



Most storage terminals are located along Turkey's Marmara, Aegean and Mediterranean coastlines

Turkey's tank storage sector has entered an important growth phase with many third party petroleum and chemical terminal owners constructing or preparing to invest in new tanks

# Bulk liquid storage in Turkey

by David Hayes

**S**trong economic growth and Turkey's development as a major energy transit corridor linking oil and gas resources in the Caucasus and central Asia to the European and global markets is driving a new tank storage expansion phase.

Although most third party terminals are Turkish-owned at present, international terminal operators are showing interest in this growing market. Texas, US-based oil pipeline and terminal operator NuStar Energy entered a joint venture with S-Oil and Aves of Turkey earlier this year, investing around \$54 million (€37 million) to take a 75% stake and operational control of two petroleum terminals.

The terminals, one capable of storing 606,000 barrels of petrol, oil and distillates such as diesel, the other designed to hold 740,000 barrels of mostly oil products, are connected by pipeline to a new offshore platform in the Mediterranean.

Bigger players also are

also interested in Turkey, with at least one leading global third party terminal operator thought to be working on setting up local storage facilities in the future.

Most storage terminals are located along Turkey's Marmara, Aegean and Mediterranean coastlines including Ceyhan, where the BTC oil pipeline and the Iraq-Turkey oil pipeline terminate. Terminal facilities at Ceyhan will expand further in future when construction of the Samsun-Ceyhan oil pipeline is completed, which is expected by 2014.

'The Turkish fuel business is growing. There is a growing economy, more cars are owned by a wealthier population, also tourism is growing,' comments Sami Habbab, board member at Delta Petroleum Products Trading, Turkey's largest third party petroleum terminal operator.

'Perhaps there is 1.5 million to 2 million m<sup>3</sup> storage capacity here. Most of the

petroleum storage capacity is owned by distribution companies and refineries.'

Established in 1983, in addition to operating its Ceyhan terminal, Delta Petroleum has other diversified business interests that range from petroleum trading and distribution to logistics and renewable energy development.

Delta's Ceyhan terminal offers 625,000m<sup>3</sup> of storage capacity. The terminal was last expanded in 2008 when 325,000m<sup>3</sup> of capacity was added, doubling the terminal's storage capacity from 300,000m<sup>3</sup> previously.

Delta installed a combination of 20,000 and 35,000m<sup>3</sup> tanks.

'These are fairly large tanks. We chose those sizes because those are the sizes of vessels calling in this region,' Habbab says. 'Our smallest tanks are 12,500m<sup>3</sup>. All our tanks are sized for transshipment.

'We store mainly petroleum and some LPG. We provide

third party storage to different clients that work here, serving Turkey and regional activities. We are a hub for value-added transactions. We do blending and add additives to improve petroleum quality.

'The hub concept started in the last five years. Turkey is a major transit corridor of pipelines and highways. As part of that we focus on the petroleum transit business.'

Ceyhan terminal is busy at present with the current storage capacity being fully utilised. Clients normally book a minimum of 30,000m<sup>3</sup> storage capacity. The maximum capacity booked ranges up to 200,000m<sup>3</sup>.

'Usually storage capacity is tight in the Mediterranean so clients want to contract storage to have a sustainable and continuous business stream,' Habbab notes. 'We can store crude but basically we store refined products. All of our cargos are in transit.'

Transit cargos are destined for Europe and Black Sea

destinations. Some cargos come from Azerbaijan, Turkmenistan, Kazakhstan and Georgia, travel from the Caspian to the Black Sea first and then get to the US or Asian markets via Ceyhan.

'We do the transit business. Local petrol and fuel oil is exported direct by Turkish refineries,' Habbab says. 'We compete with terminals in Malta and some small terminals in Egypt. Our location is advantageous for transit flows and to supply the domestic market.'

Turkey has a population of 75 million people so a small portion of the transit cargo is destined for the Turkish market.

Demand for third party petroleum storage in Turkey is expected to grow as the country's role as transshipment and distribution hub develops and economic growth encourages domestic consumption to increase.

To meet future client demand, Delta is planning to expand its Ceyhan terminal by a further 300,000 to 400,000m<sup>3</sup>, which will lift the terminal's overall capacity to about 1 million m<sup>3</sup>.

'Land is available at our terminal site. We may do the expansion in one or two phases; probably two stages. This will include building a 165,000dwt jetty with six berths. The new jetty will be completed in two years at the same time as the storage expansion and will replace the existing jetty that can accommodate 55,000dwt vessels and has two berths,' Habbab says.

'We will make a decision later this year. Currently we are negotiating off-take agreements and finance. We have good demand for capacity. Once the opportunity arrives there will be other players interested. Some are looking around now.'

Delta previously owned the Poti terminal in Georgia on the Black Sea but sold the facility to concentrate on developing Ceyhan terminal after carrying out two expansion phases in Georgia.

'We raised capital, saw growth there and it was a good time to take profit. Poti terminal is 120,000m<sup>3</sup>, which is a very good size for the Black Sea,' Habbab says. 'You can do transit business



Solventas is Turkey's largest third party storage operator

there.' A local Georgian company bought the terminal.

Plans to develop operations at Ceyhan include attracting new clients and developing the terminal's role as a regional and global hub.

'We are concentrating on the Ceyhan terminal. It will cost \$80 million to \$100 million to build the new jetty and storage tank capacity,' Habbab says. 'The expansion will involve the same size tanks and operational concept. We will enlarge our offer and do break bulk and build bulk; also, ship to ship transfers will start.'

'We want to get long haul traffic from Asia and the Far East taking different products and crude. A lot of freight is economical when you can do large size shipments. Our vision is to serve the global trade.'

#### Chemical storage

Owners of terminals handling chemicals also are expanding storage capacity to handle rising imports driven by Turkey's economic growth. Most bulk chemical terminals are located in the Izmit area along with some terminals storing petroleum. Most petroleum product and crude storage is at Ceyhan where Iraq and BTC pipelines end. Mersin in southern Turkey also has some petroleum storage.

'Turkey's chemical use is growing. When we look at our figures we can see a

lot more throughput each year,' comments Erin Baruh, marketing manager at Solventas Teknik Depolama A.S. 'The chemicals are being used by various industries - paints, foam for furniture, oils for machinery, household detergents, pharmaceuticals and others. There is a great variety of uses reflecting Turkey's fast growing economy.'

Established in 1967, Solventas is a family-owned company and Turkey's largest operator of third party chemical storage capacity. The company's terminal is located in Diovasi, an industrial area in Izmit Bay. Clients include associated chemical trading companies.

Facilities in Solventas' terminal include 196 tanks of varying sizes from 108 to 8,800m<sup>3</sup> that provide 280,000m<sup>3</sup> of storage capacity.

'In 2010 we built 14 new tanks totalling 38,500m<sup>3</sup>. Each of the tanks is 2,750m<sup>3</sup> in capacity,' Baruh says. 'We have an idea of what tank sizes are needed according to customer demand in recent years. We already have a lot of small tanks. We handle specialised chemicals where there is a lot of demand for small tanks and petroleum products where the demand is for larger tanks.'

Vessels are handled at two jetties. One is designed to handle two 50,000dwt vessels or four smaller vessels simultaneously. The other jetty can berth one 50,000dwt and

one 25,000dwt vessel or three 25,000dwt vessels at one time.

'We also have space for six barges which are used for bunkering services. We do blending for bunkering oils,' Baruh says. 'Petroleum products our customers buy from Tupras' local refineries, blend them and also use for bunkering. Petroleum imports are naphtha, gasoil and fuel oil. Some is transit. Some petroleum and chemicals are stored for trading.'

Other facilities at Diovasi include six drumming units with a combined capacity to fill 2,000 drums a day.

'We are renovating our road tanker loading racks. We used to use other equipment but now we are using scales for greater accuracy. This will allow road tankers to drive in and out to improve the traffic flow.'

#### Healthy competition

Around six companies are believed to operate third party terminals offering chemical storage facilities in Turkey. Several are expanding their storage capacity.

'Competition depends on the customer. If it's a transit cargo then terminals in neighbouring countries are competition. If the cargo is for Turkey then it is local terminal companies,' Baruh says.

'We do more special chemical business, so we have few competitors as not all terminal operators

can provide this. Clients coming to us are those with international standards and who need our services.'

Solventas serves markets in the surrounding region as well as Turkey.

'Logistically we are close to the Middle East, the Balkans, former Soviet republics and the Black Sea,' Baruh notes. 'A small amount of cargos go out of Turkey. A good amount comes into Turkey and there is a reasonable transformation business.'

'Most of our clients take delivery of their cargos by truck. Also, we can load vessels at our terminal.'

'Our customers ship cargo inland to Ankara and to Kayseri in central Turkey which is a 900km road journey.'

Solventas' terminal is the only fully automated and integrated chemical terminal in Turkey and is one of the leading terminals in the Mediterranean. Clients include Shell, Dow Chemical, BASF and Celanese Chemicals.

'We are audited by the Chemical Distribution Institute. They audit all over the world. It's important for us to be judged internationally,' Baruh says. 'When we enter a client order the automated system shows the availability of tanks, or if a vessel is coming we can check our tanks. The system checks which products were stored before in case a wash is needed. The system also monitors unloading. If a mistake is made the

system shuts down.'

'Our automated system also tracks maintenance as this is critical - if the system is not maintained it shuts down. For most products we store we have dedicated lines to the tank, to a product or a compatible product group.'

'Clients get information from our website. They can monitor stocks and movement of products, for example, when a truck collects and how much it took and the time,' Baruh explains. 'We look for long term customers as we provide detailed services. If a customer is with us for just a month then they cannot use them.'

'We already store toluene diisocyanate (TDI), which is complicated. In a completely separate closed system. There are special lines to the jetties for this.'

Over half the cargos that Solventas handles are chemicals. Most storage contracts are renewed annually.

'We store some short term cargos but 90% of clients are one year contracts,' Baruh says. 'We have 108m<sup>3</sup> tanks. If a customer wants one that size we will sign a contract.'

Demand for storage is growing in Turkey and Baruh notes the company's terminal is 'quite full' at present. Planning is underway to add more storage capacity at the Diovasi terminal where sufficient space is available to expand storage by more than 20%.

'There is room for about 60,000m<sup>3</sup> more storage capacity. We will expand more this year than in 2010,' Baruh says, declining to reveal the actual capacity expansion being planned. 'At the moment we have one site and we are investing in that.'

While ensuring the company is price competitive with other terminals in Turkey and the Mediterranean, Solventas focusses on its high level of customer service to provide the company with an important competitive edge.

'Storage fees are up a lot less than the inflation rate. So, prices relatively are not going up,' Baruh says. 'Not every company provides the same services, so not everyone asks the same prices.'

## MEASUREMENT SYSTEMS



# BLENDING

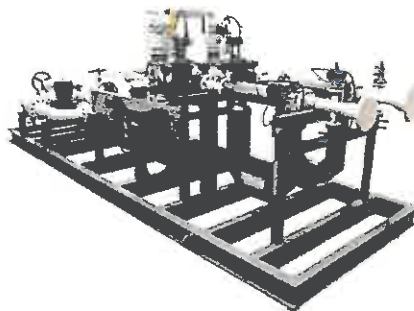
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