ARA OIL TANK TERMINAL REPORT 2020





SAMPLE



ARA OIL TANK TERMINAL REPORT 2020

Dear reader.

During the biggest economic shift since the Second World War, staying up to date on market developments has never been more important. Insights Global can provide you with the insights you need to make better business decisions. In our ARA Oil Tank Terminal Market Outlook Report, we offer our outlook for oil products supply, demand and trade flows and its impact on tanks storage demand. Furthermore, you'll benefit from our oil price forward curve outlook and its implications to tank storage markets, tank storage capacity developments, tank storage rates developments, and an expert view on medium-term profitability.

Please enjoy this sample version of our report to get a glimpse of what you can expect from our full report. We'll be sharing the table of contents of the complete report, together with a selection of key passages and graphs.

If you have any questions on our full report or would like to request a copy, please don't hesitate to contact us.

Yours truly,

ir. Patrick D. Kulsen, MSc. B. Rene Loozen, MSc.



Stationsweg 1b, 4811 AX Breda, Nederland

✓ info@insights-global.com

+31850662500

www.insights-global.com

TABLE OF CONTENTS (FULL VERSION)	
1. EXECUTIVE SUMMARY	4
2. INTRODUCTION	6
 3. ANALYSIS FRAMEWORK AND RESEARCH METHODOLOGY 3.1. Analysis framework 3.1.1. Market fundamentals 3.1.2. Market dynamics 3.2. Research methodology 	8 8 10 11 12
 4. IMPORTANT THEMES FOR TANK TERMINAL MARKET IN ARA 4.1. COVID-19 outbreak 4.2. Climate policy & renewables 4.3. IMO 2020 and changed bunker fuel specifications 4.4. European refining sector 4.5. Electrification of passenger cars 4.6. Reverse dieselization of European passenger car sales 4.7. Biofuels 4.8. Petrochemical demand 	14 15 15 15 16 16 16
5. LOGISTICS: OUTLOOK FOR OIL PRODUCTS DEMAND, SUPPLY AN	ID
 5.1. European downstream sector 5.2. Northwest European oil products supply and demand 5.2.1. Historic volumes 5.2.1.1. Northwest European S/D 5.2.1.2. Consumption market segments 5.2.2. Consumption forecasts 5.2.2.1. Corona effect 5.2.2.2. Road transport fuel markets 5.2.2.3. Aviation fuel market 5.2.2.4. Marine bunker fuel market 5.2.2.5. Residential/office heating fuel market 5.2.2.6. Petrochemical olefin plant feedstock market 5.2.3. Refinery output 5.3. Northwest European imbalances and relevant trade flows 5.3.1. LPG imports 5.3.2. Naphtha imports 5.3.3. Gasoline export 5.3.4. Gasoil/Diesel imports 5.3.5. Jet-kero imports 	17 19 19 23 24 24 26 30 31 33 34 36 38 38 38 38 38 39 39 40
5.3.6. Fuel oil: bunker market and transit flow 5.4. Impact of logistics on tank storage business in ARA 5.4.1. Impact for LPG storage 5.4.2. Impact for low-flashpoint product storage (naphtha and gasc 5.4.3. Impact for gasoil/diesel	40 41 42 Iline) 42 42
5.4.4. Impact for jet-kero	42

5.4.5. Impact for fuel oil

6. OIL PRICE FORWARD CURVE OUTLOOK	43
6.1. Oil derivatives markets and its link to tank storage markets	43
6.2. Recent evolution of oil products forward curves	44
6.3. Crude markets lead oil product markets	45
6.4. Mechanics of forward curve dynamics	45
6.5. Outlook for Brent crude futures calendar spreads	46
o.o. Forward curve patterns specific to on products	4/
7. TANK STORAGE CAPACITY DEVELOPMENTS	48
7.1. Evolution of ARA TT capacity	48
7.2. ARA tank terminal capacity expansions	49
8. COMPETITIVE STRUCTURE IN THE ARA TANK TERMINAL MARKET	51
8.1. Demand side market structure	51
8.1.1. LPG/pressurized gasses	51
8.1.2. Naphtha/gasoline	52
814 Jet-kerosene	54
8.1.5. Fuel oil	55
8.2. Supply side market structure	56
9. TANK STORAGE RATES	59
9.1. Low flash-point storage rates	59
9.2. Middle distillates storage rates	60
9.3. Fuel oil storage rates	62
10. VIEW ON MEDIUM TERM PROFITABILITY	63
10.1. Low flashpoint products (naphtha and gasoline)	63
10.2. Middle distillates	66
10.3. Fuel oil	69
11. COMMENTS AND FEEDBACK	71
12. DISCLAIMER	72
APPENDIX A: NW EUROPEAN HISTORIC VOLUMES (PRODUCTION,	
CONSUMPTION, IMPORT, EXPORT)	73
APPENDIX B: TOP ARA IMPORT SOURCES /EXPORT DESTINATIONS	76
APPENDIX C: EXPECTED CONSUMPTION IN NORTHWEST EUROPE	
FOR OIL PRODUCTS	82
APPENDIX D: EXPECTED IMBALANCES IN	83
NORTHWEST EUROPE FOR OIL PRODUCTS	83

Sample Pages



IMPORTANT THEMES FOR TANK TERMINAL MARKET IN ARA

The tank terminal market in ARA is facing several issues or themes. Based upon our research we have identified the most important ones. Table 3.1 displays these themes and shows which impact these themes have on the oil market and the ARA Tank Terminal market.

Theme:	Impact:
COVID-19 outbreak	Increase in tank demand due to massive over- supply on petroleum markets
Climate policy and renewables	Downward effect on fuel consumption rates and possible downward effect on tank storage demand
IMO 2020 and changed bunker fuel specifications	Effect on fuel oil consumption, on MGO and growing ARA tank storage demand
European refining sector and its margins	Influences regional production levels and corre- sponding imbalances and trade flows
Electrification of passenger cars	Downward effect on gasoline and diesel consumption
Reverse dieselization of European passenger car sales	The change in car sales might decrease struc- tural imbalances and lead to less demand for tank capacity.
Biofuels	Downward effect on gasoline and diesel consumption, but upward effect on tank storage demand
Growing Petrochemical demand	Upward effect on oil products used as feedstock for petrochemicals





Figure 5.1: Total demand for oil products in the Euro Area; source: JODI



Figure 5.2: Refinery output minus demand for gasoline and gasoil/diesel in Euro Area; source: JODI

COPYRIGHTS © 2020 INSIGHTS GLOBAL



Reduction of diesel and LPG volumes are a bit lower because both diesel and LPG consumption is not limited to passengers' vehicles. Commercial vehicles like buses and trucks don't use gasoline fuels but usually diesel or LPG. After the lockdown, consumption level will gradually normalise, which will take five years



Forecasted volumes road gasoline NWE

Figure 5.8: forecasted consumption volumes for gasoline, road transport fuel segment



Forecasted Volumes Road Diesel NWE

Figure 5.9: forecasted consumption volumes for diesel, road transport fuel segment



Marine fuel demand split 35.000 30.000 25.000 kton/year 20.000 15.000 10.000 5.000 0 2010 2015 2025 2035 2040 2020 2030 NWE MGO NWE LSFO ■ NWE HSFO

Figure 5.13: NW European bunker fuel outlook

Figures 5.13 and 5.14 show forecasted consumption volumes per country for the marine fuel segment. Long term growth percentages (CAGR:1.08% per year) are based on the latest World Energy Outlook of the IEA. However, we have incorporated the Corona factor, as explained on the previous page. For MGO the Corona effect is not clearly visible, because MGO consumption increased after the implementation of the IMO 2020 fuel oil regulations.



Figure 5.14: forecasted consumption volumes for marine gasoil/diesel, marine fuel segment [Corona effect label]



The shape of forward curve changes in time. A good way to visualize forward curve dynamics is by looking at calendar spreads. Calendar spreads are constructed by taking the difference in price between two futures or swap contracts of the same type but with different expiry dates. For instance, the calendar spread between June 2020 and December 2020 ICE gasoil futures contracts is the difference in price between both futures contracts at a certain moment in time. The value of this spread is proportional to the slope of the forward curve. Figure 5.1 shows ICE gasoil futures calendar spreads between the Q4 2011 and April 20th, 2020. Positive calendar spreads indicate a backwardated market, whereas negative calendar spreads indicate a contango market.

From the chart in figure 6.1 it can be seen that the market was in backwardation during approximately 6 years out of this 9-year period. Between 2H14 and 1H17 the market switched to contango for three years. The switch to contango has resulted in higher inventory levels and a strong rebound in storage rates. The switch back into backwardation has on the other hand weighted on profits of traders and resulted in low utilization rates of tank storage assets.

Since the beginning of the Corona crisis the market is clearly in Contango. Looking to the Calendar spread is was already expected that market would move into Contango on a short term. However the Corona crisis was the big trigger for the start of the Contango period. As the graph shows the market is in a deep contango and how long this situation will persist is the main question. It depends on how fast the production and demand of oil products will become in balance again.



Figure 6.1: ICE gasoil futures calendar spreads; black line: spot-2nd; red line: spot -3rd; green: spot-6th; purple: spot-12th; orange: spot-24th



TANK STORAGE CAPACITY DEVELOPMENTS

Economics in the tank storage sector are determined by the balance between supply and demand. Supply in this context is tank storage capacity at a certain location. In recent years much tank storage capacity has been built. This chapter quantifies these capacity additions for the ARA hub. This information, along with demand side information that has been highlighted in other chapters of this tank terminal study, will enable the reader to get an in-depth perspective of current and future market fundamentals.

Evolution of ARA TT capacity

The chart below (7.1) gives an overview of capacity between 2008 and 2020. As you can see from this chart tank terminal capacity has grown considerably between 2008 and 2020 with a CAGR of 4.2%. Port of Antwerp and North Sea Ports have both grown almost 8% per year since 2008. Also the terminals in the ports of Rotterdam and Amsterdam have grown significantly with growth rate of 3.1% and 2.7% per year.



Figure 7.1: Evolution of ARA tank terminal capacity; capacity in m3; source: TankTerminals.com

As you can see from this chart tank terminal capacity has grown considerably between 2008 and 2020 with a CAGR of 4.2%. Port of Antwerp and North Sea Ports have both grown almost 8% per year since 2008. Also the terminals in the ports of Rotterdam and Amsterdam have grown significantly with growth rate of 3.1% and 2.7% per year.

Especially in the period between 2008 and 2012 the growth pace was high. This surge in capacity has been the result of a prolonged period of contango between 2005 and 2011 and the increased imbalances in Northwest European oil product markets. Both supported demand for tank capacity in the period till 2011. After 2011 market circumstances were less favorable for tank terminals but since construction had already begun at many terminals, expansions capacity was still added after this date.



APPENDIX B: TOP ARA IMPORT SOURCES/EXPORT DESTINATIONS



ARA LPG export: top destinations







Stationsweg 1b, 4811 AX Breda, Nederland

☑ info@insights-global.com



www.insights-global.com