

TECHNO ECONOMIC VIABILITY REPORT

ABC LLC

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CRIF Gulf DWC LLC (Dun & Bradstreet)
15th floor, '48 Burj Gate', Downtown Burj Khalifa
P.O. Box 72478, Dubai,
United Arab Emirates
Tel: +971-4-4069900
Fax: +971-4-4069901
www.crif.com

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EXECUTIVE SUMMARY

Project Background

The promoters of ABC LLC (Hereinafter referred to as ABC) have proposed to construct and operate a Bulk Liquid Oil Storage Terminal in the UAE. ABC was incorporated as a Free Zone Limited Liability Company in June 2012 after securing prime development land in Hamriyah Port & Free Zone Sharjah.

The objective of ABC is to build and operate a State-of-the-Art bulk liquid storage terminal for storing various grades of petroleum and petrochemical products, including class 1 product. The mission of the promoters is to provide clients with an exclusive storage facility which will be in complete adherence to local and international rules & regulations, with a competitive pricing model and a professional and dependable service.

The reason for the rationale behind the project is the acute shortage of small scale storage facilities available for lease, especially facilities for Class 1 petroleum & petrochemical products near to a sea port. A study conducted by the promoters has revealed that there are no class 1 compliant storage terminals built exclusively for third party rental purposes in Hamriyah Port & Free Zone.

Salient Features & Highlights of the Project

The promoters of ABC have acquired a plot of land measuring 33,943 square metres in the tank farm area of Hamriyah Port & Free Zone. The acquisition is on a leasehold basis and for a period of 25 years with the option to renew.

Initial approvals have been granted by the Hamriyah Free Zone Authority (HFZA) and Sharjah Port Authority (SPA) for the construction of the proposed Terminal, a private Pipeline Corridor to the Main Harbor and a dedicated Bunkering Pit at the Main Harbor Berth.

The shareholders, directors and management of ABC are from the United Kingdom & India, and have a combined experience of more than 30 years in fuel retailing, wholesaling, trading, refining, distribution and logistics.

The proposed terminal and tanks are expected to store various kinds of Oil, Petroleum & Petrochemical products including, but not limited to, Naphtha, Gasoline, Jet Fuels, Gas oil, Fuel oils and Base oils.

The proposed storage terminal and tanks are proposed to be constructed and operated in compliance with American Petroleum Institute (API) standards, National Fire Protection Association (NFPA) regulations, and UAE Civil Defense codes and practices. The management aims to achieve ISO certification for the facility and membership of national associations and regulatory bodies within the tank storage industry.

The management of ABC has engaged a professional firm of engineers to design and engineer the project. The project will then be tendered out to contracting firms who will procure and build the terminal in line with engineering designs. As an additional compliance measure and to protect the interest of the owners, the management has proposed to engage a third party inspector to review and certify the engineering designs, and to monitor the construction at each stage of the build.

The promoters of ABC are of the opinion that there is a wide gap between the demand and supply of class 1 compliant storage facilities especially for the SME petroleum sector, and therefore are of the opinion that the storage facility and tanks can be leased out to potential SME clients on a long term rental basis. The revenue for the terminal will be generated from a combination of lease rental charges, throughput charges, and from ancillary services provided to the client.

The key advantage of the project is the strategic location of the land. The proposed terminal will be uniquely located at a distance of only 600 Metres from the deep water harbor port in Hamriyah. Having a facility in close proximity to a sea port would be beneficial to many businesses operating in the oil & gas sector including fuel bunkering companies, refiners, processors, and traders.

A dedicated pipeline system to the main and inner harbor port is planned. HFZ has already approved a private pipeline corridor to the main harbor which will give direct access to a 14 Metre deep water berth which can accommodate Panamax size vessels in a 250m long berth.

Additionally, the Sharjah Port Authority managing the Hamriyah Port has given official approval to ABC for the 'Right of Use' of a dedicated Bunker Pit at the main harbor berth.

The proposed storage terminal will contain 16 tanks of various sizes with a combined storage capacity of 144,594 CBM (Cubic Metres). The terminal is divided into 2 Phases; Phase 1 will contain 8 storage tanks with a total capacity of 67,388 CBM, and Phase 2 will include 8 storage tanks with a total capacity of 77,206 CBM

The storage terminal & tanks are proposed to be built to Class 1 product specifications, with the main features being; fixed coned roof tanks with internal floating roof mechanism, heating system for heavy oil, tank to tank transfer and in-line blending facility, pigging system for pipeline cleaning & maintenance, a bottom loading tanker truck gantry with 6 independent bays, various fire & safety features, inventory management systems, SCADA & PLC systems for automation and control.

The facility is expected to be equipped with a fully approved Fire Fighting System including sprinkler & foam system, fire hydrants and monitors, fire & gas detection system, emergency shutdown system, and CCTV with remote monitoring.

To protect the environment and its surroundings, the terminal will be fitted with continuous emission & air monitoring systems, overfill and leak detection systems, and water and effluence management systems.

Financial Summary

The results of the techno-economic viability study and the financial projections are as follows:

- The estimated project cost including; Preliminary Expenditure, Cost of Construction, Initial Cash Requirement and Contingency for Phase 1 is estimated at AED 57,316,246 (USD 15,617,506)
- The project is expected to be financed by a combination of Debt and Equity and the initial debt to equity ratio is projected to be 2.33
- The Net Present Value (NPV) of the project over a period of 10 years is expected to be AED 78,213,177 (USD 21,282,497).
- The Internal Rate of Return (IRR) of the project over a period of 10 years is expected to be AED 24.10 percent.
- The average DSCR over the period of the term loan is estimated at 2.812
- The financial projections in this Techno-Economic Viability Report are based on the construction and operations of Phase 1 (67,388 CBM) only. After the successful completion of construction and operational commencement of Phase 1, the promoters have planned to undertake the construction of Phase 2 which is expected to provide additional storage of 77,206 CBM.
- The project construction is scheduled to commence from February 2015 and is estimated to take up to 15 months to complete. The project is expected to be handed over by April 2016 and operational by May 2016.

Promoters Profile

The promoters of the project are Mr. Jabir Sheth, Mr. Assan Moidu and Mr. Joy Arakkal Ulahannan each having equal shareholding in the company. Below is a brief profile of the promoters of ABC:

Mr. Jabir Ali Sheth:

Jabir has extensive experience spanning all aspects of the oil supply chain including refining & processing, distribution & wholesale, operation of petrol filling stations and roadside retail developments. Jabir owns and operates 28 petrol filling stations in the UK through Spring Petroleum & Mercury Forecourts, and has forged successful relationships with companies including EXXON MOBIL, SHELL, BP, TOTAL, STARBUCKS, SUBWAY, DUNKIN DONUTS & SPAR. He is also the owner of Transglobal Fuels UK, a fuel distribution company supplying gasoline and diesel to commercial and end user customers. In 2007 he acquired 50% shares in Eagle Oil Refining Company in Sharjah UAE. The company is engaged in petroleum processing and refining, and oil trading. In 2008 he set up

Transglobal Fuels DMCC in Dubai UAE. Transglobal Fuels is engaged in trading and distribution of fuel, petroleum and petrochemical products.

Mr. Joy Arakkal Ulahannan:

Joy is the Managing Director and Shareholder of the Trotters Group which is registered under Jebel Ali Freezone Authority (JAFZA) since 2010. The company is engaged in the physical trading of oil and petroleum products. It also owns and operates a petroleum processing facility in Saudi Arabia, a used oil re-refining plant in Ras Al Khaimah, and is constructing a petrochemical and re-refining facility in Hamriyah Free Zone Sharjah.

Mr. Assan Moidu:

Mr. Assan is based in the UAE since 1972 and has extensive experience in the oil and petroleum sector. He is the founder and Managing Director of Eagle Oil Refining Company LLC in Sharjah UAE, a distillation plant engaged in refining and processing of petroleum products. Assan also has experience in lubricant oil and grease manufacturing through his previous company, International Grease & Lubricants Ajman UAE.

METHODOLOGY

The Techno-Economic Viability study assigned to D&B SAME was carried out in the following sequence-

- Verification of the documents provided by the client and procurement of information.
- Assessment of the project cost and determining its reasonableness.
- Secondary data assessment and verifying the accuracy and correctness of the data.
- Limited primary survey to verify the data collected through secondary sources.
- Validating volume and price assumptions and other assumptions related to the operations of the proposed facility.
- Assessing the project viability with Financial Analytical Techniques i.e. Internal Rate of Return, DSCR, Debt Coverage ratio, expected return on Equity, Profitability Analysis and Sensitivity Analysis.
- Conducting and Industry research of the proposed sector of operation.
- Arriving at a conclusion about the Technical, Economic and Financial Viability of the proposed project.

The scope of work was finalized as under:

- D&B SAME will physically visit the proposed location and the existing facilities of the promoter.
- D&B SAME will validate the cost of the proposed project, given the specifications on civil works, building and plant and machinery.
- D&B SAME will validate the sale price and volume assumptions of the project.
- D&B SAME will analyze the revenue and cost estimates for the proposed project. Various tools, such as debt coverage ratio, NPV, IRR, sensitivity analysis will be used to arrive at a conclusion on the viability of the project.

TEAM OF CONSULTANTS

D&B SAME team consist of three analysts, actively involved in the process and drafting of Techno-Economic Viability report.

Komal Baharnani

Project Role: Business Analyst

Overall responsible for project initiation, providing expert guidance and ensuring adherence to quality standards. She will leverage her rich experience in project management and execution.

Profile: Komal has an overall experience of 3 years in the field of business rating and analysis. She has been a Business Analyst in Dun & Bradstreet and has been handling special projects related to D&B Business ratings and benchmark analysis.

Muhammad Usman Chaudhry

Project Role: Business Analyst

Providing expert guidance, conducting research (through surveys and desk research). Usman's chartered qualification and his vast knowledge of industry, regional demographics and trends will help to obtain an expert opinion on the analysis and overall content of the report.

Profile: Usman has an overall experience of 2 years in the field of business rating and financial analysis. He has been a Business Analyst in Dun & Bradstreet and has been handling special government projects, Techno-Economic Viability and assigning D&B Business ratings.

Sarang Kulkarni

Project Role: Financial Analyst

Sarang has been responsible for the financial analysis. His knowledge and qualification has enabled D&B SAME team to assess the financial perspective of the project.

Profile: Immediately after completing his MSc Economics from UK in 2012, Sarang joined D&B SAME as a financial analyst. He has been involved in conducting financial analysis for Techno-Economic Viability Report and Business Profile Reports.

PROJECT OVERVIEW

The promoters of ABC have proposed to construct and operate a Bulk Oil Liquid Storage Terminal catering to the demand emanating from small and medium sized petroleum & petrochemical companies, traders, ship bunkering companies, petroleum refiners & processors, and lubricant manufacturing companies, operating in and around the UAE. The facility will be located in Hamriyah Free Zone in Sharjah and in close proximity to Hamriyah Port.

Reasons for the Project

Whilst conducting business in the UAE, the promoters of ABC have identified an acute shortage of small scale storage facilities that are available for lease, especially facilities which can handle Class 1 petroleum and petrochemical products and are near to a sea port.

Here are some of the reasons explaining the rationale behind the ABC project:

- Storage terminals at locations such as Jebel Ali Port and Fujairah Port tend to be owned and operated by National Oil Companies (ADNOC, ENOC), Multinational Organizations (SHELL, BP, VITTOL) and large Tank Farm Operators (OILTANKING, VOPAK). These facilities are built to cater for larger cargoes and are generally beyond the reach of smaller oil companies and traders.
- Very few storage facilities are available for rent in Hamriyah Free Zone & Port, other ports in Sharjah, and in the Northern Emirates. Many small scale terminals tend to be Proprietary Terminals, owner occupied, with limited scope for third party rental.
- Storage terminals that may be available for rent are not necessarily compliant with applicable statutes issued by API and NFPA, may not be in line with best industrial practices and hence may be inadequate for storing high volatile and low flash products. The few which offer Class 1 storage may not be fully compliant with the regulations and standards of the American Petroleum Institute (API), National Fire Prevention Agency (NFPA), and the UAE Civil Defense. Due to the lack of compliance, many of these terminals may not be properly insured leaving the stored cargo exposed and the owners at a risk of loss.
- Studies show that a large proportion of oil and fuel is imported from oil rich countries mainly by sea. Having a facility in close proximity to the port and with direct access to the sea would be highly beneficial to businesses such as fuel & bunkering companies, small scale refiners & processors, traders with storage facilities located more inland and away from the port.
- The UAE is home to many companies that are engaged in oil and petroleum related activities. Many businesses operate from virtual offices, flexi-desk offices, free zones, and industrial areas, and generally lack access to storage tanks and proper facilities. Research conducted by the promoters of ABC indicates a high demand for properly certified and approved facilities especially near to a sea port.

- Recent reports indicate that Hamriyah Free Zone is becoming the second largest hub for petrochemicals, oil & gas bunkering and storage in the UAE. This has attracted numerous multinational companies to the area and many large scale projects are already on the way. As an example, ADNOC is building a 240,000 CBM storage tank terminal to supply fuel and oil to the Northern Emirates. Gulf Petrochem has also started work on its multi-purpose storage facility to support its growing business in Hamriyah and Fujairah. ABC believes that the creation of an oil & gas hub in HFZ will strengthen business relationships among companies in the industry and will eventually lead to 'economies of scale'.
- The promoters of ABC have secured a unique plot of land totaling 33,493 sq. metres, at a distance of 600 metres from the main harbor port in Hamriyah Free Zone, making it an ideal location to develop a Bulk Liquid Storage Terminal.
- The setting layout plan for a State-of-the-Art storage terminal along with a private pipeline corridor to the main harbor has already been approved by Hamriyah Free Zone Authority. The 'Right of Use' of a Bunker Pit at the 14 metre deep water harbor has been granted by the Sharjah Port Authority.

In conclusion, the promoters of ABC are of the opinion that there is a wide gap between the demand and supply of compliant storage facilities for class 1 products at the SME level, and considering the strategic location of the facility, the rights and approvals granted by authorities, and the positive business outlook in the UAE & the petroleum & petrochemical industry in particular, the promoters of ABC have proposed to invest in this project.

PROJECT SCOPE

Considering the market demand and the opportunity to capture market share, the promoters of ABC have proposed to construct and operate an independent Bulk Oil Liquid Storage Terminal for storing petroleum and petrochemical products.

- The proposed facility will make available storage tanks for storing various products including, but not limited to, Class 1 petroleum and petrochemical products including Jet Fuel, Gasoline, Naphtha, Gas Oil, Base Oil and Fuel Oil.
- It is assumed that the storage facility and tanks will be leased out to potential clients on a short and long term rental basis and the revenue generated will be a combination of; rental fees (74%), throughput fees (20%), and ancillary service fees (6%).
- The proposed facility will contain 16 storage tanks of various sizes, with a fixed cone roof and internal floating mechanism, with a total shell capacity of 144,594 CBM. Phase 1 will have 8 tanks with capacity totaling 67,412 CBM and Phase 2 will contain 8 tanks with capacity of 77,234 CBM.
- The main features of the proposed facility will include; internal pipeline system with dedicated pumps for each tank, direct access to the sea via two 14 inch pipelines to the 14 metre deep water harbor and two 10 inch pipelines to the inner harbor with dedicated bunker pits at both the harbor berths, a pipeline pigging system for cleaning and maintenance operations, a bottom loading tanker truck gantry with 6 independent bays, a fully integrated fire fighting system, SCADA and PLC systems for terminal monitoring and automation.
- The construction of Phase 1 of the project will include 8 tanks totaling 67,412 CBM with 4 tanks of 10,878 CBM and 4 of 5,969 CBM each. The successful contractor will be responsible to carry out all the civil, mechanical, electrical, piping, fire fighting and instrumentation work for Phase 1 of the project.
- The facility will be designed and constructed in compliance will all API, NFPA and Civil Defense regulations, codes and practices.
- The construction is scheduled to commence from February 2015 and will take up to 15 months to complete, with handover in April 2016. The facility is expected to be operational by May 2016. The construction cost of phase 1 is expected to be approximately AED 40,479,614 (USD 11,029,868).

The promoters of ABC have successfully completed the administration and company formation part of the project and have signed a 25 year Lease agreement with HFZA. They have also appointed and engaged surveyors, consultants and contractors to manage, administer, monitor and develop the proposed project.

- **Engineering & Design Consultant** – Chemie Tech (India), a professional engineering & design firm, has been appointed as the main Engineering Consultant for the project. Their role is to carry out the Complete Detailed Design and Engineering work relating to the facility in accordance with industry standards and regulations.
- **General Engineering Consultant** – Capital Engineering FZC (Sharjah) has been appointed as the general consultant for the project. Their role will be to review and submit all plans, obtain No Objection Certificates (NOC's), approvals and building permits from the various authorities and stakeholders of the project.
- **Environmental Consultant** - HFZA requires businesses to conduct certain studies as a prerequisite to setting up industry in the Free Zone. Environmental Solutions & Consultancy (Sharjah) has been appointed as the environmental consultant. Their role will be to coordinate with the authorities on matters relating to Environment, Health & Safety (EHS) and to carry out Environmental Impact Assessment studies and Risk Assessment studies in relation to the proposed project.
- **Plot testing & Surveying** – Geo-science Consultant (Dubai) has been appointed to conduct soil testing and topographical surveys of the land.
- **Main Contractor** - The role of the contractor will be to procure the material and to construct the tank storage terminal facility as per the engineering designs given by the consultant. The contractor will be expected to enter into a FIDIC type agreement which will cover all aspects of the project including procurement, construction, testing, commissioning and handover of the project within the given timeframe.
- **Fire Fighting Consultant** – The fire consultant will fall under the scope of the contractor. His role will be to review and submit the fire drawings to the relevant authorities including the UAE Civil Defense and to seek the appropriate approvals on behalf of the contractor and the client.
- **Third Party Inspector** – Bureau Veritas will be employed as a third party consultant to Review the engineering designs and then to carry out Third Party Inspection Services during the construction stage of the project.
- **Techno Economic Viability Study** - Dun & Bradstreet (South Asia & Middle East) has been appointed as a consultant to conduct a study to determine the viability and financial feasibility of the project.

After the successful completion and leasing of Phase 1, the management plans to start the construction of Phase 2 which will provide an additional storage capacity of 77,234 CBM.

COMPANY BACKGROUND

ABC is incorporated as a Free Zone Limited Liability Company in Hamriyah Free Zone Sharjah on 20th June 2012.

The license number 9392 has been issued by Hamriyah Free Zone Authority, currently valid till 19th June 2015, and renewed on an annual basis.

LEGAL STATUS

Company Details	
Name	ABC LLCFZC
Date of Incorporation	20 June 2012
Constitution	Free Zone Company limited by shares
Sector	Fractional distillation of petroleum and petrochemicals
Registered office	Plot No 1A-09, Hamriya free Zone, Sharjah, UAE
Proposed site	Plot No. 1A-09
Source : Management & Trade License	

In order to conduct the proposed business activity, the company also requires the following license approvals from HFZA –

- Owning and leasing of storage tank farms
- Import/Export/Storage/Distribution of Petroleum and Petrochemical products.

The promoters have planned on obtaining these activities added to the company license before commencement of operations.

SHAREHOLDING PATTERN

As per Article 4 of the Memorandum of Association, the company has a total of 150 shares outstanding with a face value of AED 1,000 each. The three shareholders own 50 shares each.

Shareholding Pattern - ABC LLCFZC		
Sr. No.	Name of Shareholder	% Shareholding
1	Jabir Sheth	33.33
2	Assan Moidu	33.33
3	Joy Arakkal	33.33
Source : Management & Trade license		

BOARD OF DIRECTORS' DETAILS

A brief profile of directors has been provided in the exhibit below

Name of Directors	Designation	Experience
Jabir Ali Sheth	Director	<p>Jabir Sheth joined the family business of fuel retailing in the UK in 1991 and was responsible for the day-to-day management of the operations. In 2001 he incorporated Spring Petroleum Co. Ltd and now owns and operates a total of 28 Petrol Filling Station around the UK.</p> <p>Jabir is the Director and Founder Member of Tranglobal Fuels UK Ltd since its incorporation in 2007. The company operates as a wholesale fuel distributor supplying diesel and gasoline to transportation companies and petrol filling stations across the UK.</p> <p>Jabir is also a Director and Shareholder in Eagle Oil Refining Company in Sharjah UAE, and has been involved in the operations since 2007. The company is engaged in processing & refining of petroleum products.</p> <p>Jabir is the Director and Shareholder of Tranglobal Fuels Dubai which was incorporated in 2008 under the Dubai Multi-Commodities Free Zone Authority. The company is engaged in the trading of petroleum and petrochemicals.</p> <p>Jabir has more than 20 years of industry specific experience both in the UK and the Middle East.</p>
Assan Moidu	Director	<p>Assan Moidu is currently the Managing Director and was the sole shareholder of Eagle Oil Refining Company until 2007 when Mr. Jabir Ali Sheth also became a shareholder. Currently both partners hold equal shares in the company.</p> <p>Prior to Eagle Oil, Assan was the Director and owner of EDT (Ajman), a diesel trading company, and Intercontinental Grease & Lubricants (Ajman) which manufactured engine oil, lubes, and grease.</p> <p>Assan has been in the region since 1972 and has many years of experience in the oil and petroleum sector.</p>

Joy Arakkal	Director	<p>Joy Arakkal is the Managing Director and Shareholder of Trotters Group FZC Dubai. Trotters Group along with its associated companies is engaged in the refining, processing, and trading of oil, petroleum & petrochemical products.</p> <p>Trotters Group owns and operates a petroleum refining and processing facilities in Saudi Arabia, operates a used oil re-refining facility in Ras Al Khaimah, and has processing agreements with other plants in the region.</p> <p>A new petrochemical processing facility is being constructed in Hamriyah Free Zone Sharjah.</p>
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MANAGEMENT TEAM

Brief profiles of key executives of ABC LLC have been provided below:

Name	Designation	Experience
Firoz Yusuf	Project Manager	A finance graduate from the UK with several years of management experience in the field of fuel retailing, fuel trading, petroleum refining & processing.

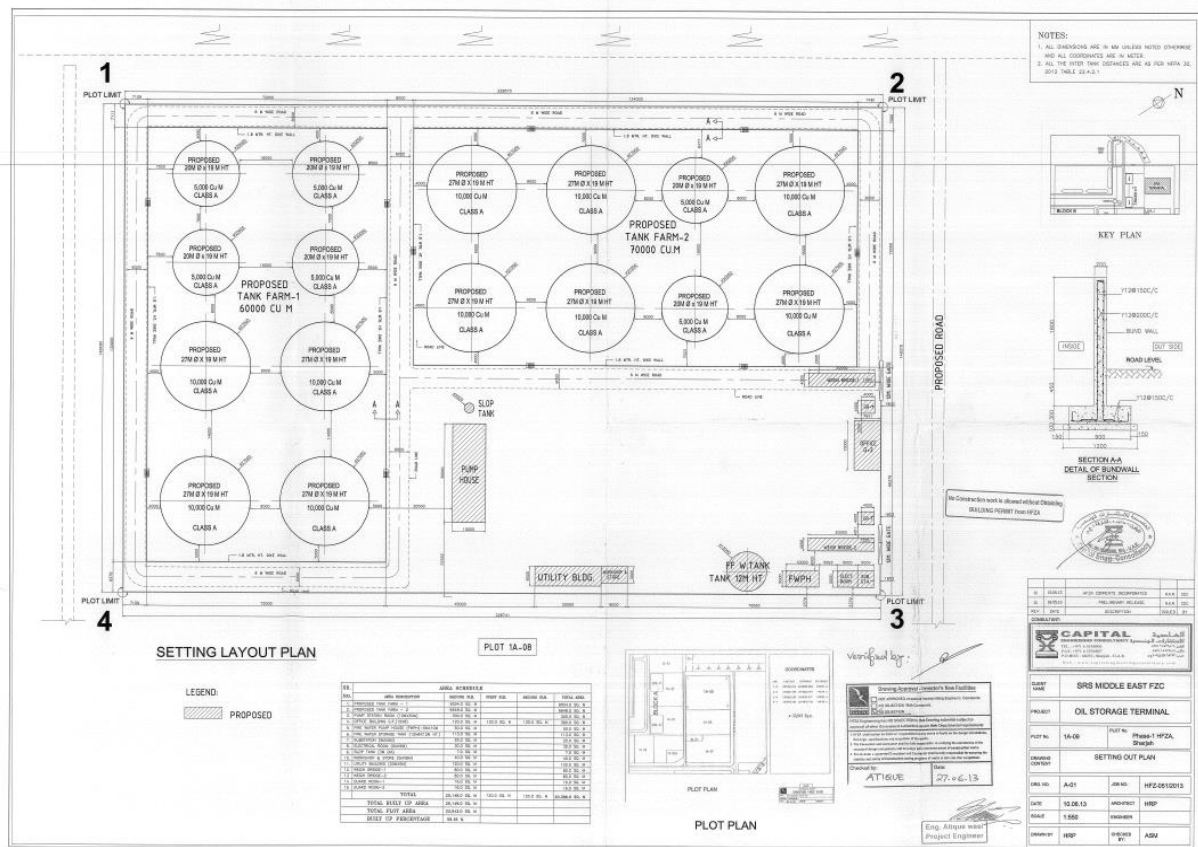
FACILITY DETAILS

The Objective of ABC is to construct and operate a State-of-the-Art Bulk Liquid Storage Terminal for various Classes of Petroleum and Petrochemical Products.

The proposed Terminal will be built on a 33,394 Square Metre plot of land which is located at a distance of 600 Metres from the Main Port in Hamriyah Free Zone, Sharjah.

Chemie-Tech Engineering (India) has been appointed to carry out the Complete Detailed Design and Engineering of the terminal.

The setting layout plan of the terminal, which includes the design and layout of the storage tanks and facilities, has already been approved by the Hamriyah Free Zone Authority. (See below).



The key features and highlights of the proposed facility include:

- Location - The facility is strategically located in close proximity to the 14 metre deep water harbor port.
- Class 1 Storage Tanks - 16 storage tanks of various sizes, with a fixed cone roof and internal floating mechanism, with total shell capacity of 144,594 CBM. Phase 1 will have 8 tanks with capacity totaling 67,412 CBM and Phase 2 will contain 8 tanks with capacity of 77,234 CBM
- Each tank will have a dedicated pump to enable tank to tank transfer and in-line blending

- Direct access to the sea via a private pipeline corridor with two 14" pipelines to the deep water harbor and two 10" pipelines to the inner harbor
Right of use of a dedicated bunker pit at the main harbor berth has been granted by the Sharjah Port Authority. The Bunker Pit at the inner harbor will be approved upon application
- A pigging system for cleaning, inspection and maintenance operations inside the pipelines
- A bottom loading tanker truck gantry with 6 independent bays
- A fully integrated firefighting system, and SCADA & PLC systems for terminal monitoring and automation
- Heating system for heavy oil

The proposed Storage Terminal will also include:

- G+2 Offices with Fully Equipped Laboratory
- Guard Room for 24 hour security, Utility Building, and Pump House
- Fire Water Pump Room, Electric Room, Substation, Workshop and Store Room
- Road Tanker Truck Gantry, Weight Bridge, and Parking Area
- Back-up Generators, Boiler & Heating System for heavy oil tanks
- Separate Entry & Exit Points, Access Road for Emergency Vehicles
- Fire Water Tank and Slop Tanks

The main Safety Features incorporated into the Facility is:

- Distance between the tanks is according to NFPA for class 1 liquid products
- Bund Wall for each Tank Farm with Wall Heights according to NFPA
- Fully Integrated Fire Fighting System
- Access road for Civil Defense & Emergency Vehicles
- American Explosion Proof Pumps throughout the terminal
- Earthing of Tank and Equipment, Lightning Arrestors in Tank
- Overfill protection, gauging & temp. monitor, PLC and SCADA for monitoring & control

Comprehensive details of the key features and facilities pertaining to the proposed project are discussed below.

STORAGE TANKS

Tank Capacity & Features

The proposed storage terminal will contain 16 storage tanks (fixed cone roof with internal floating type) with a total shell capacity of 144,594 CBM. Phase 1 will have 8 tanks with capacity totaling 67,412 CBM and Phase 2 will contain 8 tanks with capacity of 77,234 CBM. A phase-wise breakdown of capacity and tankage is shown in the table below:

Total Project			
Phase 1			
Shell Capacity (CBM)	Nos.	Shell capacity (CBM)	Tank Dimensions
10,882 CBM	4	43,528	D 27m x H 19m
5,971 CBM	4	23,884	D 20m x H 19m
Total	8	67,412	
Phase 2			
10,882 CBM	6	65,292	D 27m x H 19m
5,971 CBM	2	11,942	D 20m x H 19m
Total	8	77,234	
Total Terminal	16	144,646	
Source: Management estimates of planned capacity			

The tank design in the ABC Terminal is a ‘Fixed Cone Roof’ design with ‘Internal Floating Type Roof’. The tanks will be constructed in compliance with API, NFPA, and all relevant standards. This will increase the credibility of the facility to the authorities, insurers, as well as potential clients.

The material to be used for the tank fabrication will be MS Carbon Steel which will be ASTM tested and approved. Each Vertical Storage Tank will include; Bottom Plate, Shell Plate, Roof Structure and Roof Plate, Sump-Pit, Drain Pipe, Nozzles and Man-Ways, Staircase, Railing and Roof Railing, Pipe Ventilations and Emergency Ventilations, Hatch Covers and Connecting Platforms

The plates and tanks will be Blasted & Painted, NDT Tested and Hydro-Tested, thus, reducing the risk of leaks, enabling the owner to store multiple types of products, and increasing the overall life of the assets.

Internal Floating Roof

ABC has proposed to construct the tanks predominantly for storing Class 1 petroleum and petrochemical products. The flash point of this type of product tends to be low in nature and thus requires specialist facilities for its safe storage.

Low flash products stored in normal tanks often results in losses due to vapor evaporation, especially where the atmospheric temperature is high. The resultant vapor is also potentially hazardous due to its flammable and explosive nature, and a pollutant to the environment.

In order to minimize and mitigate such risks and hazards, both Phase 1 and Phase 2 storage tanks will include 'Aluminum Pontoon type Internal Floating Roof' with Polyethylene Foam Seals.

The roof is mechanically raised or lowered to eliminate the vapor zone which is the empty space between the roof and the liquid surface. This mechanism is especially necessary for the storage of gasoline and naphtha type products.

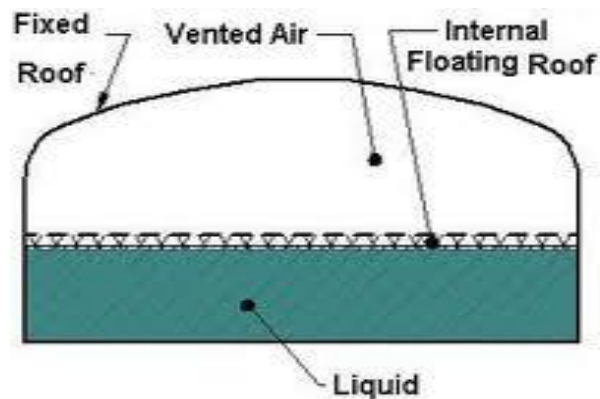


Illustration of an Internal Floating Roof

PIPELINE SYSTEM

Internal Pipeline within the Terminal

The internal pipeline system has been designed to enable multiple operations demanded by a modern storage terminal.

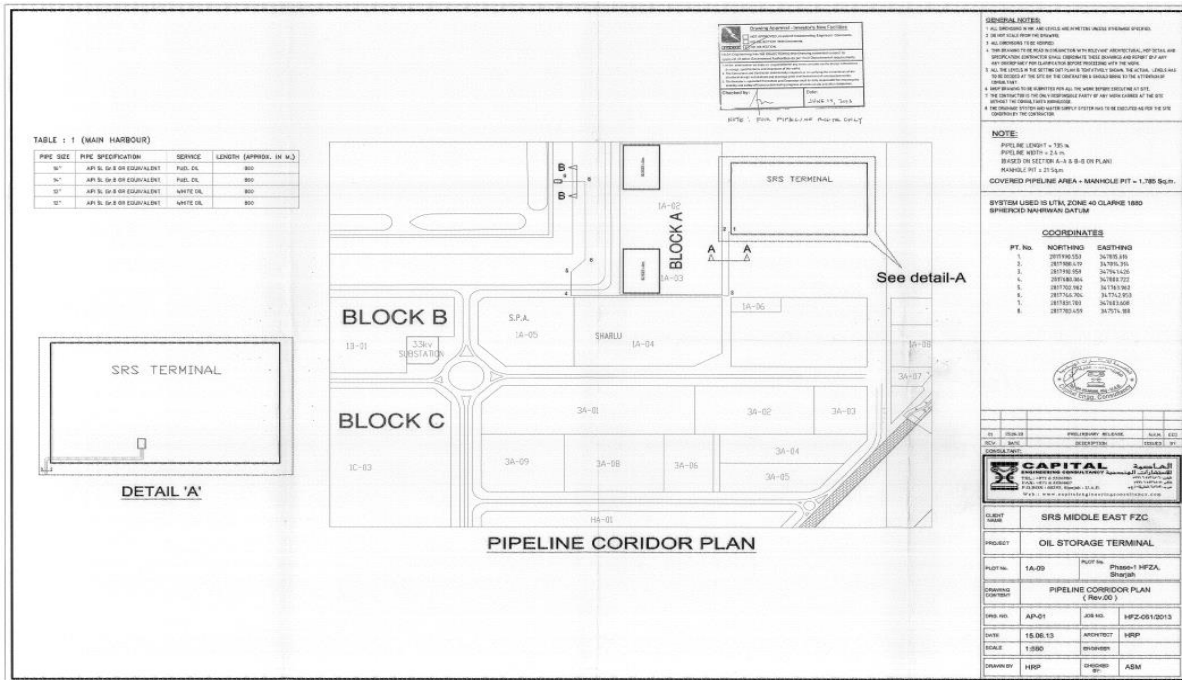
A dedicated pump for each tank will enable the simultaneous movement of product for tank to tank blending, in-line blending, loading & unloading of Marine Vessels and of Road Tanker Trucks.

The internal pipeline will be of various sizes, made from MS seamless ERW Carbon Steel, ASTM tested and API approved

External Pipeline to the Port

A dedicated pipeline system to the main port and inner port is also planned. This will enable the efficient and timely loading and discharge of products to sea-going Vessels.

A private pipeline corridor to the main harbor has already been approved by the Hamriyah Free Zone Authority (see below).



Two pipelines, one for White Product and the other for Black Product, will run from the facility to the main harbor and also to the inner harbor. The pipeline data is shown in the table below:

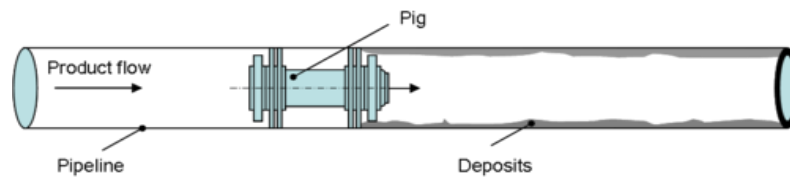
No. of Proposed Pipeline	Diameter of Pipeline	From/To	Product
1	14"	Main Jetty	Black
2	14"	Main Jetty	White
3	10"	Inner Jetty	Black
4	10"	Inner Jetty	White

Pigging System

The proposed pipeline route to the main harbor and the inner harbor consist of two pipelines each, one for white product and the other for black product. Various specification of product will flow through the pipeline. Debris may also accumulate in the pipeline over a period of time.

To enable flushing of the lines and to clear debris, it has been decided to install a Pigging System at the facility. In the context of pipelines, pigging refers to the use of a ‘pig’ to perform various cleaning, inspecting and maintenance operations inside the pipeline. The pig is inserted into the pipeline using a pig launcher and the pressure driven product in the pipeline is used to propel the pig forward until it reaches the receiving end.

The main benefit of the system is that it will ensure that product is completely cleared from the pipeline before commencing the transfer of another product through the same pipeline. The pigging system can also be used to prevent the accumulation of debris, which is a known contributor to internal pipeline corrosion. A pigging system can be completely controlled by the Programmable Logic Controller (PLC).



(Figure showing the internal working of a pigging system)



Cleaning Pig used in a pipeline. The blue discs are instrumental in performing a cleaning operation. The discs collect the remaining sediments of the product in the pipeline. A pressure driven pig then propels the product forward which is then collected at the receiving end. (Picture for illustrative purposes only)

PORT FACILITY

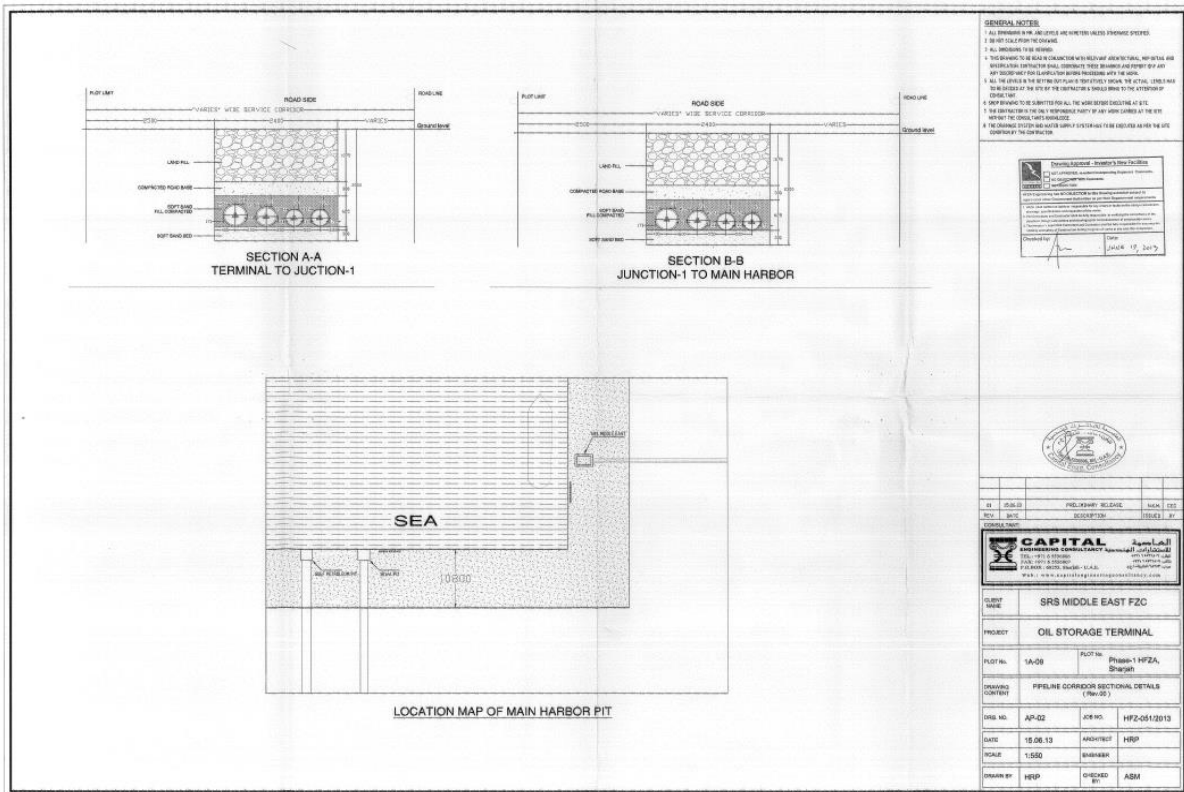
Bunker Pit

A dedicated bunker pit is required at the Port to accommodate the loading and discharge of Vessel product.

The Sharjah port Authority who manages the Hamriyah Port has given official approval to ABC for the 'Right of Use' of a bunker pit at the main harbor berth. The Bunker Pit at the Inner Harbor will be made available upon request.

The main harbor Bunker Pit will be connected to the private pipeline corridor and to the ABC storage terminal.

The location of the Main Harbor Bunker Pit can be seen in the drawing below.



The Advantages of having a dedicated Pipeline System and Bunker Pit at the Port are:

- Ensures timely and efficient loading & discharge of cargo
- Control over loading & discharge therefore reducing the risk of contamination & cross over
- Avoid unnecessary delays which can result in additional demurrage and fines
- No sharing of pipelines so operations can run on a continuous basis

Harbor Details

The following details pertain to the facilities at the Main & Inner Harbor:

The main harbor in Hamriyah Free Zone has a draught of 14 meters and can accommodate new generation ships 250 meters in length. According to the Hamriyah Free Zone website, Phases 3 and 4 of the main harbor were completed in 2010 which greatly increased the port's capacity to handle shipping traffic.

The inner harbor has a draught of 6 meters capable of handling up to 40 midsize vessels on a fully occupied quay.



(Main & Inner Harbor at Hamriyah Free Zone, Sharjah)

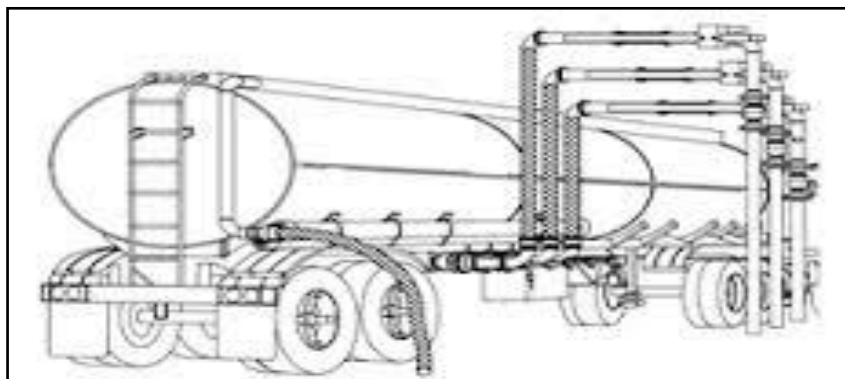
TANKER TRUCK GANTRY

A bottom loading Gantry with 6 Independent Bays is planned to be constructed within the storage terminal boundary. The gantry will enable loading and discharge of cargo via road Tanker Trucks and ISO Tanks.

The key features of the Tanker Truck Gantry include:

- 6 Loading Bays with each bay having connection to all the tanks in the terminal
- Bottom Loading system to minimize the risk of fire & explosion
- Loading/Discharge can be done from any bay and any tank
- Volumetric Flow Metres at point of Loading/Discharge
- Automatic cut off safety system
- SCADA/PLC monitored and controlled

The facility is designed in such a way that cargo from ALL the tanks can be loaded or discharged at the same time, thus enabling simultaneous Road Tanker and Marine operations.



A Road Tanker Gantry in Operation
(Image for illustrative purposes only)

TERMINAL AUTOMATION

With the aid of various equipment and systems, the terminal can be remotely monitored and operated from the command & control room. The technical consultants have proposed to incorporate a SCADA and PLC system for this type of operation.

The function of the Supervisory Control & Data Acquisition system (SCADA) will be to capture data such as volume, density, temperature, pipeline pressure, tank liquid level, and so on, which can then be fed into the Programmable Logic Controller (PLC).

The function of the PLC system will be to convert the data into command format thus enabling the automated control of mechanisms and equipment within the terminal.

The advantage of the SCADA and PLC system is that it will collect & analyze real time data which can then be used as a tool for decision making and control of the operations in the terminal.

FIRE FIGHTING SYSTEM

The need for a sophisticated firefighting system in a liquid storage terminal is second to none. The Fire Fighting system in the new facility will be installed as per NFPA codes and UAE Civil Defense Codes.

The firefighting system will consist of the following main equipment and facilities:

- Water Cooling System – each tank will be installed with water fire rings, nozzles, sprayers, separate deluge valves controlling the sprayers, and activated by means of hydraulic wet pilot detection system around each tank.
- Foam Sprinkler System – this will consist of foam station with foam pump and foam tank, deluge system, foam discharge units at the top of each tank , activated by means of wet pilot detection system.
- Fire Water Pumps – The pumps to be installed will be UL Listed (Underwriters Laboratories) pumps tested for fire-fighting purpose, and will include an Electric pump, a Diesel pump, and a Jockey Pumps.
- Motorized Fire Monitor Hydrants with firefighting accessories
- Fire Alarm System
- Emergency Lighting System
- Fire Hose Stations, Fire Hydrants, Hand held Water Monitors and Foam Monitors, as per UAE civil defense regulations

PUMPS

The type and size of pumps to be installed depend on factors such as the type of cargo that will be stored and the operational philosophy of the terminal. The technical consultants have decided to install Centrifugal Pumps which will be used for white product and Gear & Screw Pumps for the heavier black products, for both shipping and trucking operations.

FLOW METRES

For accurate custody transfer of cargo, Volumetric Flow Metres with Pre-set Valves and Mechanical Ticket printers will be installed at the loading and discharge points.

TECHNOLOGY AND EQUIPMENT PROVIDERS

Gauging & Instrumentation - The company has set aside a budget for Gauging and Instrumentation and is planning to use the latest technology from leading suppliers in the industry such as Rosemount, Emerson, Endress & Hauser and VEGA (Germany).

PROJECT AREA STATEMENT

LAND DETAILS

ABC incorporated as a Limited Liability Company in June 2012 with Hamriyah Free Zone Authority, Sharjah. The company has acquired plot of land (1A-09) measuring 33,943 square meters for the purpose of building a liquid storage terminal.

The agreement for the lease between HFZA and ABC was completed on 20 June 2012 and is valid for a period of 25 years till its expiry on 19 June 2037. The company is being charged a lease rental of AED 70/Sq.m for the first 10 years (2012-2022). However, HFZA has granted an annual “lease holiday” worth AED 396,002 on the lease charges for the initial period of 5 years. Hence the lease payments for the first 5 years will be AED 1,980,008.

The annual lease payment for the years 6-10 will be AED 2,376,010. For the years 11-25 (2023-2037), the lease rental increases to AED 75/sq.m, raising the annual charge to AED 2,545,725. The lease payment schedule is tabulated below:

ABC LLC Lease Payment Schedule				
From	To	Rate/Sq. M.	Rent Holiday	Annual payment
20-Jun-12	19-Jun-13	70	396,002	1,980,008
20-Jun-13	19-Jun-14	70	396,002	1,980,008
20-Jun-14	19-Jun-15	70	396,002	1,980,008
20-Jun-15	19-Jun-16	70	396,002	1,980,008
20-Jun-16	19-Jun-17	70	396,002	1,980,008
20-Jun-17	19-Jun-18	70	-	2,376,010
20-Jun-18	19-Jun-19	70	-	2,376,010
20-Jun-19	19-Jun-20	70	-	2,376,010
20-Jun-20	19-Jun-21	70	-	2,376,010
20-Jun-21	19-Jun-22	70	-	2,376,010
20-Jun-22	19-Jun-23	75	-	2,545,725
20-Jun-23	19-Jun-24	75	-	2,545,725
20-Jun-24	19-Jun-25	75	-	2,545,725
20-Jun-25	19-Jun-26	75	-	2,545,725
20-Jun-26	19-Jun-27	75	-	2,545,725
20-Jun-27	19-Jun-28	75	-	2,545,725
20-Jun-28	19-Jun-29	75	-	2,545,725
20-Jun-29	19-Jun-30	75	-	2,545,725
20-Jun-30	19-Jun-31	75	-	2,545,725
20-Jun-31	19-Jun-32	75	-	2,545,725
20-Jun-32	19-Jun-33	75	-	2,545,725
20-Jun-33	19-Jun-34	75	-	2,545,725
20-Jun-34	19-Jun-35	75	-	2,545,725

20-Jun-35	19-Jun-36	75	-	2,545,725
20-Jun-36	19-Jun-37	75	-	2,545,725
Source: HFZA Lease Agreement				

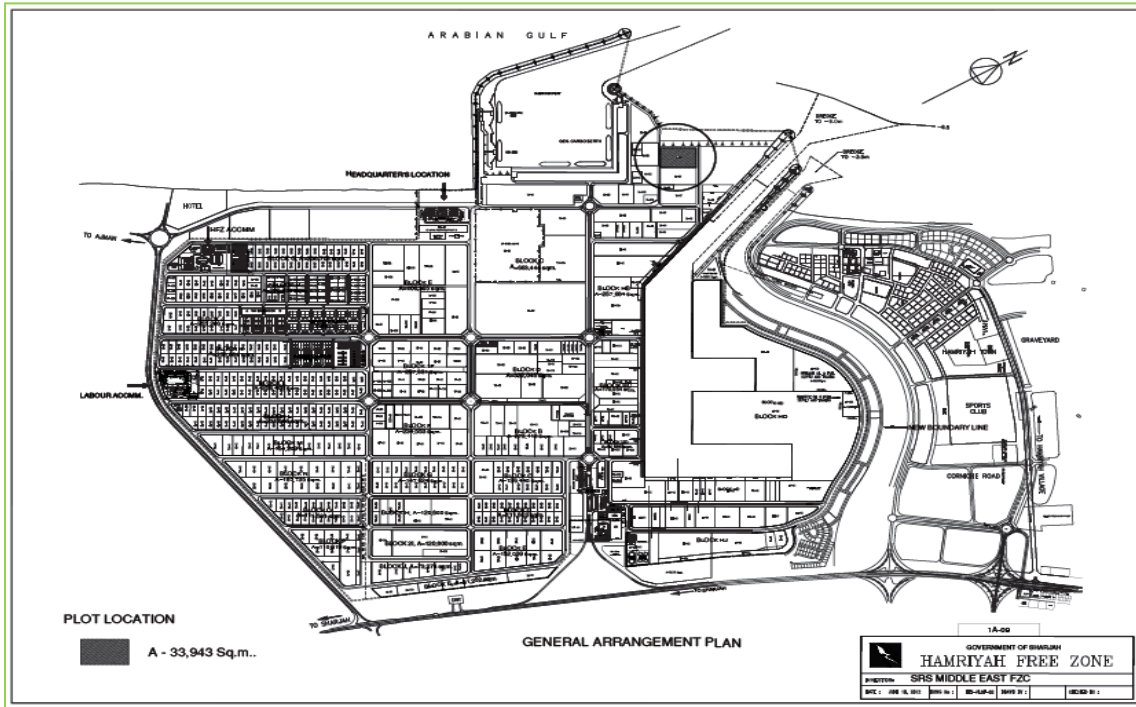
Land is available in Hamriya Free Zone for a period of 25 years with an option to renew for a further 25 years.

The land lease payments have been included in the projected financials of the company, which will be used to assess the overall financial viability of the proposed project.

LOCATION ANALYSIS

Plot Location

ABC has managed to acquire a plot of land (1A-09) in the Storage Tank Farm area of Hamriyah Free Zone, Phase 1. The plot of land measure 33,943 sq. metres and is located at a distance of 600 metres from the deep water port (see below)



The promoters of ABC are of the opinion that the uniqueness of the plot location gives them a competitive advantage over other facilities as it provides direct access to the sea, via a dedicated pipeline corridor from the proposed storage terminal, to the 14m deep water berth.



(ABC Plot Location)

Hamriyah Free Zone

Hamriyah free Zone is located in the Emirate of Sharjah between Ajman and Umm Al Quwain. HFZA was established by an Emiri Decree on 12 November 1995 and since then has been administered by the Government of Sharjah. The Hamriyah Free Zone Authority manages the Free Zone area of approximately twelve million square meters of prime industrial and commercial land including sea plots.

The free zone is divided into 7 different industry-dedicated zones:

1. Oil and gas Zone
2. Construction World
3. Petrochemicals Zone
4. Maritime City
5. Timber Land
6. Steel City
7. Perfume World

ABC ME has been allotted a plot of land in the Tank Farm Area, owing to the nature of its proposed business activity. HFZA offers the promoters a choice of Industrial, Commercial or Service License. HFZA, being a free zone, offers the promoters 100% ownership and control of the entity proposed to be set-up. The entity can be set up as a limited company either as Free Zone Establishment, Free Zone Company or as a Branch of a Foreign Company.

HFZA offers 100% ownership and control of the entity, which eliminates the requirement of a local sponsor.

HFZA is an ISO Certified organization and has a streamlined process to form a company which makes it possible to obtain a license within a very short space of time. As per the current law, a company can be formed and a license obtained through HFZA with a minimum capital requirement of AED 150,000 (US\$ 41,000), as compared to the minimum requirement of AED 300,000 for forming a company under the Department of Economic Development i.e. a local sponsored company.

In comparison to other established Free Zones in the UAE, HFZA is considered to be the most cost-effective of them all. HFZA charges AED 2,750 for Industrial License as compared to Jebel Ali Free Zone which charges AED 15,000 for Industrial License formation.

KEY INFRASTRUCTURE

Logistics Network Channel

HFZA is based around the Hamriyah Port operated and controlled by the Department of Ports and Customs, Government of Sharjah. HFZA's close proximity to the port provides distinct advantages to companies operating in the area.

Ports

The Hamriyah Port offers logistical advantages since it is closer to the Strait of Hormuz. Moreover, it is located in Sharjah and has a unique advantage as the only port on the Arabian Gulf's west and east coasts with direct access to the Indian Ocean International Sea routes as compared to the ports in other Southern Emirates i.e. Jebel Ali, Dubai & Mina Zayed, Abu Dhabi.

Apart from the Hamriyah Port, companies registered with HFZA also have access to other close by ports located in Sharjah, hence, providing additional access to Sea Routes and options to manage logistical requirements.

HFZA provides access to a highly developed water port (14 meter) that accommodates dedicated berths for petrochemical, LPG, bulk handling as well as 2 general cargo berths and 2 container terminals. It also has access to inner harbor (6-9 meter deep) which is an ideal location for ship repairing, dry docking, ship building and various other marine services. With the existing facilities, the port can also accommodate Panamax size vessels in a 250m long cargo berth.

Airport

Sharjah International Airport is at a distance of approximately 30 kilometers from HFZA. The airport is one of the biggest sea-air cargo handlers in the Middle-East and Africa. Companies have assurance of being connected to over 230 international cities and trading hubs, hence, adding to the benefits of being located in HFZA.

Road Network

HFZA has easy access to two major highways including Sheikh Mohammed bin Zayed Road (formally known as Emirates Road) and Ittihad Road. Both the roads connect Sharjah to the other Emirates and beyond.

Electrical & Water

Electricity and Water supply is provided by Sharjah Electricity and Water Authority (SEWA). SEWA has two Power Generation Units in Hamriyah, and with a combined capacity of 200 Mega Watt (MW), is easily able to meet the domestic and industrial energy requirement of Hamriyah and its neighboring areas.

Hamriyah Free Zone is the World's First Free Zone to achieve ISO 14001 certification for Environmental Safety and Water Management.

Telecommunication

Telecommunication Services in HFZA are provided by Etisalat, assuring a wide range of offerings by the largest telecommunication Company in UAE.

Advantages & Disadvantages of Hamriyah Free Zone

Advantages:

- No required a Local Sponsor (51% Shareholder in the Company)
- 100% Company ownership allowing full control over the company assets and liabilities
- A one-stop shop for document processing including immigration, registration, and licensing
- Free zones are protected from foreign exchange controls, barriers to entry
- No taxes on personal or corporate income, and full repatriation of capital as per federal law
- Regulated environment with preferential freight rates
- The import and export of goods and materials to and from HFZA is exempt from duty
- Submission of audited financial statements not compulsory, unlike other Free Zones

Disadvantages:

- Companies located in HFZA unable to have office in the main land, thus limiting the scope of expansion and market visibility
- Companies unable to carry on activities such as banking or insurance
- Hamriyah Free Zone is located in Sharjah, however, Dubai is considered to be the business hub of the Middle East, especially after being awarded Expo 2020. This may limit companies in HFZA to capitalize on expected growth and opportunities as compared to companies in Dubai based Free Zones

RAW MATERIAL AVAILABILITY

The ABC business model is to lease the bulk liquid storage tanks to its clients who operate in the Petroleum and Petrochemical industry.

The company is therefore operating in the Service Industry and will not require comprehensive Raw Material to complement its operations.

Considering the nature and limited requirement of raw material, D&B SAME Team is of the opinion that the company is completely hedged in terms of Raw Material Availability and Supply-Chain Issues.

Additionally, due to limited requirement of raw material, owing to the nature of the business, the company is completely hedged against any Government Regulations pertaining to Importing of Raw Materials.

Certain limited material may be required for running the day to day operation of the business and may include items such as fuel for generators, parts for repairs & maintenance, and Office Supplies. These materials are easily available in the local market.

Nevertheless, D&B SAME Team will analyses and evaluate any raw material or inventory that may have been reflected in the Projected Financials.

HEALTH, SAFETY AND THE ENVIRONMENT

It is a widely accepted fact that environmental hazards are inherent in the oil and gas sector, and, as a consequence, the industry has been labeled as a major polluter.

The impact of petroleum products on the health and safety of people, communities, and the environment is under scrutiny from various quarters.

The concern of any socially responsible organization should be to prevent such hazards and to identify and minimize their impact on the environment, its people, and its surroundings.

In the UAE, sophisticated environmental legislation has been implemented, both at federal and local level. The environmental protection department of Sharjah Municipality is the government authority which regulates and enforces the environmental laws, and industrial activity in the emirate is monitored by them.

Hamriyah Free Zone Authority has its own regulatory department for environment and health & safety, and requires businesses to carry out certain studies as a pre-requisite to setting up industry.

In view of the above, ABC has appointed an Environmental Consultant to conduct an Environmental Impact Assessment study and a Risk Assessment study of the proposed project.

The ongoing study will cover all likely construction and operational activities of the project, and will:

- Identify and predict the environmental, economic and social consequences of the proposed project
- Assess the physical and geographical suitability and public acceptability of the proposed facility & haulage routes
- Recommend pollution abatement options to be employed
- Recommend management control and operational practices to be employed
- Highlight the potential for accidents and failures to be foreseen and mitigated
- Conduct Risk Assessment of the project and its processes, identifying hazards and making recommendations to mitigate them

As part of the study, and as requirement of HFZ, the environmental consultant will also produce an EHS Method of Statement, an Operations Manual, and an Assembly & Evacuation Plan of the facility.

Sustainability

Traditionally, organizations have focused largely on economic performance than anything else. Modern businesses nowadays, with innovative and proactive management, are putting greater emphasis on the protection and conservation of the environment.

Sustainability is becoming a prerequisite for global competitiveness and companies worldwide, including in the oil & gas sector, are aligning their objectives with the principles of sustainable development.

These activities however cost money which in turn has a negative impact on the economic performance of the company.

The policy adopted by ABC will be one of protecting the environment, its surroundings, and its people. Its goal will be to give greater emphasis on:

- Safety Performance both during construction and operations
- Emissions & Effluents control
- Energy Consumption & Carbon Footprint, and,
- Public Health, both within the organization and beyond

As an ongoing commitment to sustainability and to protecting the environment, and amongst other measures, an Environmental Audit and Risk Assessment of the facility and its surrounding will be conducted on an annual basis.

IMPLEMENTATION SCHEDULE

The construction of Phase 1 of the proposed project is scheduled to commence from February 2015.

The successful contractor will be awarded the contract for Phase 1 of the project and will be responsible for all works relating to it, including Civil, Mechanical, Electrical, Piping, Fire Fighting and Instrumentation.

The EPC contractor will deliver the project on a turnkey type basis and will ensure that all the terms of the contract are met before handover.

It has been estimated that the construction of Phase 1 will take up to 15 months from the date of commencement, and completion and handover by April 2016.

The facility is expected to be operational by May 2016 as projected in the financial statements.

Prior to the construction of the project, ABC, the consultant and contractor will complete the following formalities:

- **Submission & Approval of Design & Drawings** including Design Calculation of Foundation and Design Calculation of Tanks
- **Submission & Approval of Inspection & Test Plan (ITP)** for the Foundation Works and for the Fabrication & Erection of Tank
- **Submission & Approval of Design and Drawings** of all the Services

CONSTRUCTION STAGE

According to the assumed 'Program of Work', the construction of the project is expected to start by the 1st week of February 2015 and is estimated to continue for a period of 15 months, completing by April 2016.

It is anticipated that all preliminary work including the design approvals, engineering approvals, building permits, and site preparation work will be complete before the start of construction in February 2015.

The construction schedule has been bifurcated and explained in detail below.

1. CIVIL WORK

The programme of civil work includes the soil improvement to be carried out before the beginning of the construction of the tanks and tank foundations. The entire programme for soil improvement is expected to last for 2 full months. During this period the contractor will undertake other preliminary

activities such as mobilization of machinery, clearing the site from debris, and construction of temporary facilities such as portable cabins.

Tank Foundation

This is the immediate next program of work and is expected to start from the beginning of April 2015 and continue for a period of 3 months.

Other Structures

The EPC contractor will undertake construction of other structures required for the proposed facility such as loading and unloading room, pump room, power substation, utility room, parking area, gantry, main entry and exit gate, and the landscaping using interlocking kerb stones. Most of this work is distributed between July 2015 and February 2016.

2. MECHANICAL WORK

The EPC contractor will perform and implement Mechanical Work in the following sub-stages:

Fabrication & Erection of Tanks + NDT Test

The 8 storage tanks in Phase 1 are scheduled to be constructed between August 2015 and December 2015. The internal pipeline and valves fitting is expected to be completed by the end of February 2015. The internal floating roofs are expected to be installed in all the tanks during the months of March and April 2015. Moreover, the fabricated tanks will be tested for the integrity of the welds, surface cracks, etc., using NDT (Non-Destructive Testing). All fabricated tanks will be constructed abiding by the guidelines issued by API.

3. EXTERNAL & INTERNAL PIPELINE CONNECTION

This stage will solely involve construction and fabrication of external and internal pipeline connections, which will integrate various machineries and equipments with tanks and Jetty Facility.

4. FIRE FIGHTING SYSTEM

The EPC contractor will install firefighting systems as per the standard and guidelines issued by National Fire Protection Association, USA (NFPA).

5. ELECTRICAL SYSTEM

Electrical network will ensure electricity supply and connectivity across the proposed facility.

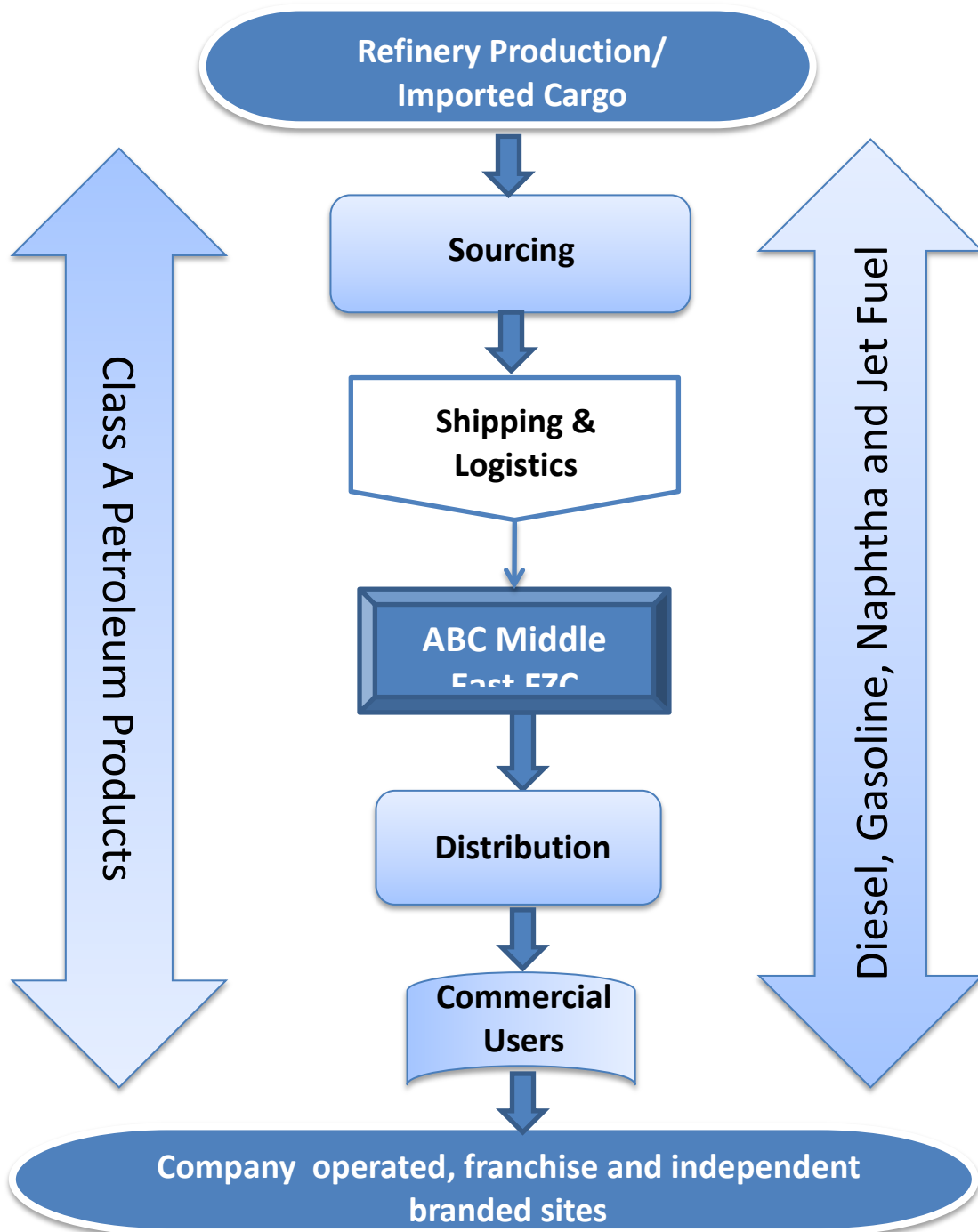
6. INSTRUMENTATION AND GAUGING SYSTEM

Instrumentation includes the installation and testing of several items such as such as radar and temperature gauges. The PLC and SCADA system is also expected to be installed and tested by the end of April 2016.

7. PROJECT CLOSE OUT

Parallel to civil and mechanical work implementation, the contractor will conduct the testing and commissioning of the tanks and the pipelines. The contracting company will handle all the submission of documentation and finalization of legal procedures to enable the handing over of the project to the management of ABC. As per the plans provided by the management and the contractor, the entire construction is expected to be completed by the end of April 2016. As per the above plan of work, the management expects ABC to commence operations by the first week of May 2016.

VALUE CHAIN ANALYSIS



An independent bulk liquid storage provider essentially provides services in the form of storage, pipeline transfer, bunkering, heating, blending and additivisation.

Most of the companies operating globally offer their services to the entire spectrum of businesses operating in the oil and gas sector. These operations comprise of oil and gas extraction, oil and petroleum refining, petroleum products trading and retail of gasoline, diesel and other end-use products.

From the point of view of the entire oil & gas sector, the independent bulk liquid storage industry is placed between the petroleum extractors and traders of petroleum products. The operations of a bulk liquid tank farm operator involve coordination with several players in the value chain.

In the case of ABC, the requirement for the facility and storage will be from companies engaged in the trading of petroleum products, refiners of petroleum & petrochemicals, manufacturers of engine and lubricating oils, and end users of fuel and petroleum products.

The performance of the independent bulk liquid storage industry generally relies on the following factors:

1. Oil and gas extraction and increase in refining capacity
2. Physical trading of petroleum products
3. General growth in retail consumption of end use petroleum products

INDUSTRY ASSESSMENT

Bulk liquid storage terminal companies store commercial liquids in aboveground storage tanks, which are often referred to as "tank farms." Any liquid that is transported in bulk such as crude oil or petroleum refined products (gasoline, diesel, fuel oils, kerosene, etc.) or chemicals (solvents, fertilizers, and pesticide, acid) are stored in tank terminals.

Some terminals provide only petroleum storage, others only chemical storage, and some store about any bulk liquid. Terminal companies interconnect with, provide services to and transfer products to and from oceangoing tank ships, tank barges, pipelines, tank trucks, and tank rail cars. Some terminal companies provide an array of additional services including blending, packaging, canning, drum filling warehousing and bonded storage.

TERMINALS TYPES

Terminal operating companies generally classify their facilities into two major categories.

1. Third party terminals are operated for independent liquid bulk storage. These terminal operators specifically construct tank farms for leasing purposes to oil companies, traders, producers, and refiners. The lease period may be for a short term of 6 – 12 months or for a longer term of 3 – 5 years. The rental is determined by factors such as the total throughput of product, duration of product stored and the type of product stored. Other services such as heating, blending, additivisation and homogenisation may also generate additional revenue.

2. Proprietary terminals are owned operated by oil companies, refineries, logistics companies, chemical manufacturers, fuel supply companies, and petrochemicals traders. The initial capital expenditure and operating expenses are borne by themselves. These terminals are for own use as a support for operations.

Additionally, a combination of for-hire and proprietary terminals are owned by companies that store their own cargo and also store cargo on behalf of clients.

COMMODITIES STORED

Bulk liquid storage terminals store commodities including crude oil, refined petroleum products, chemicals, petrochemicals, alcohol, asphalt, fertilizers, animal fats and oils (for cosmetics), vegetable oils (for food products), molasses, and so on. Customers who store products at the for-hire terminals include oil producers and refiners, food growers and producers, utilities, transportation companies (jet fuel for airlines), commodity brokers (buyers/sellers of oil), and government and military agencies.

In the case of ABC, the commodities to be stored will include various classes of petroleum and petrochemicals.

INDUSTRY GROWTH FACTORS

1. Increased spending on oil and gas storage infrastructure in the Middle East

The MENA region is expected to be a major upcoming market for independent storage providers. Infrastructural facilities are expected to improve in this region during the period 2014 – 2016. The major factor for the growth of the industry is the increased demand for fuels and crude oil in this region. Currently, the region depends on existing storage facilities in China, Singapore, the UAE and India.

2. Increased buying-out and leasing activity by merchants and traders.

Several major petrochemicals and oil traders dealing in physical delivery are based in Europe and North America. Merchants have resorted to permanently buying out or leasing for long term storage facilities in the MENA region to ensure timely delivery and a stable income flow. The option also allows the merchants to strategically cope with the geopolitical instability in the region. Leasing storage space on the Eastern coast of the UAE insulates merchants' reliance on the Strait of Hormuz and allows them to quickly respond to demand. At the same time, ports on the Western coast of the UAE are predominantly used for the transportation of oil and petroleum products within the Persian Gulf region. Products are shipped between ports such as DP World Jebel Ali, King Abdul Aziz Port Dammam, Shuwaikh Port Kuwait and Mina Zayed Abu Dhabi.

3. Divestment of storage facilities by integrated oil and gas companies.

Several regional oil and gas companies in the MENA region have already set up several storage facilities at strategic locations to help them integrate upstream and downstream energy assets into the global marketplace. However, of late, it has been observed that these companies are engaging in the divestment of their storage facilities to focus on the refining and drilling process. They have also been observed making greater investments to secure and develop upstream integration. Although this may be a risky move, the potential rewards are much higher than downward integration. Companies such as Chevron and Shell have been divesting their petroleum terminals. Potential buyers include pipeline operators, petroleum distributors and logistics service providers such as Buckeye Partners, Kinder Morgan Energy Inc. and Sunoco Inc.

4. Rising demand for Aboveground Storage Tanks (AST).

ASTs are in demand and are becoming more widely accepted since they are less expensive to install and easier to maintain and monitor as compared to underground storage. The Middle East region is expected to witness greater investment in the installation of ASTs in Riyadh and Fujairah.

5. Expectation of continued growth in DME performance.

The Dubai Mercantile Exchange was set-up in Dubai in 2007. The main product of the DME is the Oman Crude Oil Futures which is the largest physically delivered crude oil futures contract in the world. Fuelled by the growing demand for oil in the MENA region, the daily average delivery in 2011 stood at 3.5 Million barrels (556,460 CBM) growing to 4.67 Million barrels (742,470 CBM) in 2012 and 6.1 Million barrels (969,820 CBM) in 2013. The total physical deliveries in 2010 were

144,892,000 barrels (23,036,000 CBM). During the first half of 2014, trading volumes and total inventory physically delivered were up to 1.13 Billion barrels (179,660,000 CBM). Although the delivery point is located at Mina Al Fahal, Oman, oil storage terminals in Fujairah, Hamriyah and Jebel Ali play an important role for maintaining inventories. The UAE's convenient geographical location in the Persian Gulf region is better tuned for physical deliveries of contracts than ports in other countries. In the near future, a tie-up between DME and Fujairah Crude Terminal is expected which may improve the possibility of capacity expansion over the next 5 years.

6. High Operating and Net profit Margins.

Several public companies having global operations have experienced high operating and net profit margins. As per ft.com equities analytics, the following public companies can be considered as the peers of ABC Middle East. Their financial results are shown below –

Financial Performance		
Description	2013	2012
Oiltanking Partners LP (LSE)		
Operating Margin (%)	55.45	46.67
Net profit Margin (%)	59.71	48.15
Return on Equity (%)	13.31	
Return on Investment (%)	23.32	
Debt to Equity ratio	0.3602	
Koninklijke Vopak NV (NYSE)		
Operating Margin (%)	41.23	41.17
Net profit Margin (%)	24.63	25.34
Return on Equity (%)	15.9	
Return on Investment (%)	7.76	
Debt to Equity ratio	1.25	
Source: ft.com market research		

CONSTRAINTS AND CHALLENGES

1. High initial investment

Globally and in the UAE, the industry is defined by high barriers to entry. Upfront costs for setting up a new oil storage terminal and to construct storage tanks are high. On average, capital investment is estimated at approximately € 200/CBM (AED 980/CBM) for new terminals for oil and petroleum products storage, € 400/CBM for chemical terminals and € 2,000/CBM for LNG terminals. It is estimated that a company willing to establish a tank farm with a shell capacity of 100,000 CBM will have to initially invest approximately € 20,000,000 (AED 98,000,000). As per information available publically, Horizon Terminals Limited commissioned a storage terminal of 240,000 CBM in Fujairah in June 2013 after incurring an initial expenditure of USD 100 Million (AED 367,000,000) – at an average cost of € 312/CBM (AED 1,529/CBM).

2. Storage Constraints

Due to operational and safety constraints, globally, on average, only about 80% of the shell capacity utilization has been observed.

For example, the Cushing Storage Hub in Cushing, Oklahoma is the world's largest oil storage terminal with a shell capacity of approximately 77.8 Million barrels (12,370,000 CBM) however, as of January 2013, the total stock was estimated at approximately 51.8 Million barrels (8,235,000 CBM) – an effective capacity utilization of (66.6%).

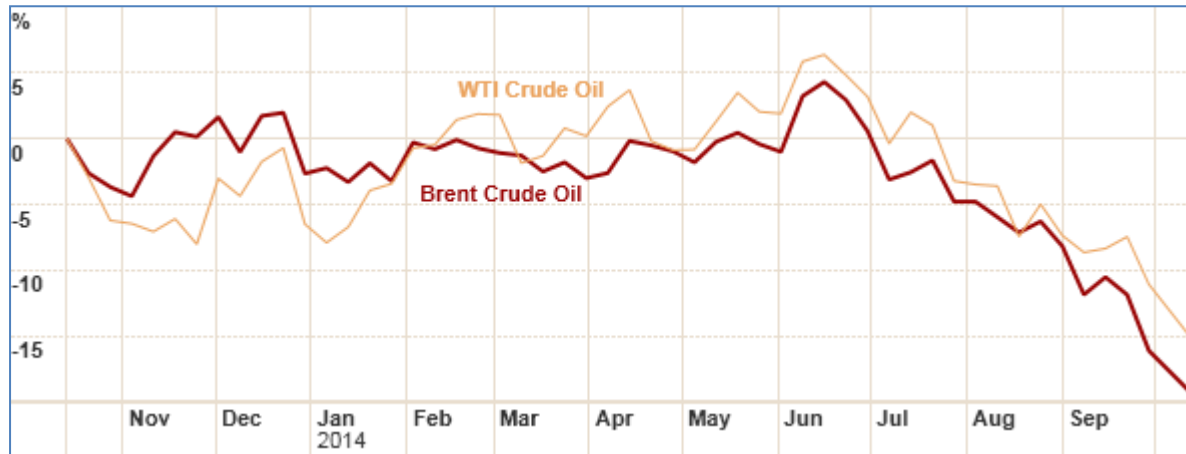
3. Contango and Backwardation in Futures Market

The oil futures market had been experiencing rapid growth due to the existence of a contango in Brent Crude and West Texas Intermediate (WTI) Crude markets. Contango is a situation in which the futures prices are quoted higher than the expected spot price. A contango indicates increasing prices beyond the period of the settlement date of the futures contract. It implies a higher demand (long position) as compared to supply (short position). Contango results in higher storage demand from petrochemicals traders on account of stockpiling due to higher expected prices. On the contrary, a backwardation indicates oversupply in the futures market as compared to the supply in the spot markets. This causes traders trying to get rid of their stocks before the expiry of the futures contracts. This in turn results in falling demand for storage capacities. The spot and futures market has been in backwardation for about 6 months till H1 2014 and this is expected to be a temporary phenomenon. However, the situation is expected to reverse in H2 of 2014 and H1 of 2015 and the markets are expected to remain in contango in the long-term.

4. Declining Oil Prices

Oil prices have been showing a declining trend with both the North Sea Brent and WTI falling nearly 15 percent in the one year till September 2014. This decline has been sharp between June 2014 and September 2014. Currently, Brent has been trading between USD 88 – 90 and the WTI between USD 90 – 94. It is expected that the OPEC countries led by Saudi Arabia may push to avoid production cuts among OPEC members stabilize between USD 80 – 85. It is suggested that this may be specifically to deter or to slow down the shale oil boom in the USA. Falling oil prices are expected to

dissuade newer investment in Shale Oil in the USA and in Europe. However, OPEC members may agree to a cut in the production quotas in the first half of 2015. It is not quite impossible to estimate a floor on the current decline in oil prices. However, it is sure that lower oil price will have an adverse impact on the prices charged by independent terminal operators and independent bulk liquid storage providers – but only in the short term.



Source: ft.com Markets research Commodities
<http://markets.ft.com/research/Markets/Commodities>

There may be an increase in oil prices over the long-term by a reduction in production due to internal budgetary requirements of OPEC member countries. Several countries such as Venezuela, Nigeria, Iran and other countries in the Persian Gulf region depend on oil revenues for determining national budgets and government spending. The long-term impact of the current reduction in oil prices on the storage revenue seems uncertain.

GLOBAL DEMAND AND SUPPLY SCENARIO

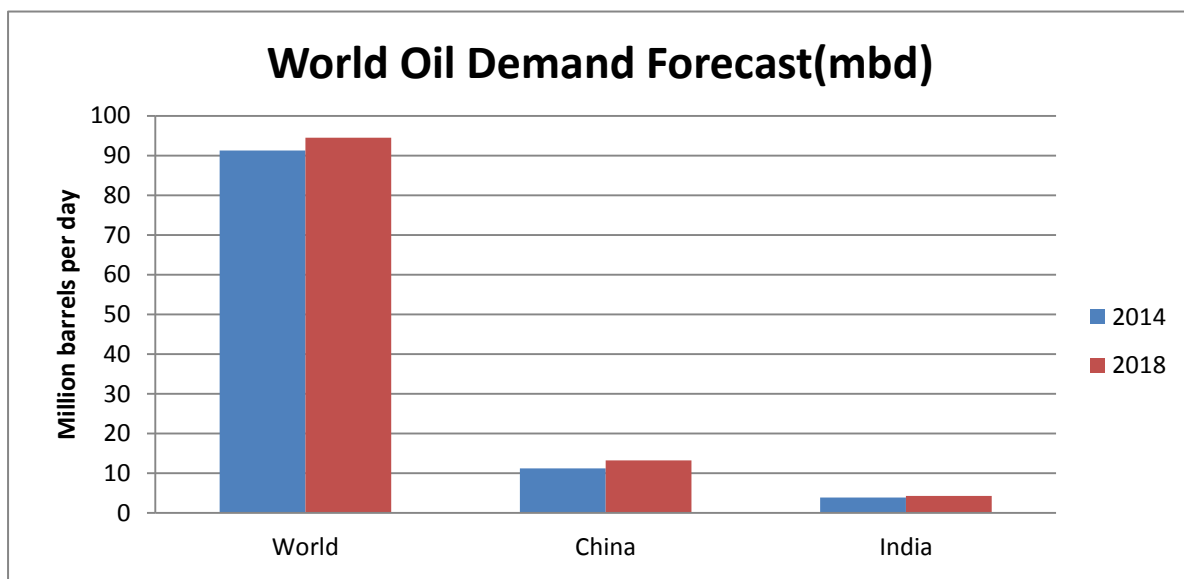
MARKET VALUE FORECAST

The global oil and natural gas industry has witnessed robust growth in the last decade. It is expected to increase by 3.5%/ 3.2 million barrels/day over the period under review (2014-2018), due to the increase in industrial activity and renewed global economic growth. In the past, this has led to investments in the oil and gas industry and in related sectors. We expect this trend to continue in the future.

Transportation and storage sectors in the oil and gas industry, is forecast to accelerate, with an anticipated CAGR of 7.3% for the five-year period 2010-2015, which is expected to drive the sector to a global value of \$162.1 billion by the end of 2015.

The global market for petrochemicals is highly fragmented in nature. The global petrochemicals market was valued at USD 472.06 billion in 2011 and is expected to reach USD 791.05 billion by 2018, growing at a CAGR of 6.7% from 2012 to 2018.

In the Middle East, chemical exports and refining capacity are expected to grow at 20% over the next several years, hence affecting the storage industry in a favorable manner. The contract logistics sector is estimated to grow at an average rate of 7 percent in the Middle East through 2015, with the highest growth in Saudi Arabia and UAE.



GEOGRAPHY SEGMENTATION

World's top ten oil producers (2012)

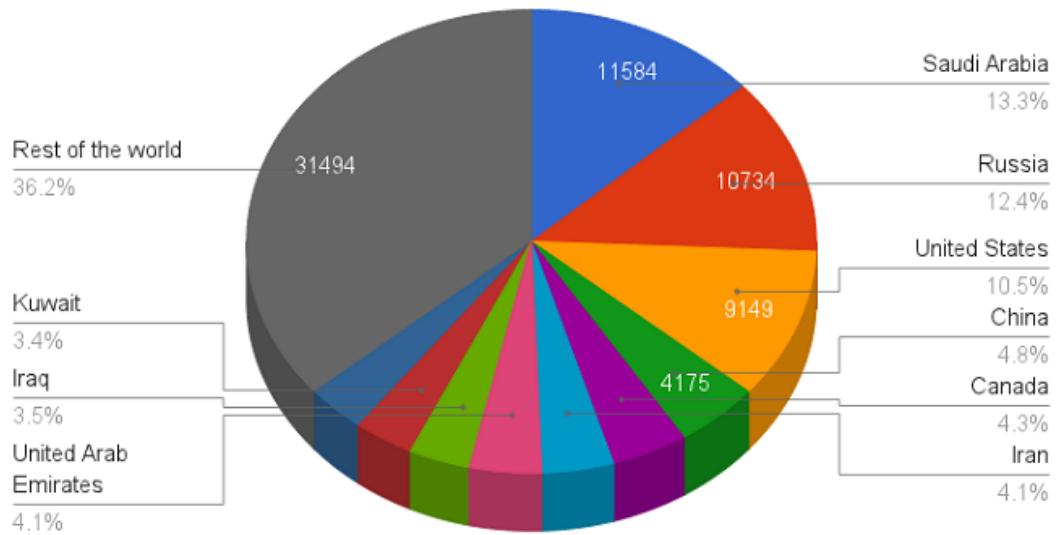
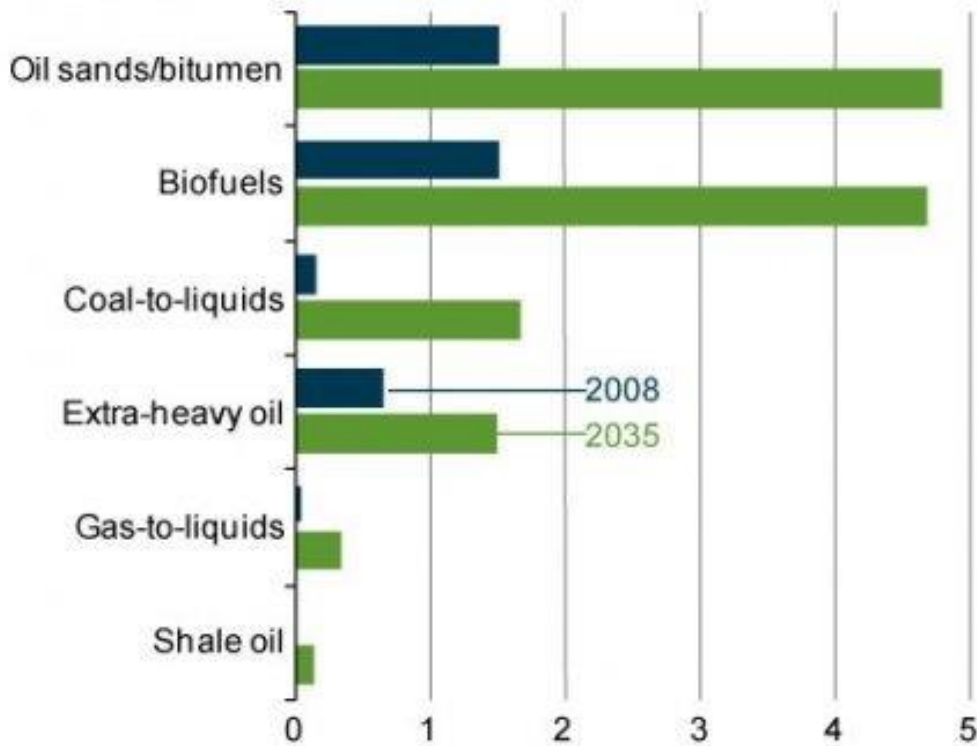


Figure 30. Unconventional liquids production by fuel type, 2008 and 2035
(million barrels per day)



EMERGING MARKETS

Given the strategic nature of storage assets, competition is intense between oil and gas companies, independent storage operators, oil traders and infrastructure funds. The Asia region, though well served by existing storage terminals in the major ports in Singapore, China, Korea and Japan, saw minimal storage terminal transactions in 2013 except in Fujairah, UAE. The intense competition for storage terminals in the United States and Europe is expected to continue. The alternative would be to acquire refineries that have been or could be converted into storage terminals.

It is estimated that the global oil & gas storage capacity may be approximately 2,000 – 2,500 Million CBM of which, independent operators own and run terminals with an estimated capacity of 400 – 500 Million CBM (20 percent). This storage market for oil and petrochemicals has been consolidated in a number of places which are operated as terminal hubs due to their strategic location. Generally, since oil, petrochemicals and LNG are traded for speculative purposes, it makes perfect sense to establish and operate a tank farm at a maritime port. Tank farms with access to jetty and bunkering facilities offer simpler solutions for delivery as compared to farms located inland.

One such traditional hub is located in the ARA region – Amsterdam, Rotterdam and Antwerp. The ARA ports region also includes smaller ports such as Ghent in Benelux and Zeeland Seaport, Netherlands due to their deep sea access. These ports are now highly dependent on the physical trade in oil and petrochemicals. Rotterdam accounts for 60 percent of the storage capacity of which only 20% is in the form of independent tank storage. On the contrary, Antwerp and Amsterdam, both, have significant investment in independent tank storage.

Europe's ports are becoming increasingly important sites for tank storage as the sector expands beyond simple supply chains to trading hubs. The major ports to benefit from this are ARA (Antwerp-Rotterdam-Amsterdam) range. They are favored because of their deep-sea access and depth of technical knowledge that comes with growing industrial clusters. Belgium is the most important European Union distribution hub for chemicals from the Middle East, according to a report published at the end of 2013 by GPCA.

ANTWERP

Antwerp has 15 tank storage terminals with a combined liquid bulk storage capacity of 6.9 Million CBM. For the year 2013, the total maritime cargo handled by the Port of Antwerp was estimated at 190 Million tons of which liquid bulk throughput was estimated at 59,943,776 tons of which, crude oil derivatives throughput was 43 Million tones. This indicated a YoY increase of 3.6 percent. The driving force behind this was liquid bulk.

ROTTERDAM

Total tank storage capacity for liquid bulk storage in Rotterdam is estimated at 30 million CBM. About 20% of this capacity – 6 Million CBM is represented by independent terminal operators such as Vopak terminals, Odfjell terminal Rubis terminal, De Rijke terminal Euro Tank Terminal, Lyondell Europoort Terminal, etc. The remaining capacity is owned and managed by oil refineries, pipeline companies, oil producers, tank construction companies, shipping, rail and trucking companies and large petrochemicals and oil traders based in the region. Total crude oil handled by the port of Rotterdam was estimated at 91 Million tones, a YoY decline of 7.1 percent and mineral oil products and oil derivatives throughput was estimated at 81 Million tones. Other liquid bulks remained same as previous year at 33 million tones. The port added that the Rotterdam complex had to cope with the low demand for refinery products, given the structural overcapacity and the increasing competition in the world market for such products led to refinery maintenance shutdowns. Total exports of chemical products from GPCA countries rose from USD 7 billion dollars in 2002 to \$ 52.7 billion in 2012.

AMSTERDAM

The shell capacity at the port of Amsterdam increased to 6.3 Million CBM in 2013 after a 12 percent growth between 2008 and 2012. The total cargo handled by the port of Amsterdam in 2013 was 95.75 million tones. The throughput of liquid bulk cargo in 2013 fell by about 5% in 2013 to 41.1 million tones. Out of which, refined products and oil derivatives accounted for 38.6 million tones.

SINGAPORE

The hub for the storage and distribution of crude oil, oil derivatives and petrochemicals is located in Jurong Island, Singapore. The island is an artificially reclaimed piece of land that has been specifically developed by the Government of Singapore for the promotion of liquid bulk storage. Physical reclamation began in 1995 and the island was officially inaugurated in 2000. The island also incorporates refineries operated by the Singapore refining Company and Exxon Mobil with a cumulative capacity of 210,000 CBM of crude oil per day. The JTC Corporation (formerly Jurong Town Corporation) has been appointed by the Singapore Government to construct underground bulk liquid storage for naphtha and its derivatives. The development is expected to be completed by the end of 2014. Phase 1 is expected to have a capacity of 1.47 Million CBM. The possibility of constructing Phase 2 with a capacity of 1.32 Million CBM is being explored.

In 2005, several companies such as Horizon Terminals, Vopak and Oiltanking started construction of substantial storage capacities to add to existing storage capacities of 18 million CBM. Chevron Philips, ExxonMobil and Shell are currently engaged in the development of underground rock caverns for the storage of liquid hydrocarbons such as crude oil, condensate, and naphtha and gas oil.

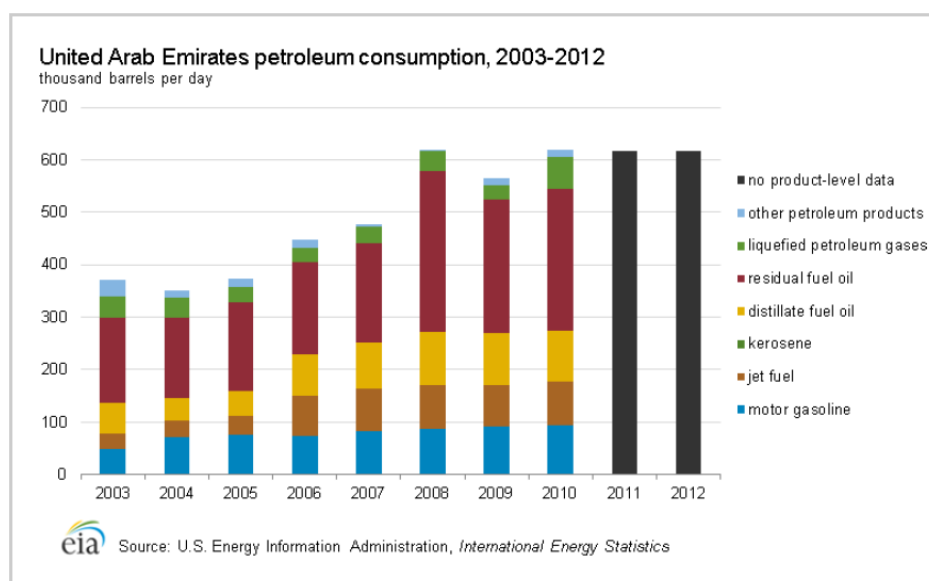
FUJAIRAH

Fujairah, UAE is strategically located from the point of view of mitigating geopolitical risks and uncertainties relating to the political instability associated with Iran. The port of Fujairah is located beyond the Strait of Hormuz through which about 35% of petroleum traded by sea passes annually. This represents about 20% of the global volumes of crude oil and oil derivatives. The strait provides a vital link for the transportation of bulk liquids through the Persian Gulf Region by providing a link to the oilfields in Ghawar, Khurais, Qatif Project, Safaniya and Jubail in Saudi Arabia and others in Qatar and Kuwait. About 85% of the oil is destined for India, China, Korea and Japan. Opec statistics indicate that in 2011, on average, 14 tankers per day passed the strait carrying about 2.7 Million CBM of crude oil. The smooth operation of the strait is vital to the growing economies of Asia and for generating revenue in the gulf region.

The Middle East is poised to witness further investment in gas and oil storage. The UAE's new port of Fujairah rivals the world's top two bunkering hubs, Singapore and Rotterdam. It serves as world's second largest bunkering centre and a major oil and logistics hub owes much to its strategic location outside the gulf and the Strait of Hormuz choke point and its proximity to shipping routes carrying over 40% of world's seaborne oil. The government of Fujairah has invested in developing modern, high capacity oil terminals. Oil storage capacity at Fujairah port is expected to rise by 34%.

The move to lease storage space serves to insulate the stable income flow of the industry, from the political instability in the region. By capturing storage space on the UAE coast, reliance on the Strait of Hormuz is reduced which allows the companies to quickly respond to the demand.

Market for storage in Middle East is changing as more and more downstream chemical production comes online and domestic demand grows. Considering Middle East both chemical exports and refining capacity are expected to grow at 20% over the next several years, hence affecting the storage industry.



Petrochemicals production in the GCC increased by 5.5% in 2012, despite a slowdown in global markets due to the recession in Europe, inventory discrepancies and a deterioration in manufacturing, according to the Gulf Petrochemicals and Chemicals Association's (GPCA) Annual Report 2012.

Favorable factors affecting the growth in Fujairah:

Due to rising tensions between the Iranian Government and the west, there have been several threats emanating from officials in Iran about creating a naval blockade of the strait thereby halting oil traffic in the region. These threats have been made on several occasions over the past decade and even as recently as in 2012 and 2013.

SOUTH ASIA AND SOUTH-EAST ASIA

South Asia is expected to be major upcoming markets of tank storage over the coming years as there economic and infrastructure growth fuels demand for oil. Increase in tank storage from China, Singapore, UAE and India is expected. India and China are two powerhouses, driving oil demand and account for more than 75% of the increase in global oil demand.

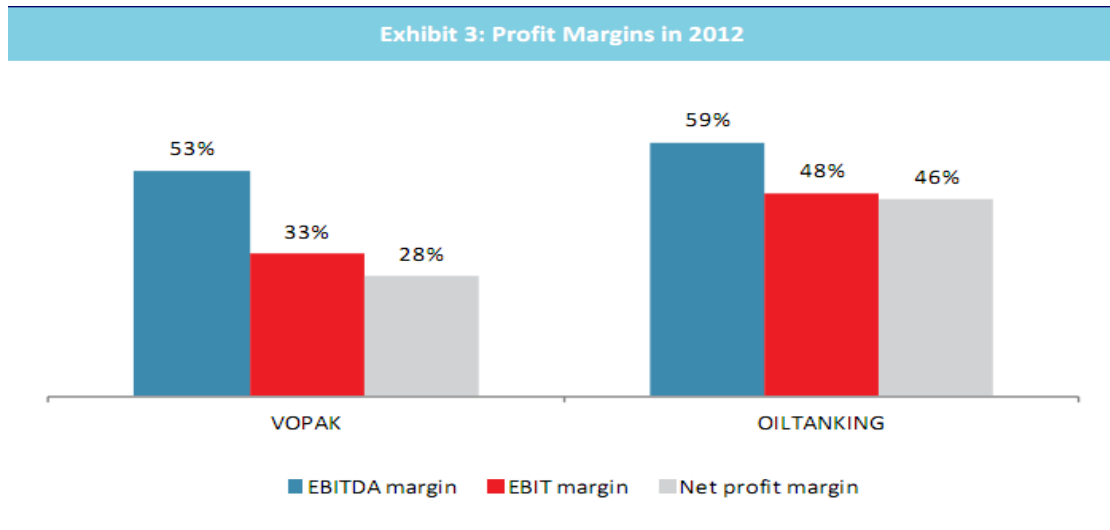
China has seen an upward trend in the petroleum storage industry, with investments coming from the central government, large state run petroleum companies, private and foreign companies.

UNITED STATES

Shale Gas is a type of un-conventional gas that is trapped within organic-rich shale formations. Shale gas is extracted through combination of horizontal drilling and hydraulic fracturing, which allows a large volume of shale gas to be produced. The economical production of shale gas has boosted the Natural Gas industry of US.

Currently, shale gas accounts for 36% of total natural gas production in the US. It is forecasted in US market to grow at a CAGR of 5.3% over the period of 2013-2018.

OIL & GAS STORAGE SERVICES MARKET



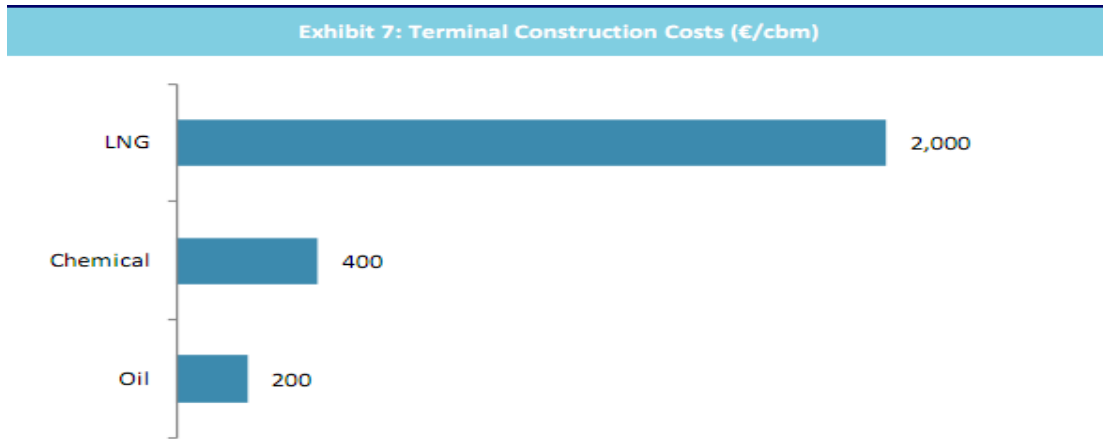
Source: Company reports, Al Masrah Capital Research

The typical customer profile of an oil & gas storage services company includes; Refiners, because their facilities may not have adequate storage capacity or do not meet specialized handling requirements for a particular product; Distributors, who store finished petroleum for eventual distribution to the end consumer, and Merchant Traders, that tend to store oil or chemical products for speculative and wholesale purposes.

Demand for storage is also impacted by pricing basis, defined as the differential between spot (or near term) and futures oil prices. A market CONTANGO (futures price exceeding spot) increases the demand for storage from both market participants and speculators looking to take advantage of this phenomenon.

Independent oil storage companies renting only to third parties formed a little more than 60% of the market.

The oil storage service business involves high upfront investment capital, which often works as an entry barrier to the business. Capital costs for oil terminals are estimated at €200/cbm compared to €400/cbm for chemical terminals and €2,000/cbm for LNG terminals. However, the accruals could differ from project to project.



Source: Al Masah Capital Research

RISK ASSESSMENT:

Bulk liquid storage companies may be affected by risks from different sources such as liquid spills, contamination of soil and groundwater, fees and penalties for effluent discharges and claims regarding to health and safety of the employees. Furthermore, all oil terminals built according to the specification existing specifications of the API and the NFPA run the risk of their facilities becoming non-compliant if the regulatory requirements become more stringent in the future. All these above risks have financial implications resulting in costs due to –

1. Remediation of polluted soil and underground water
2. Abatement of major fires and spills
3. Liabilities in case of health and safety claims
4. Up gradation of facilities in case of more stringent regulations
5. Fines and penalties for non-compliance of applicable statutes.

Storage and Handling of Petroleum Products

The promoters have planned to mitigate the risks such as spills, overfilling and fire by proposing to construct the tanks according to the applicable standards for bulk oil storage issued by the API and the NFPA. The management has appointed Bureau Veritas for the monthly inspection of the construction activity to ensure the adherence to these standards.

Soil and Groundwater Contamination

There is a potential for significant soil and groundwater contamination due to the inherent nature of the products stored at the tank farm. Contamination occurs from lighter petroleum fractions associated with gasoline and medium distillate fractions associated with diesel, kerosene and fuel oils. Typically, the contamination occurs from the daily operations around the loading/unloading gantry, pipelines, pumps and maintenance workshops.

In order to avoid or minimize the risk of contamination, the management has proposed to use a gantry that can easily accommodate a road tanker thus minimizing the risks for spillage. The promoters have also proposed to install volumetric flow meters and pumps manufactured by respectable and well-known companies to for the accurate and safe transfer of cargo. The PLC and SCADA system is also expected to provide real time information to mitigate contamination risks during product transfer.

Atmospheric Emissions

On site atmospheric emissions occur mostly in the case of low flash products due to their vaporization at relatively lower temperatures. However, the management has proposed to mitigate the risk of atmospheric pollution through product gasification by the use of an internal floating roof.

Fire Risks

Fire risks are inherent in the bulk storage of all hydrocarbons. Due to this obvious risk, the management has proposed to implement the project by complying with the complete NFPA guidelines for fire prevention. The management has proposed to construct a water storage tank to feed water to the sprinkler and spray system.

MAJOR OPERATORS IN THE UAE AND THEIR CAPACITIES

VOPAK HORIZON FUJAIRAH

Royal Vopak is the biggest independent terminal operator in the world. In the UAE, Royal Vopak operates as Vopak Horizon. Vopak Horizon Fujairah is a joint venture between Royal Vopak, Horizon Terminals Ltd, the Government of Fujairah and Kuwait's Independent Petroleum Group. The terminal in Fujairah has an installed capacity of 2.1 million CBM. The tank terminal is equipped with 68 storage tanks, 6 jetties and 1 single point mooring bay. In addition to providing storage services, the company also provides blending and heating services, homogenisation, additivition, inter-tank transfers and pipeline transfers to neighboring farms.

As per the company's website and as per several articles in Tank Storage Magazine – Middle East Edition March/April 2014, the company completed its Phase 6 expansion project by the end of 2012 and raised the installed capacity by 606,000 CBM to 2.1 Million CBM. Phase 7 expansion was announced in December 2013 and work is under way to raise the total storage capacity of crude oil by 478,000 CBM to a total of 2.6 Million CBM. The expansion is expected to be completed and tanks commissioned in the second half of 2016.

HORIZON TERMINALS

In addition to holding shares in Vopak Horizon, Horizon Terminals also operates independent oil storage terminals in the UAE in Jebel Ali Free Zone and in Fujairah. The company's independent storage terminals have a total installed capacity of about 517,000 CBM. The company also operates 2 tank terminals in partnership with EPPCO International Limited in Jebel Ali and Fujairah with a combined capacity of 936,755 CBM.

The company announced its plans to expand a new terminal in Fujairah in June 2012 and the same was commissioned in July 2013. This terminal new terminal has a capacity of 240,000 CBM and was built at a cost of USD 100 Million. The company is currently developing a new terminal in Jebel Ali with a capacity of over 141,000 CBM. This terminal is expected to be commissioned by the end of 2014.

Horizon Terminals Limited was established in 2003 and is wholly owned by ENOC Group which is a Government of Dubai undertaking.

STAR ENERGY OILTANKING (SEOT)

Oiltanking GMBH is the second largest operator of independent bulk oil storage terminals in the world in terms of installed capacity. In the UAE, the company operates as a joint venture with Star Energy Group, Abu Dhabi and Oiltanking GMBH, based in Hamburg, Germany. The company's terminal in Jebel Ali has a capacity of 857,000 CBM. The company offers storage facilities for Naphtha, gasoline, Jet Fuel, Heating Oil and diesel among other products in addition to providing additive blending, butanizing, and pipeline transfer services. The company also operates in Sohar, Oman as Oiltanking Odfjell Terminals and has a capacity of 1.4 Million CBM.

VTTI FUJAIRAH TERMINALS LIMITED.

VTTI was established in 2006 and now operates as a joint venture between Vitol Group, Rotterdam and MISC Berhad, Malaysia. In Fujairah, the company operates 47 storage tanks and 7 jetties with a combined capacity of 1.18 Million CBM. The company also operates Fujairah Refinery Limited in the same facility which is capable of refining condensate and crude oil. It has an installed capacity of 80,000 bpd.

As of May 2014, the company was reviewing a potential project expansion of an additional capacity of 1 Million CBM. The start, completion, and commissioning dates have not been finalized yet since the project cost has not been determined.

GULF PETROCHEM

The company's port storage terminal in Hamriya Free Zone, Sharjah operates 14 tanks with a total capacity of 35,000 CBM. However, the company's oil terminal in Fujairah is a much larger facility operating 17 tanks with a combined installed capacity of 412,000 CBM. By the end of 2015, the company plans to expand its total capacity in both the locations to 1.2 Million CBM. As per information available from Constructionweekonline.com, the terminal in Fujairah was completed at a cost of USD 136.4 Million.

Gulf Petrochem was established in Hamriya Free Zone in 1998 and the terminal in Fujairah was commissioned in February 2013. The terminal in Fujairah is operated as a joint venture between Gulf Petrochem group and Fujairah Petroleum Company (FPC) – a company wholly owned by the Government of Fujairah.

SOCAR AURORA FUJAIRAH

Socar Aurora Fujairah Terminal is operated as a joint venture between SOCAR – State Oil Company of Azerbaijan Republic, Aurora Progress SA and the Government of Fujairah. The terminal has been operative since 2012 and has a planned capacity of 815,000 CBM. Currently, the company has an installed capacity of 350,000 CBM which was commissioned in September 2013. The company is now engaged in the addition of more tanks to increase the capacity by 315,000 CBM.

Totally, 26 tanks have been planned, out of which, 14 are currently operational and 12 are under construction. The terminal is expected to offer blending and additive injection services.

STOLTHAVEN FUJAIRAH OIL TERMINALS

Stolt-Nielsen has a strong presence in the Middle-East and the Persian Gulf region. However, its subsidiary Stolthaven Terminals does not yet operate a facility in the UAE. It is yet unclear whether the company is planning on constructing oil terminals in the UAE.

IL&FS PRIME TERMINALS

IL&FS – Infrastructure Leasing & Financial Services Limited based in India has commenced the construction of a tank farm in Fujairah. The storage capacity is expected to be 630,000 CBM. Phase 1 is currently under construction and is expected to be commissioned in the first quarter of 2015. IL&FS Maritime Infrastructure Company Limited (IMICL) has a 65% stake in the joint venture and the UAE based company Prime Terminals and other local companies hold the remaining 35% share.

AEGEAN MARINE PETROLEUM NETWORK

The company, based in Greece had also planned on constructing an oil terminal in Fujairah in 2009 and has leased about 100,000 square meters of land in Fujairah Port. The terminal is expected to be operational by the end of 2014 with a storage capacity of 465,000 CBM. The company has faced several issues relating to obtaining permits and completion of several regulatory requirements of the port authority. Unexpected snags have resulted in a delay of about 2 years to start construction.

EXISTING AND PLANNED BUSINESSES IN HAMRIYAH FREE ZONE

The Gulf has a geographical advantage in the global oil & gas business as it sits on the world's largest hydrocarbon resources. The MENA countries account for about 58% and 43% of proven crude oil and natural gas reserves respectively, making this region of vital importance to the present and future of the global oil and gas market.

Hamriyah Free Zone (HFZ) can be described as the logistic hub of the Middle East with access to 1.5 billion consumers with high disposable income. The region's proximity to the Asian market especially China, India and the Far East, makes HFZ a perfect location for overseas manufacturers looking to expand their operations.

HFZ is a favourable location for oil & gas businesses operating in the Middle East, particularly within the Persian Gulf region. Various companies have existing operations in the form of bulk liquid storage terminals, fuel trading & bunkering, petroleum and petrochemical processing, oil refining & re-refining, lubricant and chemicals manufacturing as well as and oil & gas services.

The close proximity to the port allows companies to take advantage of the 14 Metre Draft Harbor and the 9 metre Inner Harbor, LPG Jetty, Jet Fuel Jetty, Oil Terminal, and 50 Bunkering Pits.

Existing Business

HFZ has a total storage capacity of around 1.2M cubic metres of fuel with Lube Oil (46 per cent) and Fuel or Gas Oil (30 per cent) comprising the bulk of its storage. Several local and international companies have been operating in the Free Zone for many years, some examples are given below.

British Petroleum (BP) - The Anabees Storage terminal in HFZ is a Joint Venture between Air BP and the Sharjah Government. The JV owns and operates a 50,000 CBM state-of-the-art storage facility in HFZ, with direct pipeline to the main harbor and a 45 km direct pipeline to the Sharjah Airport. Air BP is currently the largest fuel supplier to Air Arabia and is a 49 percent shareholding partner in Sharjah Aviation Services Co (SASCO) which manages the fuel systems and Into-Plane services at the airport.

The Anabees operations at HFZ enhances the strategic importance of BP Sharjah which already operates three gas fields along with a processing plant, gas compression facilities and two liquid gas export terminals in the Emirate.

Gulf Petrochem - Gulf Petrochem is a major player in the oil industry with its headquarters in HFZ. The company was established in HFZ in 1998 with the commissioning of an oil refinery. Within a short space of time the group has established itself into various strategic business units including oil trading and bunkering, oil refining, grease manufacturing, oil storage terminals, bitumen manufacturing, and shipping and logistics.

Among other business units in HFZ, Gulf Petrochem own and operate a storage terminal with 14 tanks and capacity of around 35,000 cbm. To facilitate its current and future operations, Gulf

Petrochem is investing further in HFZ by constructing a new storage tank facility with capacity to the tune of 200,000 cbm. The new facility will be located in close proximity to the ABC terminal.

Gulf Petrochem maintains operations elsewhere in the UAE and has built a 412,000cbm storage terminal in Fujairah, one of the biggest bunkering ports in the world, and has plans to expand further. It also has trading offices in Dubai, Mumbai and Delhi, and subsidiaries in Singapore and Geneva.

Crescent Petroleum - Crescent Petroleum has been operating as a regional upstream oil and gas company in the United Arab Emirates for almost 40 years. It began its activities in the early seventy's and was the first regional, independent, privately-owned Middle Eastern petroleum company to engage in the acquisition, exploration and development of petroleum concessions, and the production and sale of crude oil, petroleum products and natural gas.

Crescent Petroleum is headquartered in Sharjah with operations in HFZ, and international offices strategically located in the UK, Iraq and an affiliate office in Egypt.

New Developments

HFZ is home to many oil companies and is rapidly becoming the second largest hub for petrochemicals, oil & gas bunkering and storage in the UAE.

Many new facilities are being planned and constructed, including storage terminals, refining and processing facilities, petrochemical and chemical plants, bitumen storage and manufacturing.

Abu Dhabi National Oil Company (ADNOC) - ADNOC is currently building an oil storage terminal to help meet demand for power and vehicle fuel in the northern parts of the UAE. The terminal is expected to be equipped with a total of 12 tanks having a storage capacity of 241,000 CBM. The company has cited the convenience of HFZ and port which has easy access to all of the northern emirates. The terminal is expected to be operational by the end of 2014.

Hazel International (HIF) - Hazel International is owned by Veritas India Limited (VIL), a listed company on the BSE, and has recently begun construction of a \$126.45m liquid & solid cargo handling and processing facility. The new 30,000 square metre land in the tank terminal area of HFZ will have the capacity to store a wide variety of commodities including chemicals, petrochemicals, base oils, bitumen, gases, bio-fuels and edible oils. In addition to this, the facility will offer drumming and packing services and will house a petrochemical processing plant.

PROJECT COST

The project cost for PHASE 1 is estimated at AED 57,519,102 (USD 15,672,780).

This estimation is based on the explanations provided by ABC and the responses and quotations received from various contractors and consultants.

Moreover, the D&B SAME team has independently verified the costs to appropriately estimate the cost of the proposed project.

The summary of the project cost is shown below:

Estimate of Project Cost - Phase 1		
Description	Figures in AED	Figures in USD
Preliminary Expenditure	10,916,269	2,974,460
Contracting works	2,983,643	812,982
Land Development	1,500,000	408,719
Buildings	2,292,966	624,786
Storage tanks and internal pipeline	23,293,253	6,346,935
Vehicles	644,650	175,654
Plant, Machinery and Instrumentation	2,978,000	811,444
Laboratory Equipment	200,000	54,496
Power Equipment	3,235,000	881,471
Firefighting Works	2,725,000	742,507
underground and external pipelines	3,566,752	971,867
Office Equipment	295,000	80,381
Initial cash requirement	500,000	136,240
Contingency @ 5%	2,185,713	595,562
Total	57,316,246	15,617,506
Source: Management, D&B SAME estimates		

All the components of the project cost are discussed in the subsequent sections.

CONTRACTOR'S QUOTATION

ABC has proposed to construct an Oil Storage Terminal on the land leased in Hamriya Free Zone. The details and cost structure pertaining to the construction of the oil storage terminal is mentioned below and forms the major part of the overall project cost.

ABC has obtained proposals and quotations from various contractors for the construction of the Phase 1 facility. The most competitive proposal was given by Gulf Tech Energy LLC which estimated the cost of construction for Phase 1 to be AED 40,479,614 (USD 11,029,868).

Gulf Tech Energy is an EPC contractor based in Ajman UAE. They specialize in the fabrication and construction of storage tanks, pressure vessels, pipelines, refineries and related works. The costing and descriptions given by Gulf Tech Energy have been used for the purpose of this report.

This is a budgetary estimate provided by Gulf Tech Energy and is subject to changes and revision before finalisation. In order to account for an increase in the cost of construction, D&B SAME has provided a conservative estimate for a contingency of 5 percent of the entire project cost.

The contractor has proposed to undertake works including civil, mechanical, electrical, piping and instrumentation. From a purely accounting perspective, these individual assets are grouped into distinct account-heads depending on the nature of the asset.

A detailed bifurcation of the construction cost is provided below:

Contractor Quotation from Gulf tech Energy Cont. LLC.			
Description	Figures in AED	Figures in USD	Classified as
Civil Works			
Soil improvement, hauling	1,500,000	408,719	Land Development
Tank foundations	2,350,000	640,327	Storage Tanks and Internal Pipeline
Construction of dike wall	650,000	177,112	Contracting Works
Construction of ground slab between tanks	630,000	171,662	Contracting Works
Construction of loading and unloading pump room	595,000	162,125	Buildings
Construction of Gantry	140,000	38,147	Plant, Machinery and Instrumentation
Fire Pump Building	130,000	35,422	Buildings
Construction of substation	145,000	39,510	Power Equipment
Weigh bridge	220,000	59,946	Plant, Machinery and Instrumentation
Utility Building & Workshop	450,000	122,616	Buildings
Guard Room	75,000	20,436	Buildings
Office Block	950,000	258,856	Buildings
Slop Tank	20,000	5,450	Storage Tanks and Internal Pipeline
Parking Area	92,966	25,331	Buildings

Steel Sliding gate	24,000	6,540	Contracting Works
Interlock and kerbstone	779,643	212,437	Contracting Works
Boundary Wall	900,000	245,232	Contracting Works
Subtotal	9,651,609	2,629,866	
Mechanical Works			
Storage tanks incl water tank	14,887,000	4,056,403	Storage Tanks and Internal Pipeline
Internal floating roof	1,312,000	357,493	Storage Tanks and Internal Pipeline
Internal pipelines + valves	4,724,253	1,287,262	Storage Tanks and Internal Pipeline
Mechanical Equipment			
Subtotal	20,923,253	5,701,159	
External Piping	3,566,752	971,867	Underground and external pipelines
Fire Fighting System	2,700,000	735,695	Firefighting works
Electrical System	1,100,000	299,728	Power Equipment
Instrumentation & Gauging System			
gauging System	1,216,000	331,335	Plant, Machinery and Instrumentation
Instrumentation (PLC & SCADA)	500,000	136,240	Plant, Machinery and Instrumentation
Subtotal	1,716,000	467,575	
Pigging System	822,000	223,978	Plant, Machinery and Instrumentation
Total	40,479,614	11,029,868	
Source: Gulf tech Energy Contracting LLC			

SCOPE OF WORK

1. Civil Work

The Civil Work to be performed by the contractor includes groundwork, landscaping, and construction of various building and structures. More specifically it includes:

- Soil Improvement and Hauling
- Footings and Tank Foundation
- Ground Slab Construction
- Landscaping, Interlocking, Dike Wall, Gates
- Pump Room, Gantry, Fire Room, Office, Workshop & Store,
- Substation, Security Room, Weigh Bridge, Slop Tank, Parking Area

The total cost for the civil work is estimated at AED 9,651,609 (USD 2,629,866).

2. Mechanical work

The Mechanical works is the main part of the contractor proposal and include the following:

- Fabrication and erection of 8 storage tanks of various sizes
- Tank support structures including staircase, railings, emergency ventilations, hatch covers and connecting platforms
- Fabrication and Installation of internal floating roof inside the storage tanks
- All internal pipeline work and related equipment including valves, supports & brackets
- Blasting and painting of all the tanks and pipelines
- Supply and installation of all mechanical equipment including Flow Metres, Loading/Unloading Arms and Pumps

The total cost of mechanical works as provided by the contractor is estimated at AED 20,923,253 (USD 5,701,159).

3. Underground External Pipeline Connection

The contractor will construct the external pipeline system from the terminal to the port. The scope of work includes the supply of all material, equipment, and consumables necessary for the fabrication and laying of pipes from the storage terminal to the port. The pipelines details are:

- 2 x 14 inch diameter MS Seamless pipeline to the Main Harbour- 1,780 meters length
- 2 x 10 inch diameter MS Seamless pipeline to the Inner Harbour - 1,240 meters length

Since the underground pipelines are expected to be connected from the storage facility to the bunker pit at the port, the scope of work includes all civil work including trenching and excavation, leveling and compacting, backfilling, road cutting, removal and restoration, and all other related works. The pipelines will be painted and coated and all necessary testing work will be carried out before handover. The construction of two Bunker Pits is also part of the contractor quotation.

The total cost for external pipeline system, bunker pits, and all related works is estimated to be AED 3,566,752 (USD 971,867).

4. Fire Fighting Works

The contractor quotation for the fire system includes the following:

- Supply and installation of Sprinkler System
- Supply and installation of Foam System
- Supply and installation of Firefighting Pumps
- Testing and commissioning
- Approvals and certifications

All the equipment is expected to be in conformity with the National Fire Protection Association (NFPA-USA) code and is approved by Civil Defense, Sharjah and Hamriyah Free Zone Authority.

The Fire Fighting System will be supplied and installed by the main EPC contractor. He may however use the services of an external consultant to procure material and seek approvals from the civil defense and other authorities.

The total cost for firefighting system, equipment and related work is estimated at AED 2,700,000 (USD 735,695).

5. Electrical Works

The scope of work covers all internal electrical work in the terminal including:

- Fixing of boundary wall lighting poles
- Electrical work relating to the Gantry, Pump Room, Loading & Unloading with installation of DB, Control Panel and Small Panel
- Complete office electrical work with cables, switches, and installation of DB
- Installation of Sub DB
- Earthing of all Tanks

Electrical work pertaining to SEWA electricity connection and cabling has been separately accounted for under other capital expenditure since it does not fall under the scope of work to be performed by the contractor.

The cost for the internal electrical work is estimated at AED 1,100,000 (USD 299,728).

6. Instrumentation and gauging System

The scope of work includes the supply and installation of the following:

- Automatic Radar and Temperature Gauges for each tank with display and monitor
- All related cabling, sleeving and support structures
- PLC control system and all related peripherals
- SCADA system software

The cost is estimated at AED 1,716,000 (USD 467,575).

7. Pigging System

The contractors quote includes the supply and installation of a pigging system for the main harbor and the inner harbor. The specifications of the pigging system are as follows:

- 14 inch diameter pigging system with mechanical signals control
- 10 inch diameter pigging system with mechanical signals control

The cost of the pigging system is estimated at AED 822,000 (USD 223,978).

PRELIMINARY EXPENDITURE

Pre-operative expenses are those expenses incurred by a company before commencement of commercial operations. Pre-operating costs include any expenses incurred during the startup or formation of a new business. They include expenses related to the investigation of a potential new business, as well as the actual costs associated with formation or decision making of the project. The following table provides a bifurcation of the pre-operative expenses which are incurred or expected by the promoters.

Preliminary Expenditure		
Description	Figures in AED	Figures in USD
Portable cabins 2 no's	30,000	8,174
Generator fuel	56,250	15,327
Water connection	50,000	13,624
water consumption	45,000	12,262
Security personnel	90,000	24,523
Project manager	375,000	102,180
Third Party Inspection Services	270,000	73,569
No Objection Certificates	7,500	2,044
Building permit fees	15,000	4,087
Company Formation and License renewal	55,800	15,204
Chamber of Commerce registration and renewal	6,000	1,635
PO Box Fees	2,760	752
Plot demarcation fees	5,000	1,362
Soil Testing/Topographical survey	15,500	4,223
Leveling and fencing of plot	95,000	25,886
Design Engineering consultant fees	990,000	269,755
General Engineering consultant fees	100,000	27,248
Environmental consultant fees	165,000	44,959
Techno Economic Viability Report	58,720	16,000
Civil Defense Consultant Fees	50,000	13,624
Main Harbour Bunker Pit location plotting fees	5,000	1,362
Main Harbour Bunker Pit "Right of Use"	150,000	40,872
Civil defense statutory fees	175,000	47,684
Civil Defense statutory body for reporting	15,000	4,087
Engineering Design Review	111,476	30,375
Research and Development	18,299	4,986
Land Rent	7,755,031	2,113,087
Pipeline corridor rent	203,933	55,568
Total	10,916,269	2,974,460

The following assumptions, estimates and documentation have been considered to estimate the individual material cost head under Pre-operating expenditure:

Estimate of Pre-operation Expenses	
Component	Assumptions and explanations
Portable cabins	2 portable cabins are estimated to be required for housing the temporary site office and to carry out administrative work during the construction period. The cost of each portable cabin is estimated at AED 15,000. These are expected to be discarded after the construction is complete.
Generator Fuel	Throughout the construction period of 15 months, the power requirement is expected to be satisfied by the running of the two generators. The cost of fuel is formulated as under: Consumption per day = 10 Imperial Gallons Construction period = 15 months (450 days) Total fuel consumption = 4,500 Imperial Gallons Cost per Imperial gallon = AED 12.5 Total fuel cost = AED 56,250
Water Connection	The estimated cost of AED 50,000 is expected to be a one-off payment to Sharjah Electricity and Water Authority (SEWA) to complete the formalities of obtaining the water connection to the company's location in HFZA.
Water Consumption	An approximate expenditure of AED 2,500 per month towards water consumption throughout the construction period. The total cost is estimated at AED 37,500.
Security Personnel	A 3 rd party security company will supply security guards. Each guard is expected to complete an 8 hour shift. A monthly cost of AED 2,000 per security guard has been assumed. 3 guards for a total of 15 months are estimated to cost the company a total of AED 90,000.
Project Manager	The project manager is expected to be hired from the beginning of the construction period at a monthly salary of AED 25,000. The total cost during the construction period is AED 375,000
Third Party Inspection Services	Bureau Veritas is expected to charge AED 270,000 towards the inspection of the construction done by the contractor to ensure that the same is done as per the approved designs.
No Objection Certificates	Throughout the construction period, the management will have to obtain No Objection Certificates from HFZA. AED 500 is estimated each month. The total cost for NOCs is estimated at AED 7,500.

Building Permit Fees	Building permit fees are to be obtained from HFZA in addition to the NOCs. The Building Permits hold a validity of 6 months. For facilitation of the construction, a total of 3 are required at a cost of AED 5,000 each.
Licensing and company formation	The company was established in July 2012 whereas Phase 1 is expected to be open for operations on 1 May 2016. A total of 4 years' worth of licensing fees are expected to be borne by the company. The license is renewable annually at a cost of AED 8,500 – bringing the total cost to AED 34,000. Additionally, in the first year, the company incurred company formation expenses of AED 21,800. The total licensing and company formation expenditure prior to operations is estimated at AED 55,800.
Chamber of Commerce Registration	Chamber Registration has set up fees of AED 1,500 and annual renewal fee of AED 1,500. The total cost for a period of 4 years prior to operations is estimated at AED 6,000.
PO Box renewal	The first year expenditure for obtaining a PO Box in HFZA cost the company AED 510. Thereafter, until operations commence, the company is expected to renew the PO Box usage at an annual cost of AED 750. The total cost is estimated at AED 2,760
Plot demarcation fees	Plot Demarcation fee of AED 5,000 has been paid by the company to HFZA after obtaining the leased land.
Soil Testing/Topographical survey	Soil Testing/Topographical survey has been conducted and paid for at AED 15,500.
Leveling and fencing of plot	The company appointed Al Bahr Al Arabi Marine Engineering Services Company for the purpose of Leveling and fencing of plot. This cost of AED 95,000 has to be accounted for separately since it is not part of the contractor's quotation.
Design Engineering Consultant fees	ABC has appointed Chemie Tech LLC as its Design Engineering Consultant. The scope of work includes full detailed drawings, specifications, BOQ's of the project. Chemie Tech LLC will ensure that the design and drawings comply with international standards such as those of the API, the NFPA and other local requirements. Moreover, Chemie Tech LLC has also designed the proposed layout plan and drafted list of applicable codes and standards, along with drafting process design philosophy, process flow diagram etc. As per the agreement, for the given scope of work, Chemie Tech LLC has quoted USD 270,000 (AED 990,000). The agreement is dated 4 th of February 2013.
General Engineering Consultancy and Approval fee	Capital Engineering Consultancy has been appointed as General Engineering Consultant. Capital Engineering Consultancy will charge AED 50,000 to the subject for obtaining necessary approvals for the tanks from authorities and AED 50,000 will be charged for obtaining approvals of Pipe line routing from respective authority. The agreement is dated 9 th of April 2013.

Environmental Impact Assessment Consultant fees	The management has appointed Environmental Solutions and Consultancy, Sharjah to conduct a health, safety and environmental impact assessment and a risk assessment study. The consultant will provide advice and solutions to the possible environmental and health hazards associated with the project. For the given scope, Environmental Solutions and Consultancy has quoted a total cost of AED 165,000.
Techno Economic Viability Report	ABC LLC has assigned D&B SAME LTD as Independent Evaluator to determine the overall technical, financial and economic viability of the project. D&B SAME LTD has charged USD 16,000 to comment on the overall reasonableness and viability of the project.
Civil Defense Consultant Fees	The company has received an informal quotation from an independent Consultant for helping the subject align its project to obtain necessary civil defense approval. D&B SAME team has also independently estimated a cost of AED 50,000.
Main Harbour Bunker Pit "Right of Use"	ABC has paid Sharjah Port Authority AED 150,000 to obtain Right of Use of Main Harbour Bunker Pit. The same has been substantiated through the invoice dated 9 th of October 2013.
Civil defense statutory fees	It has been estimated by the management of ABC LLC and D&B SAME team that the subject will incur a cost of AED 175,000 in respect to Civil Defense statutory fees
Engineering Design Review	Bureau Veritas has been appointed to independently review the engineering designs and to certify their conformity with standards. The scope includes; design review of floating roof storage tank, piping network, Civil and Structure and Rotary Equipment. The cost of the above scope is estimated USD 30,375.
Research and Development	The promoters visited the Tank Expo, Dubai in 2013 and 2014 as part of R&D to understand more details about the construction and operations of an oil storage tank farm.
Land Rent	The company has leased the plot (1A-09) from July 2012. Hence, it will incur lease cost for 3 years and 11 months till the first day of operations. The annual rent is AED 1,980,008 and the total apportioned cost as preliminary expenses is calculated at AED 7,755,031.
Pipeline Corridor rent	The annual payment towards pipeline corridor rent is AED 52,068. The apportioned cost for 3 years and 11 months as preliminary expenditure is calculated at AED 203,933.

Source: Management and D&B SAME Estimates

Out of the total preliminary expenditure, the management will have incurred the following expenditure before the commencement of construction –

Preliminary Expenditure before construction		
Description	Figures in AED	Figures in USD
Water connection	50,000	13,624
Company Formation and License renewal	47,300	12,888
Chamber of Commerce registration and renewal	4,500	1,226
PO Box Fees	2,010	548
Plot demarcation fees	5,000	1,362
Soil Testing/Topographical survey	15,500	4,223
Leveling and fencing of plot	95,000	25,886
Design Engineering consultant fees	990,000	269,755
General Engineering consultant fees	100,000	27,248
Environmental consultant fees	165,000	44,959
Techno Economic Viability Report	58,720	16,000
Civil Defense Consultant Fees	50,000	13,624
Main Harbour Bunker Pit location plotting fees	5,000	1,362
Main Harbour Bunker Pit "Right of Use"	150,000	40,872
Civil defense statutory fees	175,000	47,684
Civil Defense statutory body for reporting	15,000	4,087
Engineering Design Review	111,476	30,375
Research and development (Tank Expo)	18,299	4,986
Land Rent	5,724,024	1,559,680
Pipeline corridor rent	156,204	42,562
Total	7,938,033	2,162,952
Source: Management, D&B SAME estimates		

The following expenditure is expected to be incurred during construction –

Preliminary Expenditure during construction		
Description	Figures in AED	Figures in USD
Portable cabins 2 no's	30,000	8,174
Generator fuel	56,250	15,327
water consumption	45,000	12,262
Security personnel	90,000	24,523
Project manager	375,000	102,180
Third Party Inspection Services	270,000	73,569
No Objection Certificates	7,500	2,044
Building permit fees	15,000	4,087
Company Formation and License renewal	8,500	2,316
Chamber of Commerce registration and renewal	1,500	409
PO Box Fees	750	204
Land Rent	2,031,007	553,408
Pipeline corridor rent	47,729	13,005
Total	2,978,236	811,508
Source: Management, D&B SAME estimates		

EXPENDITURE FOR VEHICLES

Considering the transportation requirement of the subject, it has estimated AED 644,650 as expenditure for Vehicles.

Detailed bifurcation of cost is provided below:

Vehicles		
Description	Figures in AED	Figures in USD
Prime Mover/Unit Head	238,550	65,000
Flatbed	60,000	16,349
Small Oil Tanker	67,800	18,474
3 ton Pickup trucks (2 nos.)	113,800	31,008
Bus for labor transport	164,500	44,823
Total	644,650	175,654
Source: Management, D&B SAME estimates		

OFFICE EQUIPMENT AND FURNITURE

Office Equipment and Furniture		
Description	Figures in AED	Figures in USD
Office Furniture	50,000	13,624
Telephone, Internet Cabling, Networking, Wi-Fi	150,000	40,872
Air Conditioning	75,000	20,436
Other IT Expenditure, Server, UPS	20,000	5,450
Total	295,000	80,381
Source: Management, D&B SAME estimates		

INITIAL CASH REQUIREMENT

The initial cash requirement for the project is estimated at AED 500,000 (USD 136,240). The company is not engaged in manufacturing or trading activities. Instead, the company is expected to be a purely service providing company. Purchases of goods/raw materials are expected to be minimal and restricted to the procurement of items required for the maintenance and upkeep of the tank farm. Hence, in absence of any working capital requirement, the company is not expected to incur payments of large magnitude.

As per the proposed business model, the company is expected to receive regular payments from customers in advance, at the beginning of every quarter. Hence, the cash required is mainly for the initial payment of expenditure heads such as salaries, utilities and other administrative expenses. It is therefore estimated that the company will require an injection of cash for covering the initial operational expenditure. The total operating expenses for FY 2016 (eight operational months) are estimated at AED 3,546,915. The monthly average cash expenditure is calculated at AED 443,364. Conservatively, the initial cash requirement is estimated at AED 500,000

CONTINGENCIES

Contingency is estimated at 5 percent of the capital expenditure. This is intended to account for approximation inaccuracy based on quantities assumed or measured by the contractor, unanticipated changes in market conditions, delays in implementation schedule, and in general, to provide for the omission of some minor expenditure which may inadvertently be overlooked.

The quotation received from Gulf tech Energy Contracting LLC is not a final quotation and is intended for use in budgetary purposes of the promoters. The quotation may be subject to change as per the changes in material and labor costs anticipated by the contractor. In order to account for the increase in these prices before the finalization of the quotation, a contingency of 5 percent of the project cost (excluding preliminary expenditure and initial cash requirement). The contingency is estimated at AED 2,185,713 (USD 595,562).

MEANS OF FINANCE

The promoters have proposed to finance the project by a combination of Debt and Equity. The equity component is expected to be in the form of Share Capital as the initial investment by the promoters and retained earnings in the succeeding years. The debt component is proposed to be raised in the form of a term loan with a repayment period of 5 years and an initial moratorium period of 15 months.

Means of Finance			
Description	Weight	Estimated (AED)	Estimated (AED)
Shareholders' equity	30.00%	17,194,874	4,685,252
Debt finance	70.00%	40,121,372	10,932,254
Initial Debt Equity Ratio			2.33
Source: Management and D&B SAME estimates			

The promoters of the company have proposed to finance the project with an initial equity of AED 17,194,874 (USD 4,685,252) of contribution by way of share capital. This amounts to exactly 30 percent of the total project cost. The remaining 70 percent of project cost is proposed to be financed by way of a term loan of AED 40,121,372 (USD 10,932,254).

Term Loan Details	
Description	Debt Component (Proposed)
Term Loan Amount	AED 40,121,372
Interest rate on term loan	4.85%
Loan Disbursement Date	01 February 2015
Commencement of repayment	2nd half of FY 2016
Moratorium Period	01 February 2015 – 30 April 2016
Repayment	10 half-yearly installments over 5 years
Source: Management and D&B SAME estimates	

The promoters expect to borrow the debt component from a bank in the UAE. For the purpose of the report, the rate of interest applicable to the project is assumed as the 6 month Emirates Interbank Offer rate (EIBOR). The promoters expect to repay the loan over a period of 6 years (including initial 15 months of moratorium period) with installments payable every 6 months.

Corresponding to the repayment structure, the base rate for the levy of interest is taken as the 6 month Emirates Inter-Bank Offer rate (EIBOR) as quoted by the Central bank of the UAE. As of 21 October 2014, the rate was quoted at an annualized rate of 0.85143 percent (85 basis points). The bank margin for the term loan is assumed at 4 percent (400 basis points). The annualized interest rate applicable for the term loan is calculated as 4.85 percent (485 basis points).

The loan repayment is expected to commence in the second half of FY 2016. After the end of the moratorium period, interest is calculated for 2 months for the first half of FY 2016. This interest is capitalized and added to the principal amount for the next period. A variable installment is payable for every period. The variable installment includes a fixed amount of AED 4,044,578 towards the amortization of the principal amount as on 1 July 2016 (AED 40,445,782).

The repayment schedule is provided below:

Date	Principal outstanding	Interest	Total outstanding	Principal repayable	Total EMI	Closing balance
30-Jun-15	40,121,372	-	40,121,372	-	-	40,121,372
31-Dec-15	40,121,372	-	40,121,372	-	-	40,121,372
30-Jun-16	40,121,372	324,410	40,445,782	-	-	40,445,782
31-Dec-16	40,445,782	981,099	41,426,882	4,044,578	5,025,678	36,401,204
30-Jun-17	36,401,204	882,989	37,284,194	4,044,578	4,927,568	32,356,626
31-Dec-17	32,356,626	784,880	33,141,505	4,044,578	4,829,458	28,312,048
30-Jun-18	28,312,048	686,770	28,998,817	4,044,578	4,731,348	24,267,469
31-Dec-18	24,267,469	588,660	24,856,129	4,044,578	4,633,238	20,222,891
30-Jun-19	20,222,891	490,550	20,713,441	4,044,578	4,535,128	16,178,313
31-Dec-19	16,178,313	392,440	16,570,753	4,044,578	4,437,018	12,133,735
30-Jun-20	12,133,735	294,330	12,428,065	4,044,578	4,338,908	8,089,156
31-Dec-20	8,089,156	196,220	8,285,376	4,044,578	4,240,798	4,044,578
30-Jun-21	4,044,578	98,110	4,142,688	4,044,578	4,142,688	-

ECONOMIC VIABILITY

REVENUE STREAM

Independent oil storage service companies earn the major chunk of their revenue from storage service fees (74%) followed by throughput fees (20%) and ancillary service fees (6%). This has been verified by D&B SAME through industry market research.

Based on the discussions with management & industry peer's, and the research conducted by D&B SAME, the revenue stream generated at the ABC terminal is assumed to be of a similar nature to the industry average.

- i. **Storage Service Fee** – The service fee will be the main source of revenue for ABC and will constitute about 74% of the total earnings. The D&B research shows that the typical service fee charged for storage tanks range from \$6.50 to \$7.00 (Per CBM/Month). The ABC terminal will be handling volatile cargo and therefore estimates that it will be able to charge fees at the higher end of the industry average. The following table shows the products to be stored and the chargeable rates assumed by management:

Product	USD per month per CBM
Naphtha	7.50
Gasoline	7.50
Gas Oil (Diesel)	6.50
Jet fuel	7.50
Fuel Oil	6.50
Average	7.10
Source: Management, D&B SAME estimates	

- ii. **Throughput Fees** – This is the fee charged by the storage provider for the movement of cargo which is over and above the monthly agreed volume. On average, independent storage providers earn about 20% of their revenue in the form of throughput fees.

Throughput fees are dependent on the number of transactions of a particular product. Some product movement is more frequent than others. For example, commodities such as fuel oil, diesel and gasoline experience higher volumes as compared to jet fuel. In such instances, the operator may generate a higher proportion of revenue from throughput fees for some products than others. Throughput fees at the ABC terminal have been estimated as 20 percent of total revenue.

- iii. **Ancillary Fees** – This is the fee charged for providing value added services such as heating, mixing, blending, packing, additivisation, and homogenisation. Ancillary services depend on the type of product stored and the requirement of the customer. ABC has assumed that it will earn around 6 percent of the total revenue as Ancillary fees.

CAPACITY AND CAPACITY UTILISATION

The Phase 1 of the project has been proposed by the management to incorporate a shell capacity of 67,412 CBM. Phase 1 is expected to have 2 types of tanks as follows –

1. 4 tanks with shell capacity of 10,882 CBM
2. 4 tanks with shell capacity of 5,971 CBM.

As per the governing standard on bulk liquid storage – API 650 and as per explanations provided by the design consultants, is recommended that the storage tank be filled up to the Design Liquid level. From the point of view of prevention of overflow and liquid spillage, an overflow slot is left unoccupied between the top shell height and the design liquid level.

The tanks with a shell capacity of 10,882 CBM have a height of 19.00 meters. These can be filled up to a maximum height of 17.68 meters. The maximum capacity for liquid storage possible as per API 650 is 10,128 CBM – effective capacity utilization of 93.07 percent.

The tanks with a shell capacity of 5.971 CBM have a height of 19.00 meters. These can be filled up to a maximum height of 17.60 meters. The maximum capacity for liquid storage possible as per API 650 is 5,530 CBM – effective capacity utilization of 92.61 percent.

The revenue generation for the company is based on this capacity utilization which is estimated at 75 percent for FY 2016, 80 percent for FY 2017 and 85 percent for 2018. For FY 2019 – 2025, the capacity utilization has been estimated at 90 percent. The entire tank farm is estimated to be operational throughout the year.

In the financial model, for the purposes of estimating revenue, it has been assumed that the company will be following a standard industry practice of charging a storage rent on the basis of cubic meters per month. For example, a trader storing 2,000 CBM of fuel oil for a period of 3 months will be charged a storage fee of effective utilization of 2,000 * 3 months = 6,000 CBM per month.

The following table provides an estimate of annual chargeable units based on capacity utilization:

Description				2016	2017	2018	2019	2020
Tank No.	Shell Capacity	Product Stored	100%	75%	80%	85%	90%	90%
Tank - 101	5,971	Naphtha	71,652	53,739	57,322	60,904	64,487	64,487
Tank - 102	5,971	Naphtha	71,652	53,739	57,322	60,904	64,487	64,487
Tank - 103	5,971	Gasoline	71,652	53,739	57,322	60,904	64,487	64,487
Tank - 104	5,971	Gasoline	71,652	53,739	57,322	60,904	64,487	64,487
Tank - 105	10,882	Gas Oil (Diesel)	130,584	97,938	104,467	110,996	117,526	117,526
Tank - 106	10,882	Jet fuel	130,584	97,938	104,467	110,996	117,526	117,526
Tank - 107	10,882	Fuel Oil	130,584	97,938	104,467	110,996	117,526	117,526
Tank - 108	10,882	Fuel oil	130,584	97,938	104,467	110,996	117,526	117,526
Total Chargeable Units			808,944	606,708	647,155	687,602	728,050	728,050

Description				2021	2022	2023	2024	2025
Tank No.	Shell Capacity	Product Stored	100%	90%	90%	90%	90%	90%
Tank - 101	5,971	Naphtha	71,652	64,487	64,487	64,487	64,487	64,487
Tank - 102	5,971	Naphtha	71,652	64,487	64,487	64,487	64,487	64,487
Tank - 103	5,971	Gasoline	71,652	64,487	64,487	64,487	64,487	64,487
Tank - 104	5,971	Gasoline	71,652	64,487	64,487	64,487	64,487	64,487
Tank - 105	10,882	Gas Oil (Diesel)	130,584	117,526	117,526	117,526	117,526	117,526
Tank - 106	10,882	Jet fuel	130,584	117,526	117,526	117,526	117,526	117,526
Tank - 107	10,882	Fuel Oil	130,584	117,526	117,526	117,526	117,526	117,526
Tank - 108	10,882	Fuel oil	130,584	117,526	117,526	117,526	117,526	117,526
Total Chargeable Units			808,944	728,050	728,050	728,050	728,050	728,050

ESTIMATED SALES PRICES

Description				2016	2017	2018	2019	2020
Tank No.	Shell Capacity	Product Stored	100%	75%	80%	85%	90%	90%
Tank - 101	5,971	Naphtha	7.50	7.50	7.65	7.80	7.96	8.12
Tank - 102	5,971	Naphtha	7.50	7.50	7.65	7.80	7.96	8.12
Tank - 103	5,971	Gasoline	7.50	7.50	7.65	7.80	7.96	8.12
Tank - 104	5,971	Gasoline	7.50	7.50	7.65	7.80	7.96	8.12
Tank - 105	10,882	Gas Oil (Diesel)	6.50	6.50	6.63	6.76	6.90	7.04
Tank - 106	10,882	Jet fuel	7.50	7.50	7.65	7.80	7.96	8.12
Tank - 107	10,882	Fuel Oil	6.50	6.50	6.63	6.76	6.90	7.04
Tank - 108	10,882	Fuel oil	6.50	6.50	6.63	6.76	6.90	7.04

Description				2021	2022	2023	2024	2025
Tank No.	Shell Capacity	Product Stored	100%	90%	90%	90%	90%	90%
Tank - 101	5,971	Naphtha	7.50	8.28	8.45	8.62	8.79	8.96
Tank - 102	5,971	Naphtha	7.50	8.28	8.45	8.62	8.79	8.96
Tank - 103	5,971	Gasoline	7.50	8.28	8.45	8.62	8.79	8.96
Tank - 104	5,971	Gasoline	7.50	8.28	8.45	8.62	8.79	8.96
Tank - 105	10,882	Gas Oil (Diesel)	6.50	7.18	7.32	7.47	7.62	7.77
Tank - 106	10,882	Jet fuel	7.50	8.28	8.45	8.62	8.79	8.96
Tank - 107	10,882	Fuel Oil	6.50	7.18	7.32	7.47	7.62	7.77
Tank - 108	10,882	Fuel oil	6.50	7.18	7.32	7.47	7.62	7.77

The sales price estimated in the case of ABC is as per industry averages based on the survey performed by D&B SAME. The prices differ from product to product depending upon their specifications. The products are all Class 1, low flash petroleum products which require specialized handling and monitoring equipment and instrumentation. At the same time, the management has

proposed to construct the entire project in accordance with the NFPA and API standards. This is expected to enable the management to charge a premium of 5 – 10 percent resulting in slightly higher prices as compared to the prevailing market rates.

The facility location is in very close proximity to the main harbor which is expected to provide an advantage to ABC in terms of pricing power as compared to other terminals in the Sharjah and the UAE. It has been discussed earlier that facilities for storing Class 1 petroleum products in Sharjah and Hamriyah are limited and the relative shortage is expected to continue. Independent storage facilities for crude oil and petroleum products are located in Fujairah but are generally occupied by multinational crude oil extracting and trading companies. The facilities are cheaper to construct as compared to tank farms for Class 1 petroleum products and also charge a lower rate of approximately USD 6.00 per CBM per month. D&B SAME has conservatively estimated an annual growth of 2 percent in storage rent prices over the projection period.

As discussed in the section on Constraints and Challenges faced by the industry, there has been a general decline in crude oil prices in the wake of weak economic data emanating from Europe. In the short-run, the low levels of oil prices are expected to persist. However, in the long run, production cuts in the annual quotas of OPEC countries are likely which may push crude prices back to pre-decline levels – approx. USD 100 per barrel. Hence, the annual growth of 2 percent in the rental prices is estimated to be reasonable.

In the calculation of the sales estimates, it has been assumed that 1/3rd of the total capacity i.e. 2 tanks of shell capacity 10,898 each will be reserved for the storage of fuel oil (black product). Other 2/3rd space i.e. remaining 6 tanks are earmarked for the storage of respective products. The following table provides details about the tanks, their capacities and the products expected to be stored –

Tank Storage		
Tank	Shell Capacity (CBM)	Product storage
Tank - 101	5,971	Naphtha
Tank - 102	5,971	Naphtha
Tank - 103	5,971	Gasoline
Tank - 104	5,971	Gasoline
Tank - 105	10,882	Gas Oil (Diesel)
Tank - 106	10,882	Jet fuel
Tank - 107	10,882	Fuel Oil
Tank - 108	10,882	Fuel Oil
Source: Project Design		

Based on the above assumptions, the company's revenues are forecasted as below on a per tank basis –

Description				2016	2017	2018	2019	2020
Tank No.	Shell Capacity	Product Stored	100%	75%	80%	85%	90%	90%
Tank - 101	5,971	Naphtha	537,390	403,043	438,510	475,235	513,254	523,519
Tank - 102	5,971	Naphtha	537,390	403,043	438,510	475,235	513,254	523,519
Tank - 103	5,971	Gasoline	537,390	403,043	438,510	475,235	513,254	523,519
Tank - 104	5,971	Gasoline	537,390	403,043	438,510	475,235	513,254	523,519
Tank - 105	10,882	Gas Oil (Diesel)	848,796	636,597	692,618	750,624	810,674	826,888
Tank - 106	10,882	Jet fuel	979,380	734,535	799,174	866,105	935,393	954,101
Tank - 107	10,882	Fuel Oil	848,796	636,597	692,618	750,624	810,674	826,888
Tank - 108	10,882	Fuel oil	848,796	636,597	692,618	750,624	810,674	826,888
		Storage (USD)	5,675,328	4,256,496	4,631,068	5,018,920	5,420,433	5,528,842
		Throughput (USD)	1,533,872	1,150,404	1,251,640	1,356,465	1,464,982	1,494,282
		Ancillary (USD)	460,162	345,121	375,492	406,939	439,495	448,284
		Storage (AED)	20,856,830	15,642,623	17,019,174	18,444,529	19,920,092	20,318,494
		Throughput (AED)	5,636,981	4,227,736	4,599,777	4,985,008	5,383,809	5,491,485
		Ancillary (AED)	1,691,094	1,268,321	1,379,933	1,495,502	1,615,143	1,647,445
		Total (USD)	7,669,362	5,752,022	6,258,200	6,782,324	7,324,910	7,471,408
		Total (AED)	28,184,906	21,138,679	22,998,883	24,925,040	26,919,043	27,457,424

Description				2021	2022	2023	2024	2025
Tank No.	Shell Capacity	Product Stored	100%	90%	90%	80%	80%	80%
Tank - 101	5,971	Naphtha	537,390	533,990	544,670	555,563	566,674	578,008
Tank - 102	5,971	Naphtha	537,390	533,990	544,670	555,563	566,674	578,008
Tank - 103	5,971	Gasoline	537,390	533,990	544,670	555,563	566,674	578,008
Tank - 104	5,971	Gasoline	537,390	533,990	544,670	555,563	566,674	578,008
Tank - 105	10,882	Gas Oil (Diesel)	848,796	843,425	860,294	877,500	895,050	912,951
Tank - 106	10,882	Jet fuel	979,380	973,183	992,647	1,012,500	1,032,750	1,053,405
Tank - 107	10,882	Fuel Oil	848,796	843,425	860,294	877,500	895,050	912,951
Tank - 108	10,882	Fuel oil	848,796	843,425	860,294	877,500	895,050	912,951
		Storage (USD)	5,675,328	5,639,419	5,752,207	5,867,251	5,984,596	6,104,288
		Throughput (USD)	1,533,872	1,524,167	1,554,651	1,585,744	1,617,458	1,649,808
		Ancillary (USD)	460,162	457,250	466,395	475,723	485,238	494,942
		Storage (AED)	20,856,830	20,724,863	21,139,361	21,562,148	21,993,391	22,433,259
		Throughput (AED)	5,636,981	5,601,314	5,713,341	5,827,608	5,944,160	6,063,043
		Ancillary (AED)	1,691,094	1,680,394	1,714,002	1,748,282	1,783,248	1,818,913
		Total (USD)	7,669,362	7,620,836	7,773,253	7,928,718	8,087,292	8,249,038
		Total (AED)	28,184,906	28,006,572	28,566,704	29,138,038	29,720,799	30,315,214

It should be noted that the management has not finalized the manner of leasing the storage terminal and tanks. In the independent bulk liquid storage industry, there are several options available to the service provider.

One such scenario is that the management may decide to lease the tanks to client for a given period of time. In such cases, the management will charge rent and throughput charges based on the entire shell capacity of the tank leased irrespective of the capacity utilization by the client. Effectively, the service provided is completely insulated from the trading volumes of the client. Hence, the service provider receives a fixed income in the form of rent per tank irrespective of market conditions. This practice is generally followed by independent bulk oil storage terminal operators in the case of long term contracts with large companies which may be engaged in oil production, refining, distillation of petroleum products, or companies engaged in the logistics of petroleum products. The storage leasing contract may be for a period of 3-5 years based on the requirement. However, in such cases, the revenue from throughput and ancillary services is still collected on the basis of volumes transferred. The overall control, management and ownership of the tank farm/storage terminal are retained with the service provider.

Another possibility is the transfer of entire operational rights of the facility to a company specializing in tank farm management. In such cases, the promoters will retain the ownership of the tank farm/storage but the operational and management rights will be transferred to another company. The promoters will then be able to collect revenue in the form of fixed payments and a percentage of the profits.

For the purpose of the financial model, it has been assumed that the owner will operate the terminal and lease the tanks only.

ESTIMATED SALARIES

The management has estimated that the facility will require a terminal manager to oversee all the operations on the tank terminal. Other staff includes skilled workers such as SCADA/PLC Operators, Shift Supervisors, a lab technician and engineering technician. Labor required are estimated at 12 which include drivers, gantry operators, pump room staff and general support staff. The following table shows the manpower requirements and the estimated salaries:

Job Description	Positions	Monthly salary (AED)
Terminal manager	1	25,000
Shift supervisor	2	8,000
Lab technician	1	5,500
Scada/PLC	2	5,000
Engineering technician	2	5,000
Accounts/Admin	2	5,000
Driver	2	2,500
Pump Room Staff	2	1,500
Gantry Operators	2	1,500
Support staff	4	1,500
Security staff	2	2,000
Total	22	
Source: Management and D&B SAME Estimates		

It is also estimated that the 12 labor employed by the company will be provided with free accommodation, transportation and daily meals. Accommodation is expected to be available in Hamriya Free Zone in the form of rented rooms available at AED 24,000 annually. One room is expected to accommodate a maximum of 4 labors. Annual costs for rent, meals and transportation are expected to increase annually at 2 percent.

Description	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020
Salaries	1,170,000	1,170,000	1,193,400	1,217,268	1,241,613
Accommodation Cost	96,000	96,000	97,920	99,878	101,876
Meals and Food Cost	131,400	131,400	134,028	136,709	139,443
Visa Cost	33,000	33,000	33,660	34,333	35,020
Insurance Cost	15,000	15,000	15,300	15,606	15,918
Workmen's compensation for health benefits	3,600	3,600	3,672	3,745	3,820
Annual ticket	26,400	26,400	26,928	27,467	28,016
Total	1,475,400	1,475,400	1,504,908	1,535,006	1,565,706

Description	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Salaries	1,266,446	1,291,775	1,317,610	1,343,962	1,370,841
Accommodation Cost	103,913	105,992	108,112	110,274	112,479
Meals and Food Cost	142,232	145,076	147,978	150,937	153,956
Visa Cost	35,720	36,435	37,163	37,907	38,665
Insurance Cost	16,236	16,561	16,892	17,230	17,575
Workmen's compensation for health benefits	3,897	3,975	4,054	4,135	4,218
Annual ticket cost	28,576	29,148	29,731	30,325	30,932
Total	1,597,020	1,628,961	1,661,540	1,694,771	1,728,666

For the first year of operations, the salaries and wages are calculated at a pro rata cost for 8 operational months since the facility is expected to be operational from 1st May 2016 onwards. 3 daily meals are expected to be provided to 12 laborers throughout the year i.e. 13,140 meals at an estimated cost of AED 10.00 per meal. This cost is expected to increase at a rate of 2 percent annually.

Visa costs for all 22 employees are expected to be borne by the company. On average, one employment visa for 2 years costs AED 3,000 per employee. A cost of AED 1,500 is apportioned for 1 year.

Annual cost of AED 1,500 is estimated per employee for health insurance. The company is expected to incur an additional cost of AED 300 per laborer per year to provide workmen's compensation.

The company is also obliged to provide for the cost of an annual air ticket to all employees and their dependents. This cost has been initially estimated at AED 1,200 per employee (no dependents assumed). This cost is also expected to increase at a rate of 2 percent annually.

ESTIMATED UTILITIES COST

Electricity		FY 2016	FY 2017	FY 2018	FY 2019	FY 2020
Capacity Utilization	100%	75%	80%	85%	90%	90%
Monthly Power Utilization (KWh)	25,000	18,750	20,000	21,250	22,500	22,500
Rate/kWh (AED)	0.400	0.400	0.408	0.416	0.424	0.433
Monthly Electricity Cost (AED)		7,500	8,160	8,843	9,551	9,742
Annual Electricity Cost (AED)	120,000	90,000	97,920	106,121	114,610	116,903

Water		FY 2016	FY 2017	FY 2018	FY 2019	FY 2020
Capacity Utilization	100%	75%	80%	85%	90%	90%
Monthly Gallons Usage	12,000	9,000	9,600	10,200	10,800	10,800
Rate/Gallons (AED)	0.030	0.040	0.041	0.042	0.042	0.043
Monthly Water Cost	360	360	392	424	458	468
Annual Water Cost (AED)	4320	4,320	4,700	5,094	5,501	5,611

Telephone & Internet		FY 2016	FY 2017	FY 2018	FY 2019	FY 2020
Estimated Monthly cost	3,500	3,500	3,570	3,641	3,714	3,789
Annual telephone Cost (AED)	42000	42,000	42,840	43,697	44,571	45,462

Annual Utilities Cost	166,320	136,320	145,460	154,911	164,683	167,976
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Electricity		FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Capacity Utilization	100%	90%	90%	90%	90%	90%
Monthly Power Utilization (KWh)	25,000	22,500	22,500	22,500	22,500	22,500
Rate/kWh (AED)	0.400	0.442	0.450	0.459	0.469	0.478
Monthly Electricity Cost (AED)		9,937	10,135	10,338	10,545	10,756
Annual Electricity Cost (AED)	120,000	119,241	121,626	124,058	126,539	129,070

Water		FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Capacity Utilization	100%	90%	90%	90%	90%	80%
Monthly Gallons Usage	12,000	10,800	10,800	10,800	10,800	9,600
Rate/Gallons (AED)	0.030	0.044	0.045	0.046	0.047	0.048
Monthly Water Cost	360	477	487	496	506	459
Annual Water Cost (AED)	4320	5,724	5,838	5,955	6,074	5,507

Telephone & Internet		FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Estimated Monthly cost	3,500	3,864	3,942	4,020	4,101	4,183
Annual telephone Cost (AED)	42000	46,371	47,299	48,245	49,210	50,194

Annual Utilities Cost	166,320	171,336	174,762	178,258	181,823	184,771
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The major component in the utilities cost is the payment for the electricity usage to SEWA. On a monthly basis, working at full capacity, the company is expected to use 25,000 KWh of electricity. In 2014, power is available from SEWA and HFZA at AED 0.4/KWh. The annual per unit cost of electricity is expected to increase at a rate of 2 percent. The annual cost of electricity use in 2016 is estimated at AED 60,000 (accounting for 8 operational months).

Water requirement is estimated at 12,000 gallons per month. Water is available in HFZA at AED 0.03 /gallon.

Telephone and internet costs are estimated at AED 3,500 per month as quoted by Etisalat and Du for commercial establishments.

INSURANCE

The company is expected to incur insurance costs on three instances –

1. Vehicle insurance at 4.00 percent of vehicle value
2. Fire and Property insurance at 0.75 percent of total assets value
3. Marine Insurance at AED 65,000 annually.

The following table provides an explanation of the costs incurred –

Closing Value of Fixed assets					
Particulars	2016	2017	2018	2019	2020
Contracting works	2,917,340	2,817,885	2,718,430	2,618,976	2,519,521
Buildings	2,242,011	2,165,579	2,089,147	2,012,715	1,936,282
Storage tanks and internal pipeline	22,775,625	21,999,183	21,222,742	20,446,300	19,669,858
Vehicles	601,673	537,208	472,743	408,278	343,813
Plant, Machinery and Instrumentation	2,779,467	2,481,667	2,183,867	1,886,067	1,588,267
Laboratory Equipment	173,333	133,333	93,333	53,333	13,333
Power Equipment	3,019,333	2,695,833	2,372,333	2,048,833	1,725,333
Firefighting Works	2,543,333	2,270,833	1,998,333	1,725,833	1,453,333
Underground and external pipelines	3,487,491	3,368,599	3,249,707	3,130,816	3,011,924
Office Equipment	255,667	196,667	137,667	78,667	19,667
Total Fixed Assets	40,795,274	38,666,788	36,538,303	34,409,817	32,281,332
Vehicle insurance	24,067	21,488	18,910	16,331	13,753
Fire & Property insurance	301,452	285,972	270,492	255,012	239,531
Marine Insurance	65,000	65,000	65,000	65,000	65,000
Total insurance Cost	390,519	372,460	354,401	336,343	318,284

Closing Value of Fixed assets					
Particulars	2021	2022	2023	2024	2025
Contracting works	2,420,066	2,320,611	2,221,156	2,121,702	2,022,247
Buildings	1,859,850	1,783,418	1,706,986	1,630,554	1,554,121
Storage tanks and internal pipeline	18,893,416	18,116,975	17,340,533	16,564,091	15,787,649
Vehicles	279,348	214,883	150,418	85,953	21,488
Plant, Machinery and Instrumentation	1,290,467	992,667	694,867	397,067	99,267
Laboratory Equipment	-	-	-	-	-
Power Equipment	1,401,833	1,078,333	754,833	431,333	107,833
Firefighting Works	1,180,833	908,333	635,833	363,333	90,833
Underground and external pipelines	2,893,032	2,774,140	2,655,249	2,536,357	2,417,465
Office Equipment	-	-	-	-	-
Total Fixed Assets	30,218,846	28,189,361	26,159,875	24,130,390	22,100,904

Vehicle insurance	11,174	11,174	11,174	11,174	11,174
Fire & Property insurance	224,546	209,809	195,071	180,333	165,596
Marine Insurance	65,000	65,000	65,000	65,000	65,000
Total insurance Cost	300,720	285,983	271,245	256,507	241,770

LEGAL, PROFESSIONAL AND CONSULTANCY FEES

Description	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022
HFZA license renewal fees	8,500	8,670	8,843	9,020	9,201	9,385	9,572
Annual Civil defense certificate	20,000	20,400	20,808	21,224	21,649	22,082	22,523
Annual Environmental Audit	35,000	35,700	36,414	37,142	37,885	38,643	39,416
Fire system maintenance contract	10,000	10,200	10,404	10,612	10,824	11,041	11,262
Third Party Inspection Contract	35,000	35,700	36,414	37,142	37,885	38,643	39,416
Annual Legal And Consultancy fees	108,500	110,670	112,883	115,141	117,444	119,793	122,189
Source: D&B SAME Estimates							

The company is expected to incur fixed costs in the nature of renewal fees for –

1. Trade License for continuation of business activities
2. Chamber of Commerce Certificate
3. Annual Environment Audit for a review of the environmental impact of the company’s commercial activities
4. Fire Systems maintenance is mandatory as per the UAE law and as per the NFPA standards. The management has proposed to enter into a contract with a specialized agency for this purpose. The annual costs are estimated at AED 10,000.
5. Annual Third party inspection fees of AED 35,000 are expected to be incurred to check the integrity of the tanks and terminal

PROFITABILITY PROJECTIONS

Description	31-Dec-16	31-Dec-17	31-Dec-18	31-Dec-19	31-Dec-20
Income from storage	10,428,415	17,019,174	18,444,529	19,920,092	20,318,494
Throughput income	2,818,491	4,599,777	4,985,008	5,383,809	5,491,485
Other income	845,547	1,379,933	1,495,502	1,615,143	1,647,445
Total operating income	14,092,453	22,998,883	24,925,040	26,919,043	27,457,424
Salaries and benefits	983,600	1,475,400	1,504,908	1,535,006	1,565,706
Utilities	90,880	145,460	154,911	164,683	167,976
Rent	1,980,008	2,376,010	2,376,010	2,376,010	2,376,010
Insurance	390,519	372,460	354,401	336,343	318,284
Legal, consultancy and professional expenses	108,500	110,670	112,883	115,141	117,444
Total operating expenses	3,553,507	4,480,000	4,503,114	4,527,182	4,545,420
EBITDA	10,538,946	18,518,883	20,421,925	22,391,860	22,912,004
EBITDA %	74.78%	80.52%	81.93%	83.18%	83.45%
Depreciation & Amortization	3,602,244	4,311,739	4,311,739	4,311,739	4,311,739
EBIT	6,936,702	14,207,144	16,110,186	18,080,121	18,600,264
EBIT %	49.22%	61.77%	64.63%	67.16%	67.74%
Interest on term loan	1,305,509	1,667,869	1,275,429	882,989	490,550
Profit before tax	5,631,192	12,539,275	14,834,757	17,197,132	18,109,715
Tax	-	-	-	-	-
Net profit	5,631,192	12,539,275	14,834,757	17,197,132	18,109,715
Net profit %	39.96%	54.52%	59.52%	63.88%	65.96%

Description	31-Dec-21	31-Dec-22	31-Dec-23	31-Dec-24	31-Dec-25
Income from storage	20,724,863	21,139,361	21,562,148	21,993,391	22,433,259
Throughput income	5,601,314	5,713,341	5,827,608	5,944,160	6,063,043
Other income	1,680,394	1,714,002	1,748,282	1,783,248	1,818,913
Total operating income	28,006,572	28,566,704	29,138,038	29,720,799	30,315,214
Salaries and benefits	1,597,020	1,628,961	1,661,540	1,694,771	1,728,666
Utilities	171,336	174,762	178,258	181,823	184,771
Rent	2,376,010	2,545,725	2,545,725	2,545,725	2,545,725
Insurance	300,720	285,983	271,245	256,507	241,770
Legal, consultancy and professional expenses	119,793	122,189	124,632	127,125	129,668
Total operating expenses	4,564,879	4,757,619	4,781,400	4,805,951	4,830,599
EBITDA	23,441,693	23,809,084	24,356,638	24,914,848	25,484,615
EBITDA %	83.70%	83.35%	83.59%	83.83%	84.07%
Depreciation & Amortization	2,062,485	2,029,485	2,029,485	2,029,485	2,029,485
EBIT	21,379,208	21,779,599	22,327,152	22,885,362	23,455,130
EBIT %	76.34%	76.24%	76.63%	77.00%	77.37%
Interest on term loan	98,110	-	-	-	-
Profit before tax	21,281,098	21,779,599	22,327,152	22,885,362	23,455,130
Tax	-	-	-	-	-
Net profit	21,281,098	21,779,599	22,327,152	22,885,362	23,455,130
Net profit %	75.99%	76.24%	76.63%	77.00%	77.37%

BALANCE SHEET PROJECTIONS

Description	31-Dec-16	31-Dec-17	31-Dec-18	31-Dec-19	31-Dec-20
Fixed Assets					
Land	1,500,000	1,500,000	1,500,000	1,500,000	1,500,000
Contracting works	2,917,340	2,817,885	2,718,430	2,618,976	2,519,521
Buildings	2,242,011	2,165,579	2,089,147	2,012,715	1,936,282
Storage tanks and internal pipeline	22,775,625	21,999,183	21,222,742	20,446,300	19,669,858
Vehicles	601,673	537,208	472,743	408,278	343,813
Plant, Machinery and Instrumentation	2,779,467	2,481,667	2,183,867	1,886,067	1,588,267
Laboratory Equipment	173,333	133,333	93,333	53,333	13,333
Power Equipment	3,019,333	2,695,833	2,372,333	2,048,833	1,725,333
Firefighting Works	2,543,333	2,270,833	1,998,333	1,725,833	1,453,333
Underground and external pipelines	3,487,491	3,368,599	3,249,707	3,130,816	3,011,924
Office Equipment	255,667	196,667	137,667	78,667	19,667
Total Fixed Assets	40,795,274	38,666,788	36,538,303	34,409,817	32,281,332
Current Assets					
Cash balance	500,000	500,000	500,000	500,000	500,000
Bank balance	9,198,982	17,960,839	29,018,179	42,437,893	56,770,191
Total Current Assets	9,698,982	18,460,839	29,518,179	42,937,893	57,270,191
Expenditure till date not written off					
Preliminary Expenses	8,733,015	6,549,761	4,366,508	2,183,254	
Total capitalized Expenditure	8,733,015	6,549,761	4,366,508	2,183,254	-
Total Assets	59,227,271	63,677,389	70,422,989	79,530,964	89,551,523
Description	31-Dec-16	31-Dec-17	31-Dec-18	31-Dec-19	31-Dec-20
Equity					
Equity capital	17,194,874	17,194,874	17,194,874	17,194,874	17,194,874
Profit for the year	5,631,192	12,539,275	14,834,757	17,197,132	18,109,715
Total Retained Earnings	5,631,192	18,170,467	33,005,224	50,202,356	68,312,070
Funds attributable to shareholders	22,826,066	35,365,341	50,200,098	67,397,230	85,506,944
Borrowed Funds					
Term Loan	36,401,204	28,312,048	20,222,891	12,133,735	4,044,578
Total borrowed funds	36,401,204	28,312,048	20,222,891	12,133,735	4,044,578
Total Liabilities	59,227,270	63,677,389	70,422,989	79,530,964	89,551,523

Description	31-Dec-21	31-Dec-22	31-Dec-23	31-Dec-24	31-Dec-25
Fixed Assets					
Land	1,500,000	1,500,000	1,500,000	1,500,000	1,500,000
Contracting works	2,420,066	2,320,611	2,221,156	2,121,702	2,022,247
Buildings	1,859,850	1,783,418	1,706,986	1,630,554	1,554,121
Storage tanks and internal pipeline	18,893,416	18,116,975	17,340,533	16,564,091	15,787,649
Vehicles	279,348	214,883	150,418	85,953	21,488
Plant, Machinery and Instrumentation	1,290,467	992,667	694,867	397,067	99,267
Laboratory Equipment	-	-	-	-	-
Power Equipment	1,401,833	1,078,333	754,833	431,333	107,833
Firefighting Works	1,180,833	908,333	635,833	363,333	90,833
Underground and external pipelines	2,893,032	2,774,140	2,655,249	2,536,357	2,417,465
Office Equipment	-	-	-	-	-
Total Fixed Assets	30,218,846	28,189,361	26,159,875	24,130,390	22,100,904
Current Assets					
Cash balance	500,000	500,000	500,000	500,000	500,000
Bank balance	76,069,196	99,878,280	124,234,918	149,149,766	174,634,381
Total Current Assets	76,569,196	100,378,280	124,734,918	149,649,766	175,134,381
Expenditure till date not written off					
Preliminary Expenses					
Total capitalized Expenditure	-	-	-	-	-
Total Assets	106,788,042	128,567,641	150,894,793	173,780,156	197,235,285
Description	31-Dec-21	31-Dec-22	31-Dec-23	31-Dec-24	31-Dec-25
Equity					
Equity capital	17,194,874	17,194,874	17,194,874	17,194,874	17,194,874
Profit for the year	21,281,098	21,779,599	22,327,152	22,885,362	23,455,130
Total Retained Earnings	89,593,168	111,372,767	133,699,919	156,585,282	180,040,411
Funds attributable to shareholders	106,788,042	128,567,641	150,894,793	173,780,155	197,235,285
Borrowed Funds					
Term Loan					
Total borrowed funds	-	-	-	-	-
Total Liabilities	106,788,042	128,567,641	150,894,793	173,780,155	197,235,285

FINANCIAL ANALYSIS

NPV-IRR

Description	31-Dec-16	31-Dec-17	31-Dec-18	31-Dec-19	31-Dec-20
Profit After Tax	5,631,192	12,539,275	14,834,757	17,197,132	18,109,715
Depreciation	3,602,244	4,311,739	4,311,739	4,311,739	4,311,739
Operating cash flow	9,233,437	16,851,014	19,146,496	21,508,871	22,421,454
Project Cost	57,316,246				

Description	31-Dec-21	31-Dec-22	31-Dec-23	31-Dec-24	31-Dec-25
Profit After Tax	21,281,098	21,779,599	22,327,152	22,885,362	23,455,130
Depreciation	2,062,485	2,029,485	2,029,485	2,029,485	2,029,485
Operating cash flow	23,343,583	23,809,084	24,356,638	24,914,848	25,484,615
Salvage value of assets					19,890,814

The operating cash flow of the company is calculated by adding back the non-cash expenditure such as depreciation and amortization of preliminary expenditure to the profit after tax. In the financial projections, the company does not have any subsequent activities relating to financing (issue of equity capital, additional debt financing) or investing (purchase/disposal of assets). Hence, the operating cash flow has been taken as the net cash inflow for the company in that particular year.

Other cash flows include –

- a. **Project Cost outflow** – The company is expected to start investment in fixed assets on 1 February 2015. The entire investment is expected to be made by the 1st week of May 2016. The investment is represented initially by way of capital expenditure financed by equity. Thereafter the term loan is expected to be applied to the payments made to the contractor for the construction of assets.
- b. **Salvage value of assets** – The salvage value of fixed assets has been considered as the balance sheet value (book value) at the end of FY 2025 less 10 percent to allow for selling and disposal costs.

The discounting rate for the cash flows and NPV calculations has been taken as the Weighted Average Cost of capital (WACC). This is necessary since the company is has a mix of debt and equity finance. The cost of equity has been assumed at 15 percent. The cost of debt financing is the annualized 6 month EIBOR + 400 basis points i.e. 4.90 percent. The following table illustrates the WACC calculation –

Weighted Average Cost of Capital		
Means of Finance	Weight	Cost
Equity	30.00%	15.000%
Debt	70.00%	4.851%
WACC		7.896%

Over the period of the projections, the NPV of the project is positive at AED 91,680,657 (USD 24,947,118). The internal rate of Return is calculated at 32.46 percent – higher than the discounting rate.

NPV and IRR analysis Cash flows		
Particulars	Amount	Date
Project Cost Outflow	(57,316,246)	01-Feb-2015
OCF 2016 inflow	9,233,437	31-Dec-16
OCF 2017 inflow	16,851,014	31-Dec-17
OCF 2018 inflow	19,146,496	31-Dec-18
OCF 2019 inflow	21,508,871	31-Dec-19
OCF 2020 inflow	22,421,454	31-Dec-20
OCF 2021 inflow	23,343,583	31-Dec-21
OCF 2022 inflow	23,809,084	31-Dec-22
OCF 2023 inflow	24,356,638	31-Dec-23
OCF 2024 inflow	24,914,848	31-Dec-24
OCF 2025 inflow	25,484,615	31-Dec-25
Asset Salvage Value inflow	19,890,814	31-Dec-25
NPV	78,213,177	21,282,497
IRR	24.10%	

KEY RATIO ANALYSIS

Description	31-Dec-16	31-Dec-17	31-Dec-18	31-Dec-19	31-Dec-20
EBITDA Margin	74.78%	80.52%	81.93%	83.18%	83.45%
EBIT Margin	49.22%	61.77%	64.63%	67.16%	67.74%
Net profit Margin	39.96%	54.52%	59.52%	63.88%	65.96%
Operating Cash Flow Margin	66.52%	73.27%	76.82%	79.90%	81.66%
Fixed Assets Turnover Ratio	0.35	0.59	0.68	0.78	0.85
Debt: Equity Ratio	1.59	0.80	0.40	0.18	0.05
Loan to asset value ratio	0.89	0.73	0.55	0.35	0.13

Source: D&B SAME Estimates

Description	31-Dec-21	31-Dec-22	31-Dec-23	31-Dec-24	31-Dec-25
EBITDA Margin	83.70%	83.35%	83.59%	83.83%	84.07%
EBIT Margin	76.34%	76.24%	76.63%	77.00%	77.37%
Net profit Margin	75.99%	76.24%	76.63%	77.00%	77.37%
Operating Cash Flow Margin	83.35%	83.35%	83.59%	83.83%	84.07%
Fixed Assets Turnover Ratio	0.93	1.01	1.11	1.23	1.37
Debt to Equity Ratio	-	-	-	-	-
Loan to asset value ratio	-	-	-	-	-

Source: D&B SAME Estimates

- i. The company is expected to maintain a minimum EBITDA margin of 74.8 percent. However, this margin is expected to improve to 83 - 84 percent as the capacity utilization reaches the maximum permissible limit of 90 percent.
- ii. The EBIT Margin is initially low due to the high charge of depreciation and amortization expenses to profits. The margin is expected to show a generally improving trend over the projection period. However, a drastic improvement is expected in FY 2021 due to the complete amortization of preliminary expenses in the preceding years.
- iii. The net Profit margins are also expected to display a generally improving trend due to a variety of factors – generally increasing capacity utilization, falling interest costs and total amortization of preliminary expenses in the previous years.
- iv. The fixed assets turnover ratio (FATR) is expected to show an improving trend over the projection period. The ratio is expected to gradually improve from 0.35 FY 2016 to 0.85 in FY 2020 when the loan is repaid. The further increase in the FATR is primarily due to the reduction in the book value of fixed assets due to a fixed charge of depreciation. Capacity utilization has been assumed to reach a maximum of 90 percent in FY 2019. The increase in FATR then onwards is only due to the annual rise of 2 percent in the rental rates.

The FATR is low but this is expected to be similar to the prevailing industry averages for newly set-up independent bulk liquid storage service providing companies. Being a service

- provider, the company is expected to have a lack of expenditure related to raw materials. There is no manufacturing activity; hence utilities costs are limited to the operations of pumps and office use. All these factors result in a high amount of cash inflow and high profitability at the same time.
- v. The operating Cash flow margin is healthy starting at 66.52 percent in FY 2016. This margin is expected to show an improving trend over the projection period primarily due to the increase in revenue due to higher capacity utilization. At the same time, some of the costs are fixed in nature. Hence, over the period, although revenues are expected to increase, a major cash outflow in the form of rent is fixed in nature. At the same time, other costs such as salaries and administrative expenses are expected to remain fairly stable over the projection period.
 - vi. The initial debt to equity ratio is 2.33. The loan is to be repaid within 6 years of operations after which, the company will be financed wholly by equity. The drastic reduction in the debt equity ratio is also attributed to the retention of profits in the business.
 - vii. The initial loan to asset value ratio is expected to be 0.92. This is expected to reduce gradually as the assets are depreciated but the loan is repaid at a faster rate. Assets in this case represent only tangible fixed assets.

COST BREAK-UP ANALYSIS

Operating Costs

Percentage of Sales					
Description	31-Dec-16	31-Dec-17	31-Dec-18	31-Dec-19	31-Dec-20
Salaries and benefits	6.98%	6.42%	6.04%	5.70%	5.70%
Utilities	0.64%	0.63%	0.62%	0.61%	0.61%
Rent	14.05%	10.33%	9.53%	8.83%	8.65%
Insurance	2.77%	1.62%	1.42%	1.25%	1.16%
Legal, consultancy and professional expenses	0.77%	0.48%	0.45%	0.43%	0.43%
Total operating expenses	25.22%	19.48%	18.07%	16.82%	16.55%

Percentage of Sales					
Description	31-Dec-21	31-Dec-22	31-Dec-23	31-Dec-24	31-Dec-25
Salaries and benefits	5.70%	5.70%	5.70%	5.70%	5.70%
Utilities	0.61%	0.61%	0.61%	0.61%	0.61%
Rent	8.48%	8.91%	8.74%	8.57%	8.40%
Insurance	1.07%	1.00%	0.93%	0.86%	0.80%
Legal, consultancy and professional expenses	0.43%	0.43%	0.43%	0.43%	0.43%
Total operating expenses	16.30%	16.65%	16.41%	16.17%	15.93%

Other Costs

Percentage of Sales					
Description	31-Dec-16	31-Dec-17	31-Dec-18	31-Dec-19	31-Dec-20
Depreciation & Amortization	25.56%	18.75%	17.30%	16.02%	15.70%
Interest on term loan	9.26%	7.25%	5.12%	3.28%	1.79%
Total	34.83%	26.00%	22.42%	19.30%	17.49%

Percentage of Sales					
Description	31-Dec-21	31-Dec-22	31-Dec-23	31-Dec-24	31-Dec-25
Depreciation & Amortization	7.36%	7.10%	6.97%	6.83%	6.69%
Interest on term loan	0.35%	0.00%	0.00%	0.00%	0.00%
Total	7.71%	7.10%	6.97%	6.83%	6.69%

SENSITIVITY ANALYSIS

Sensitivity Analysis			
Description	NPV	IRR	DSCR
Base Scenario	78,213,177	24.10%	2.812
5% decrease in sales prices	70,244,767	22.70%	2.640
10% decrease in sales prices	62,276,356	21.26%	2.469
5% decrease in capacity utilization	54,228,461	20.06%	2.343
10% decrease in capacity utilization	44,759,138	18.14%	2.132
1% increase in interest rates	69,210,841	23.87%	2.756
10% increase in project cost	64,250,324	22.01%	2.573
Average	63,311,866	21.74%	2.532

Sensitivity Analysis										
Description	EBITDA									
	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Base Scenario	74.78%	80.52%	81.93%	83.18%	83.45%	83.70%	83.35%	83.59%	83.83%	84.07%
5% decrease in sales prices	73.46%	79.50%	80.98%	82.30%	82.57%	82.84%	82.47%	82.73%	82.98%	83.23%
10% decrease in sales prices	71.98%	78.36%	79.93%	81.31%	81.61%	81.89%	81.50%	81.77%	82.03%	82.29%
5% decrease in capacity utilization	77.62%	75.99%	78.03%	79.79%	80.11%	80.41%	79.99%	80.28%	80.57%	80.85%
10% decrease in capacity utilization	75.59%	73.99%	76.34%	78.35%	78.69%	79.02%	78.56%	78.87%	79.18%	79.48%
1% increase in interest rates	74.78%	80.52%	81.93%	83.18%	83.45%	83.70%	83.35%	83.59%	83.83%	84.07%
10% increase in project cost	74.78%	80.52%	81.93%	83.18%	83.45%	83.70%	83.35%	83.59%	83.83%	84.07%
Average	74.72%	78.49%	80.15%	81.61%	81.90%	82.18%	81.79%	82.06%	82.32%	82.58%

Sensitivity Analysis										
Description	NET PROFIT									
	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Base Scenario	39.96%	54.52%	59.52%	63.88%	65.96%	75.99%	76.24%	76.63%	77.00%	77.37%
5% decrease in sales prices	36.80%	52.13%	57.39%	61.98%	64.16%	74.72%	74.99%	75.40%	75.79%	76.18%
10% decrease in sales prices	33.29%	49.47%	55.02%	59.87%	62.17%	73.32%	73.60%	74.03%	74.45%	74.86%
5% decrease in capacity utilization	45.92%	43.95%	50.78%	56.60%	59.09%	71.14%	71.45%	71.91%	72.36%	72.81%
10% decrease in capacity utilization	41.00%	39.28%	46.99%	53.50%	56.17%	69.08%	69.41%	69.91%	70.39%	70.87%
1% increase in interest rates	37.97%	52.96%	58.42%	63.18%	65.57%	75.91%	76.24%	76.63%	77.00%	77.37%
10% increase in project cost	32.32%	51.92%	57.28%	61.95%	64.21%	75.31%	75.53%	75.93%	76.32%	76.70%
Average	38.18%	49.18%	55.05%	60.14%	62.48%	73.64%	73.92%	74.35%	74.76%	75.16%

CONCLUSION

The objective of the study is to assess techno economic viability of the project proposed by the management of ABC Middle FZC. The project entails the construction and subsequent operation of a bulk oil and petroleum storage tank farm with the intention of leasing out storage space to oil and petroleum traders in the UAE.

D&B SAME has assessed the techno economic viability of the project based on the data provided by the Company and other market information based on primary and secondary research.

While assessing the viability of the project, D&B SAME has considered the following major relevant factors:

- Background and experience of the promoters and the management
- Project specific attributes both, positive and negative
- Reasonableness of the Project Cost and operating expenditure
- Global industry growth and constraints
- Expected financial performance of the project

Subject to the above assessment, achievement of the critical success factors and the impact of various scenarios as envisaged under sensitivity analysis study, the project of the Company is viewed as techno economically viable.

CONFIDENTIALITY

CURRENCY: All amounts in this report are in local currency unless otherwise stated.



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