

ESSAR VIZAG TERMINALS LIMITED

**Phase-I - Up-gradation and Modernization
of Existing Iron-Ore Mechanized Facility of Outer Harbour
at Visakhapatnam Port**



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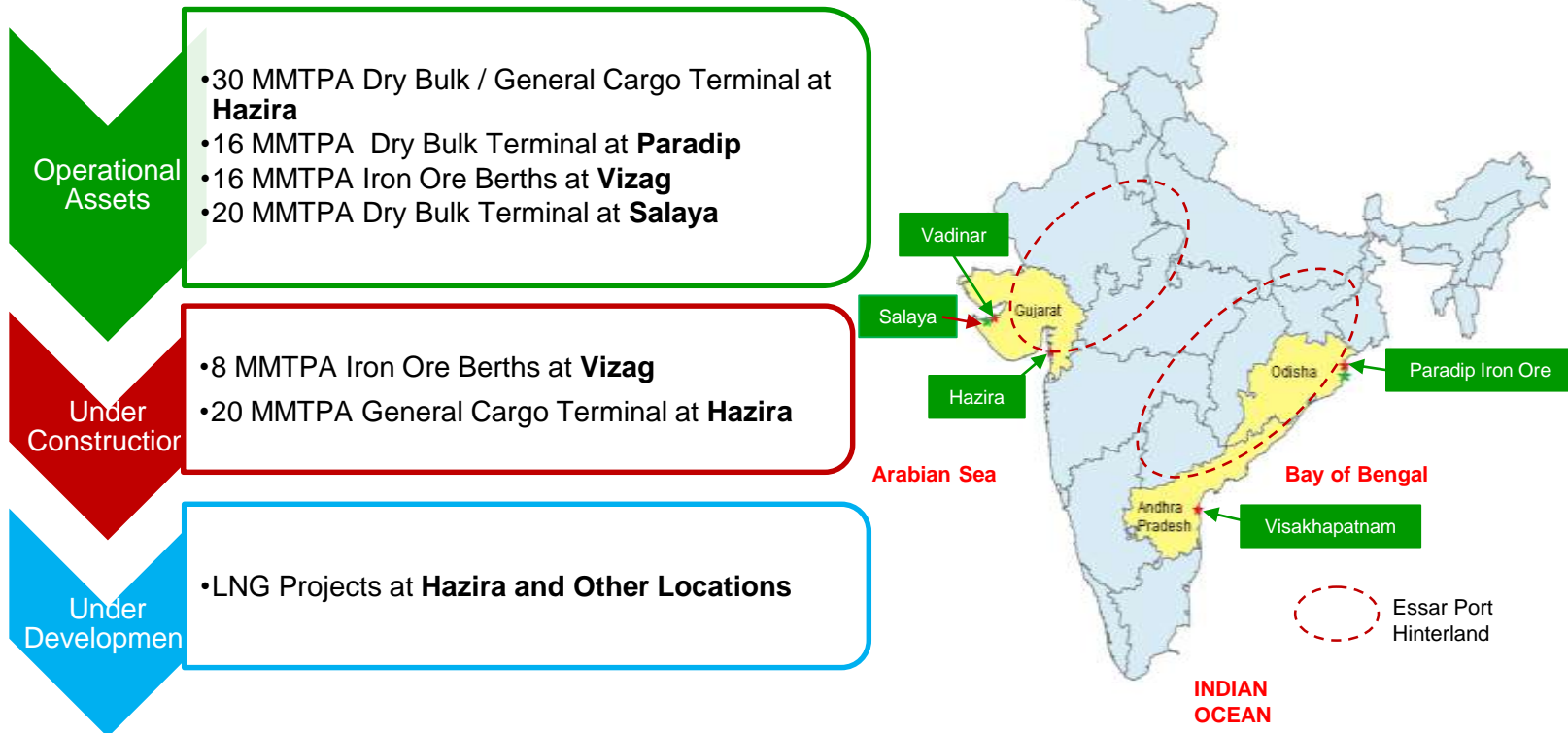
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Ports Business Overview

Reaching 110 MMTPA by 2018



- ✓ Presence in strategic locations of east and west coast of India
- ✓ High operating margins at operating ports. Further scalability possible at most locations

Note:

* The above over-view is post divestment of Vadinar Port Terminal Facility of 58 MMTPA Capacity at a valuation of approx USD 2 Billion Dollar

Hazira Overview

	Hazira – Operational	Hazira – Expansion
Infrastructure	Berth 550m, Draft 14m	Berths 1,100m; Draft 16m
Capacity	30 MMTPA	20 MMTPA
Cargo	Iron Ore, Coal, Limestone, Finished Steel Products, Project Cargo, Containers	General Cargo, Coal, Containers, Petrochemicals
Project status	Operational since May 2010	Under Development
Key Customers	Essar Steel, Essar Power, Merchant	Essar Steel & Merchant



Hazira Photographs

Bulk cargo handling



Finished Steel Handling



Paradip

	Paradip I (Dry Bulk)
Infrastructure	Berth: 230m; Draft: 14m
Capacity	16 MMTPA
Ships Handled	Upto 105,000 DWT
Handling Rates	Loading at 70,000 TPD
Cargo	Iron Ore and other dry bulk cargo
Project status	Commissioned – Dec 2012
Key Customers	Essar Steel, Merchant
Hinterland Connectivity	Road & Rail



Paradip Dry Bulk Photographs

Ship Loader, Reclaimers



Conveyor



Salaya

Infrastructure	Berth: 385m; Draft: 14m
Vessel to be handled	Capesize vessels
Capacity	20 MMTPA
Cargo at Phase I	Coal, bauxite, pet coke
Phase I Project status	Commissioned in FY 2017
Key Customers	Essar Power, Essar Oil, Reliance, Ashapura Minechem, Sikka Thermal Power Plant, coal traders
Road Connectivity	Connected to 4 lane state highway through 5km internal road
Rail connectivity	Will be connected through rail by 13km long spur line



EVTL - Brief over-view

EVTL Iron-Ore Handling Terminal is a Brown-Field Project taken-over from M/s. Visakhapatnam Port Trust on DBFOT basis.

Project: The Outer Harbour Berths (OB#1 and OB#2) need to be upgraded, with latest state-of-art handling facilities, with original designed loading rated capacity of 8000 TPH. Simultaneous “Operations & Up-Gradation” to be done over FY 16; FY 17 & FY18.

	Outer harbour – Phase I
Expected Start-Date	14 th May'15 (DOA)
Facilities	
Railway Facilities	28 ETKM Track, 7 No Locos
Major Equipment	Tipplers – 2 Nos Stackers – 2 Nos @ 2,700 TPH Reclaimers – 3 Nos @ 4,000 TPH Ship-Loader – 1 No @ 8,000 TPH
Receiving Conveying Network	5400 TPH
Stack-yard (Hectares)	15*
Loading Capacity	8000 TPH
Berth dimensions	325 m
Depth / Draft	20 mtrs / 18.5 mtrs
Vessel size	Super capsized
Rail/ Road connectivity	Available

* Additionally ESTL has a 3-Plots of Stack-Yard area of 15 Hectares

EVTL - OHC History

OHC Operations

- 1966 : Commercial Operations (WQ#5)
- 1969 : Up-gradation to 6 MMTPA
- **1976 : Outer-Harbour Commissioning**

OHC Up-gradation / Replacement Activities

- 1983 : New 3rd Tippler Installation
- 1991 : Replacement of BWR#1 with #3
- 1992 : Replacement of Twin Tippler
- 1996 : Replacement of BWR#2 with #4
- 2003 : Replacement of Stacker#2 with #3
- **2012 : Concession Awarded to Essar**
- **2015 : Taken over by Essar for Upgradation works**



First passenger ship
dated 07th Oct' 1933



Operations

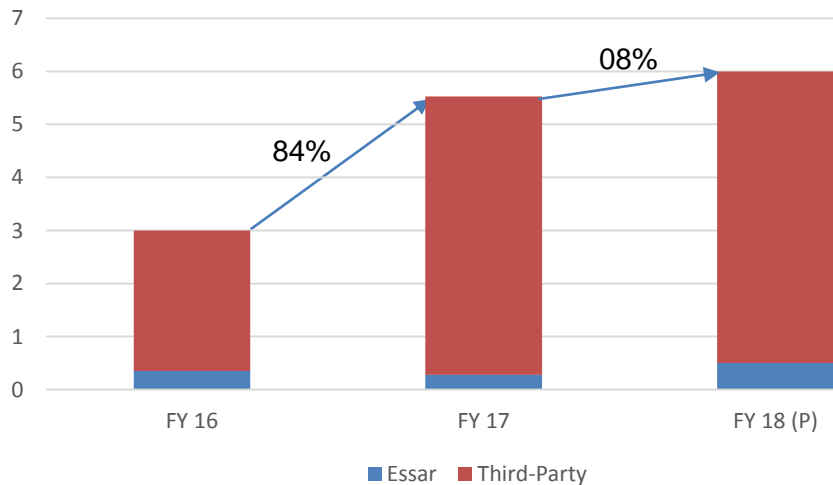


EVTL - Operational Performance - FY16; FY17 & FY18

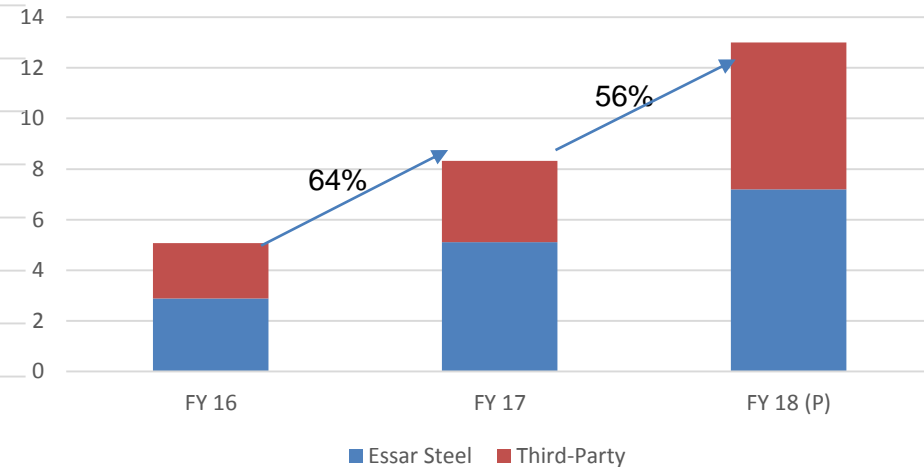
All Values in MMT

	Receiving				Shipping		
	FY 16	FY 17	FY 18 (P)		FY 16	FY 17	FY 18 (P)
Essar Steel	0.35	0.28	0.50		2.88	5.11	7.20
Third-Party	2.65	5.25	5.50		2.19	3.21	5.80
Grand-Total	3.00	5.54	6.00		5.07	8.32	13.00

Rakes Receiving (MMT)



Vessel Shipping (MMT)



EVTL - Operational Critical Focus & Present Status

➤ **Loading-Rate Improvement:**

- Doubled the capacity of loading-rate from 30,000 TPD (During FY16) to 70,000 TPD (At present)
- Enhanced loading-rate has yielded faster turn-around and also dispatch bonus to the customers
- Aiming for further improvement on month-on-month basis i.e. 120,000 TPD by Oct'17

➤ **Spillage-Reduction:**

- Drastic reduction of spillages has been observed over the period of time, by which customer confidence has been built-up.
- Average Spillage Rate of 0.33% during the FY 16 has been reduced to 0.18% during FY 18
- Aiming for further reduction on month-on-month basis.

➤ **Contamination-Reduction:**

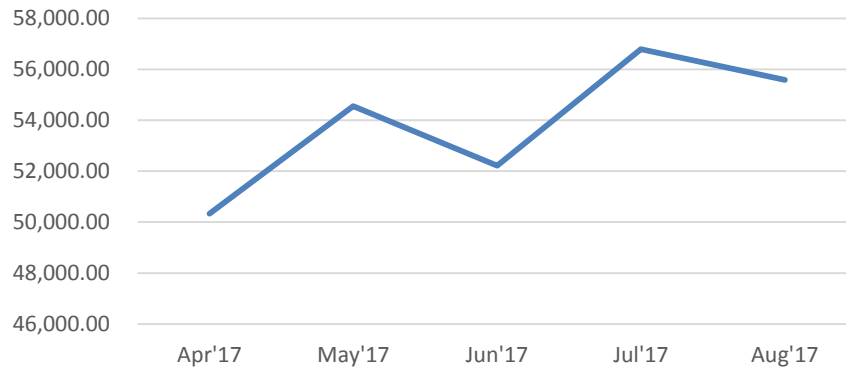
- Absolutely eliminated the contamination sourcing from the facility.
- Contamination received through railways / source-point was observed to have got reduced based on % of vessels & weight-basis. Expecting to reduce with new tippler, which got commissioned during Aug'17 with gratings & grizzly facility
- Aiming to further reduce by installing New OBMS (enhanced capacities); New M.S (enhance capacity) and New M.D(s)

➤ **Pollution-Control Measures & Reduction:**

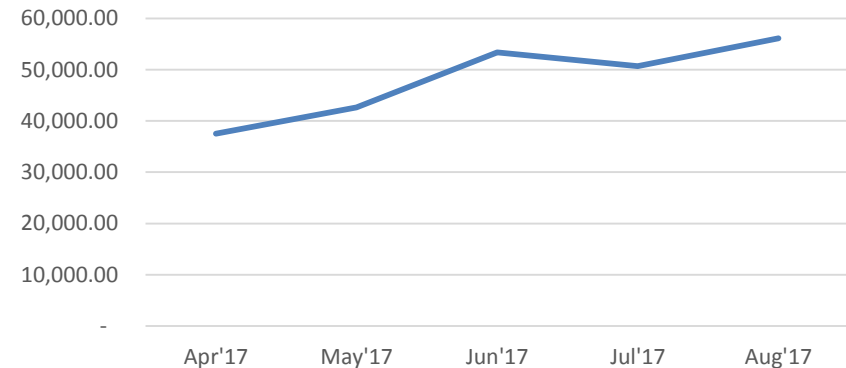
- All the major open shipping conveyors were re-designed and covered with sheeting
 - Water sprinkling system at all the Junction-Houses and at Berth-area were replaced.
 - Cold Fog System at each Junction-House and Sprinkling system at Stack-Yard(s) were under implementation
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EVTL - Loading Performance – FY18

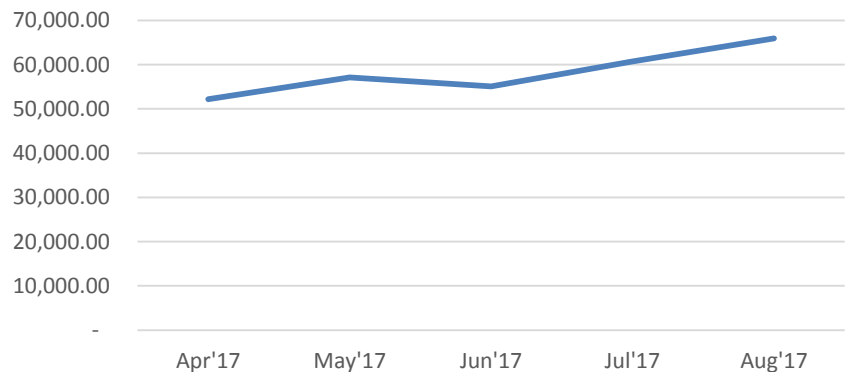
ESTIL - Cape Size Vessels – OSBD TPD



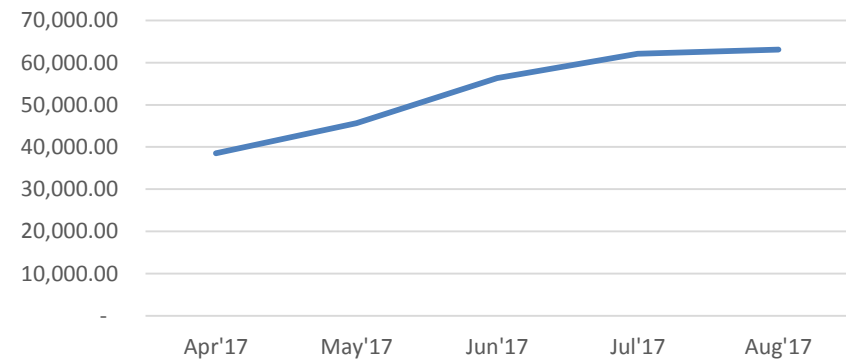
MMTC - Panamax Vessels – OSBD TPD



ESTIL - Cape Size Vessels - Gross TPD



MMTC - Panamax Vessels - Gross TPD



Projects



EVTL – Project Brief Progress update

Replacement of all major Equipment	Implementation of Major New Packages	Misc. Other Activities
1) Apron-Feeders (06 No's) >Apron-Feeders 2No*4000TPH >Apron-Feeders 4No*1500TPH 2) Stacker(s) 2 No*2700TPH 3) Reclaimer(s) 2 No*4000TPH 4) Ship-Loader 1 No*8000TPH 5) Rotary-Tippler (30 Tips/ Hour) 6) Twin-Tippler (27 Tips/ Hour)	1) PLC Automation & Control 2) Electrical Packages > EPC 132kV MRSS > EPC 3.3kV Switch Boards 3) Dust-Suppression System 4) Stack-Yard Strengthening 5) To accommodate 200,000 DWT Vessels > Berth Strengthening > Dredging (-18Mtr to -20Mtr)	1) Mechanical Equipment replacement (Belts; Idlers; Pulleys; Gear-Boxes; Couplings; Etc) 2) Electrical Equipment replacement (Motors; Scoops; Cables; Etc) 3) Structural Strengthening (Junction- Houses; Surge-Bin; Galleries; Etc)

Progress as on Sep'17
 Target by End Oct'17

: 90.00% (Loading-Rate: 3500 TPH i.e Avg 70,000 TPD)
 : 100.00% (Loading-Rate: 8000 TPH i.e Avg 120,000 TPD)

EVTL – Project Unique Facilities

- 23 MMTPA Iron-Ore Handling facility, to cater to vessels up to 200,000 DWT with a depth of -18.0 Mtrs
 - **Rake Receiving System:** Complete mechanized facilities comprising of wagon tipplers (02 Nos) for receiving cargo by rakes, transferring cargo through conveyor system to stack-yard having high capacity multiple Stackers (02 Nos – 2700 TPH each). Present capacity of 07 Rakes / Day is being enhanced to 15 Rakes / Day
 - **Shipping System:** Comprising of high capacity Reclaimers (03 Nos – 4000 TPH each) loading into vessels up to capesize through ship loader (01 No – 8000 TPH) with minimal human intervention. One of fastest loading systems in Indian Ports.
 - Some of the unique up-graded / proposed facilities are:
 - PLC based SCADA automation system replacing relay based manual control system
 - Cold-Fog dust separation system replacing water sprinkling system
 - Hybrid of GIS & AIS i.e. PASS technology based electrical 132kV main receiving substation adding to the safety and security in operations
 - 3.3kV HT Panels equipped with circuit breakers & contactors replacing old panels equipped with Isolators & contactors by which safety of the sub-stations is enhanced
 - World-class facility assuring contamination free-zone and creating green-environment with zero emissions
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EVTL – OHC Strengths and Advantages



EVTL – OHC - Strengths

Mining Source:

- ✓ Closest proximity major iron-ore mining source M/s. NMDC Bailadila-Kirandul Region, Chhattisgarh
- ✓ The range contains 1200 million tonnes of high grade [iron ore] distributed in 14 deposits / reserves of which 3 are being mined
- ✓ The range possesses the world's best grade of hard lumpy iron-ore having +66% iron content, free from sulphur and other deleterious material

Port Connectivity from Mining Sources:

- ✓ M/s. NMDC Bailadila-Kirandul Region Iron-Ore, Chhattisgarh is connected through Kirandul-Kothavalasa (K-K) Line (443 Km) to EVTL Port Facility
- ✓ M/s. Indian Railways has potential to cater 15-16 Rakes per day through the network accounting to 15 MMTPA

Major Players Establishment:

- ✓ **Domestic Market:** The domestic consumers of western sector is only having the dependency / requirement of M/s. NMDC High-Grade iron-ore.
 - ✓ **Export Market:** The export operations from M/s. MMTC is a stable market for 2.8 MMTPA - 3.6 MMTPA due to the tie-up made by GOI with Japanese Steel Mills & South-Korean Companies
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EVTL – OHC – Advantages

- Following are the advantages for OHC customers using “NMDC Mining Source” and “KK Rail Connectivity”:
 - Tippler Facilities (03 Nos) – Present capacity of 07 Rakes / Day enhancing to 15 Rakes / Day
 - Stack-Yard Facilities – Vast stacking space of 20 Acres, which is capable to stack around 1.2 Million tons at any point of time, extendable to 1.5 Million tons using West-of-West plot of EStIL
 - Independent Receiving & Shipping System facilities there-by simultaneous stacking & reclaiming can be done.
 - One of the highest iron-ore mechanized loading facility @ 8000 TPH – Presently can load @ 70,000 TPD and the loading-rate will be enhanced to 120,000 TPD by Oct'17, there-by turn-around of the vessels is faster
 - Cargo-Handling charges by EVTL and Vessel-Related charges by VPT are guided by TAMP Rules & Regulations, which are generally far lower than other private \ public ports in India.
 - Post up-gradation capacity, EVTL can cater to a capacity of 23 MMTPA
 - All weather deep draft facility to serve all the growing markets of south-east Asia, including China, Japan and Korea
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ESSAR VIZAG TERMINALS LIMITED

THANK-YOU

