)	(216)	(208)	(301)
Total Capital Employed	**4,226**	**5,920**	**6,654**	**7,622**
Applications of Funds				
Gross Block	508	562	979	999
Less: Accumulated Depreciation	189	236	355	524
Net Block	**319**	**326**	**624**	**476**
Capital Work in Progress	58	77	20	20
Investments	134	437	437	437
Intangible Assets	80	158	80	80
Current Assets, Loans & Advances				
Inventories	351	736	824	940
Sundry Debtors	6,353	7,413	8,379	9,729
Cash and Bank Balance	2,185	3,245	3,500	4,252
Loans and Advances	1,283	1,419	1,561	1,795
Other Current Assets	2	3	4	6
sub total	10,174	12,816	14,268	16,722
Less : Current Liabilities & Provisions				
Current Liabilities	5,379	6,427	7,283	8,477
Provisions	1,160	1,467	1,492	1,636
sub total	6,539	7,894	8,775	10,113
Net Current Assets	3,635	4,922	5,493	6,609
Misc Expenses				
Total Assets	**4,226**	**5,920**	**6,654**	**7,622**

E-estimates

CASH FLOW

Particulars	Mar10	Mar11	Mar12E	Mar13E
Profit before tax	744	834	1,257	1,592
Depreciation & w.o.	139	100	119	168
Net Interest Exp	0	(25)	114	129
Direct taxes paid	(205)	(407)	(401)	(512)
Chg. in Working Capital (Non Cash)	(1,352)	(294)	(316)	(364)
Other	114	63	17	(99)
(A) CF from Operating Activities	**(559)**	**271**	**791**	**914**
Capex {Inc./ (Dec.) in FA n WIP}	(154)	(195)	(360)	(20)
Free Cash Flow	**(713)**	**76**	**431**	**894**
Inc./ (Dec.) in Investments	1	(300)	0	0
Other	504	365		
(B) Cash Flow from Investing Activities	**351**	**(130)**	**(360)**	**(20)**
Issue of Equity/ Preference	5	1,224	0	0
Inc./(Dec.) in Debt	(16)	35	0	50
Interest exp net	(42)	(42)	(114)	(129)
Dividend Paid (Incl. Tax)			(62)	(62)
(C) Cash Flow from Financing	**(53)**	**1,218**	**(176)**	**(142)**
Net Change in Cash	(262)	1,359	255	752
Effect of Foreign Curency Translation	*(144)*	*(1)*		
Opening Cash balances	1,879	1,616	3,245	3,500
Closing Cash balances	1,617	2,975	3,500	4,252

E-estimates

IMPORTANT RATIOS

Particulars	Mar10	Mar11	Mar12E	Mar13E
(A) Measures of Performance (%)				
EBIDTA Margin (excl. O.I.)	9.1	9.1	10.4	11.4
EBIDTA Margin (incl. O.I.)	9.6	9.8	10.5	11.4
Interest / Sales	2.1	1.2	0.8	0.8
EBDTA Margin	7.5	8.6	9.7	10.7
Tax/PBT	40.8	37.9	32.0	32.5
Net Profit Margin	3.7	4.3	6.1	6.5
(B) As Percentage of Net Sales				
Raw Material	69.8	71.5	70.5	69.3
Employee Expenses	13.8	13.9	12.7	11.7
Administrative Expenses	7.3	5.5	6.4	7.7
(C) Measures of Financial Status				
Debt / Equity (x)	0.10	0.07	0.07	0.06
Interest Coverage (x)	4.6	8.2	13.0	14.6
Average Cost Of Debt (%)	60.5	36.1	26.8	28.7
Debtors Period (days)	189	219	215	215
Inventory Turnover Ratio (x)	24.3	12.0	12.2	12.2
Fixed Assets Turnover (x)	24.1	21.9	14.5	16.5
Net Working Capital Turnover (NWC x)	3.4	2.5	2.6	2.5
Net Working Capital Period (days)	108	146	141	146
Non Cash NWC (Rs Mn)	1,450	1,677	1,993	2,358
Non Cash NWC Period (days)	43	50	51	52
(D) Measures of Investment				
EPS (Rs.)	47.8	49.8	81.5	101.6
CEPS (Rs.)	62.7	59.2	92.8	117.5
Book Value (Rs.)	429.1	540.5	609.2	704.9
RoANW (%)	11.6	10.8	14.2	15.5
RoACE (%)	24.9	21.9	21.8	24.1
RoAIC (%) (Excl Cash & Invest.)	77.1	53.6	55.4	60.9
(E) Valuation Ratios				
CMP (Rs.)	1,284	1,284	1,284	1,284
P/E (x)	26.9	25.8	15.8	12.6
Market Cap. (Rs. Mn.)	12,018	13,564	13,564	13,564
MCap/ Sales (x)	1.0	1.1	1.0	0.8
EV (Rs. Mn.)	10,224	10,746	10,491	9,789
EV/Sales (x)	0.8	0.9	0.7	0.6
EV/EBDITA (x)	9.2	9.6	7.1	5.2
P/BV (x)	3.0	2.4	2.1	1.8
Dividend Yield (%)	0.0	0.8	0.4	0.4

E-estimates

DOLAT CAPITAL

BUY	Upside above 20%
ACCUMULATE	Upside above 5% and up to 20%
REDUCE	Upside up to 5%
SELL	Negative Returns

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