Vopak Analyst Day

Tuesday, 12th December 2017

Corporate Participants

Jack de Kreij – Vice-Chairman of the EB and CFO of Royal Vopak

Gerard Paulides – Member of the EB and CFO of Royal Vopak (as of 1 February 2018)

Laurens de Graaf – Manager Investor Relations

Anil Acardag – Manager Investor Relations

Hari Dattatreya – Global Oil Director

Ismail Mahmud – Global Chemicals Director

Ton Floors – Global LNG Director

Analyst Participants

ABN AMRO – Thijs Berkelder

Credit Suisse – Thomas Adolff

Degroof Petercam – Luuk van Beek

Goldman Sachs – Milou Beunk

HSBC – Murielle Andre-Pinard

ING Group – Quirijn Mulder

KBC Securities – Cédric Duinslaeger

Kempen – Thomas van der Meij

Kepler Cheuvreux – Andre Mulder

NIBC Markets – Martijn den Drijver

UBS – Dominic Edridge

Overview of the Day

Welcome

A very warm welcome to the Analyst Day of Vopak. I am very happy that you could all make it to our head office in Rotterdam. Today we are going to focus on the developments in the oil, chemicals and gas markets.

Program

So, the programme for today: we have three global product directors. Hari Dattatreya will start with the oil products market update, followed by Ismail Mahmud on the chemicals and LPG market, and later on Ton Floors will provide you with an update on the LNG market. Jack de Kreij will give then some implications of the IFRS 16 Lease that is coming up in 2019.

For today, the aim is to discuss the different product market updates, and we will not discuss any financial developments. I think you are very well familiar with the forward-looking statements. those are applicable of course during the entire presentations and Q&A, but I trust you are aware of this.

Oil Product Market Update

Hari Dattatreya - Global Oil Director

Introduction

Hari Dattatreya: Thank you for giving me the chance to share some of the developments in the oil markets. What I did is, we made a presentation where we basically started with what is opportune in oil, and then we go through some of the key developments in terms of energy, also in terms of oil markets themselves, and then focus a bit on IMO 2020, which is due for a lot of debate, and then going a bit into the fundamentals that drive the activities in the hubs and in the distribution markets.

Vopak's well-balanced global portfolio

If you start on the first slide, for Vopak, these are some key numbers, probably very familiar. Oil activities, EBITDA is 40–45% of the company. Our activities in oil are spread across all the key divisions. So, if you take The Netherlands, we are active in Rotterdam, we are active in Amsterdam. If you move to the EMEA region, think about locations like Fujairah, South Africa but also Hamburg: these are all locations of terminals. In Asia, the main activities are in The Straits, so Singapore, Pengerang but also in Australia as well as in China. Then you have the Americas with terminals in LA on the West Coast as well as in Canada; and you have seen the announcement of Panama, so we are active there as well. That is a bit where we stand today with our oil activities.

Oil demand continues to grow and shifts to non-OECD countries

Energy demand outlook

If you then go at the next page, I thought it might be good to start with this page but basically these numbers are from the latest world energy outlook by IEA; it is their New Policies Scenario that came out a couple of weeks ago. What you can see is the general view at this moment of markets, that demand of energy will continue to grow.

If you look at energy, you can see that the demand for especially gas, that is where the highest absolute growth is foreseen. For renewables, that is the highest relative growth, but also oil will continue to grow for quite a period, whereas coal, and I think that is a change with previous forecasts, is more trending towards a neutral, stable position. So, all in all, if you look at oil, still some growth.

Oil demand by region

Now, looking at the different areas, it might not be a surprise that most of the growth in oil demand is concentrated in Asia Pacific, where especially China and India are key countries of demand growth, but also in the Middle East, still a growing demand, large populations. If you take Africa, also some growth is seen there, and that is still relatively small because the level on the per capita consumption is still low but really growth is coming there.

For the more mature economies like the US, the Americas and Europe, you really have a very mature declining picture, where it is not only the high level of current demand but also energy efficiency is something that is really taking some demand out. That is basically from a regional point of view.

Oil and energy demand by sector

If we then move to oil demand – I think there is always a lot of discussion that if you talk energy, you talk about oil, but actually if you talk about oil, you talk about specific segments where the demand is concentrated. If you take this picture here, you can see that road is an important element, where we still see growth. Going forward later in the forecast period towards 2040, you will see some decline in growth there.

If you look at other products like the petchem demand, that is something where – and I think Ismail will talk more about it later on – the growing demand of chemicals in the world needs feedstocks, and oil and especially Naphtha and LPG are important elements into it, so that is really a solid driver.

At the same time, you can see some growth in aviation and navigation, so basically air transport and shipping. For these segments, it is very much linked to a growing trade for shipping and for air transport, I think the growing welfare standard of living in the world, and still oil is a very attractive fuel for these segments, so especially for air transport there are not a lot of alternatives.

Speaker: Just a question here. Are we allowed to ask questions during the presentation?

Hari Dattatreya: It is fine.

Speaker: I was just wondering, do you know the assumptions behind the forecast, for example, for the road section on the oil demand per sector, because I have also seen some alternative forecasts whereby the electrification does play a role. I was just wondering how that balances out relative to growth in Asia and Africa; it might differ per region but in general?

Hari Dattatreya: I think that in general there are a lot of forecasting agencies that are forecasting the future; I would say that the consensus is very close to what IEA is using here, but of course there are more extreme scenarios. But I think what you see is that assumption on electric vehicles has increased a lot going forward, but still the absolute impacts is in general seen as relatively limited. What really has a big impact is the energy efficiency, that

you can see across the line, but again there are a lot of forecasts, and we are using AEA because they come out with the latest thing. I think this is pretty much a standard for the economy, but obviously the future will show what it will be in reality. Maybe to move to the next slide.

Energy transition changes mix in demand for oil products

There is a lot of talk about energy transition, and I think how we tend to look at it is that energy transition basically has three levels, and I would really like to underline that here. The first step of energy transition is having access to energy; the second step is having access to clean energy. If you take this current situation in the world, still the first two steps of the energy transition, large group of people are still in that phase, and that is something which will influence the demand profiles going forward. The third step in energy transition is obviously going towards more low-carbon energy, which is very much the debate in the developed world, and especially here in Europe. But if you take for instance electric vehicles, the nice thing there is that it combines basically low carbon with the clean fuel, and that is probably one of the reasons why in some areas, like China and India, it is really picking up at a tremendous manner, probably more related to clean energy as well as having a nice combination with CO2 reduction.

In general, if you look at the oil demand growth in the period 2016 to 2040, you can see the petrochemical part, the impacts. I think I already mentioned that the impact on the products are used in petrochemicals is basically Naphtha and LPG, so that is where a lot of the growth is. Then you have the aviation and shipping; distillates and fuel oil; and for trucking, it is very much distillates so diesel-based transport. In the period to 2040, you see a reduction in the demand for oil, especially in passenger cars; that is where you see then the impact of the energy efficiency, as well as the impact of the electric vehicles. As you can see on the right side, the basis of the forecast is an electric car feed of close to 300 million in 2040. Also, what IEA mentions here is that especially China is really leading the pack there, but also India is at a pretty high level.

Speaker: When do you see gasoline demand peaking? I am just looking at that picture.

Hari Dattatreya: That is again depending on which agency is making the forecast, but I would say it is probably around 2020–2035 globally, but obviously it is a mixed picture.

Speaker: All the growth drivers are predominately distillate-led as opposed to gasoline; I am just interested when you, Vopak or the IEA, see gasoline peaking.

Hari Dattatreya: I am not having the numbers here precisely; I could say from the top of my mind something, but I would then really like to refer to IEA. But probably if you talk about gasoline, it depends on the market that you are looking at. If you take the North West European part, there you can already see that gasoline has peaked. If you talk about emerging markets like India, China, South Africa, that is where still a lot of growth is, South East Asia. So, it is a mixed picture: it is peaking already in one area, and on the other area there is still growth.

Jack de Kreij: Maybe Hari, as an illustration, you could elaborate slightly on Western Europe but also Eastern Europe, so to put it in perspective? Can you see more likely than not an increase in demand for diesel in Eastern Europe – maybe you put it in that type of perspective?

Hari Dattatreya: Yes, definitely if you take Europe, you have different pictures. I mean the North West European part in terms of demand, it has peaked if you talk about gasoline, but also diesel is at a high level, excluding the shipping business. But if you take Eastern Europe, like for instance Poland, that is where still growth is. So, it is a balanced picture in that sense. Turkey is growing, Greece is more stable, so it depends very much on the individual countries.

The environmental impact of fuels. The last bullet I would like to mention here is that if we talk about cleaner fuels, I always find that a difficult thing, so that is why we prefer to talk about having less environmental impact. You can see that across the world the specifications for transport fuels are tightening, so sulphur levels are going down and also other less environmental substances are going down, but also for instance for IMO for bunker fuels for ships, this is a big reduction in the environmental impact. So, that is really cleaning up. What it does mean, and we will see that later on, is that to make these fuels you need a lot of blending, so parties bring the different components together to be really on the right specification. These specifications are not the same in all the markets.

Dynamic oil market landscape

Now, maybe to go to the next slide. I think the oil market is a very, very dynamic market with a lot of developments that are not ending. I mean every period there are new things that are happening. I would say that what you can see here, these are some of the most important items as we see them today. On the one side, you can see that the US crude production is going up very fast. You can also see that the cost levels of the US, especially the shale production has gone down a lot. At the same time, you can see that the OPEC production cut is really becoming effective: prices are going up, and there is a global reduction in stocks of both crude and oil products. Now, that balance will be interesting to follow. You are probably following the publications in that field. It is an uncertain situation where parties in general at this moment of time to whom we talk, they are a bit like, 'Okay, let us see how it is going.' There is not really a clarity there. These are two of the key drivers in the market today.

If you look a bit further, you can see that the US is definitely becoming a big exporter of energy in the world. Their exports of crude gas and products are going to expand rapidly, and that in a market where you can see a number of non-traditional relations that are emerging. Who would have thought that a Chinese conglomerate would buy a stake in Rosneft, and Rosneft is buying shares in an Indian refinery, where again one of the big trading houses is very closely involved in. These are some of the new relationships and considerations that will have an impact on the oil markets that were dynamic, and are dynamic going forward. Also, the IPO of Saudi Aramco is a very interesting thing to follow.

Now, going on to the fifth item, the globalisation and what has been said about it, but we do see that globalisation is continuing in oil markets, both in terms of market parties, in terms of product flows and in terms of fuels on the markets: it is really rapidly continuing on this path.

Global imbalances of oil products

If you then move to the next slide, this slide shows a bit about how the regional imbalances, according to Wood Mackenzie, are going to emerge. It also shows in red the areas where the product deficits are going to increase in a material manner in the coming period.

Americas

Now, if you take a look at this slide, we show here LPG, clean petroleum products, so diesel, gasoline, naphtha, as well as fuel oil, so you can see indeed how, as we said before, the US growing rapidly in its surpluses. Now for fuel oil, I have to say a word to that, that this is basically Mexico, because Mexico is part of North America: they are moving to natural gas so they get a surplus in fuel oil. So, there is a big surplus in the Americas as a result of the reduction. If you look at Latin America, you can see a deficit that is emerging. The key reason there is that the initial plans for Brazil to expand its refinery footprint have been a bit delayed, and we also know what is happening in Venezuela.

Greater Europe

If you then go to Greater Europe, we can see that these markets are flattening a bit. That all has to do with what we said before, that the demand profile is more mature in Greater Europe.

Other regions

Sub-Saharan Africa, a bit of a reduction in a growth in the deficit which is there. The only thing to mention here is that in the forecasted period some refineries might emerge that really is flattening the growth of the deficits often. The Middle East, a growing surplus; FSU, more or less stable; and Asia really driving the deficit in the world, which is really the result of the fast growth in not only China and India but also South-East Asia, and if you add up Indonesia, Thailand, Vietnam and that area, you really have a substantial amount of people. Also, Australia is growing its deficit.

Speaker: What is the reason that India is not in red, because I think there are logistic constraints as well?

Hari Dattatreya: That is a good point, thank you for that. I think that India is a very big country with, if you look at the refining picture, a surplus in product. A part of the state-owned enterprises, you have Reliance, you have Essar that are big exporters so, yes, there are logistical constraints but there are also a lot of investments taking place, so it will be something where so far it looks that they are solving their challenges. I don't know if you are aware but there is already a pretty extensive pipeline network, running for instance from the North-Western part of India into the heartland around Delhi and the likes.

Speaker: Looking at this picture, do you think that there are more opportunities for Vopak on the import side than on the export side, if you look at the areas where the main changes are taking place?

Hari Dattatreya: We are going to talk about the distribution markets a bit later on, and I would like to leave it really to where product flows are, how the flows are developing in the current market.

Jack de Kreij: What we said in our previous updates is that in the import sides you have of course a structural deficit, as a result of which you have a more predictable pattern, whereas in the export side you are becoming almost a captive stores capacity of a producer. We have focused primarily in our business model on end-consuming markets with respect to the distribution of products. So, for us, we are, let us say, focusing more on import markets.

Then on hubs, but you see that we hardly have any export facilities because, if you look at it from a production point of view, they are almost a replacement of captive storage capacity.

Speaker: If we compare the six numbers with the ones in previous locations, the picture is basically the same with the exception of Europe. In Europe, the deficit is smaller than in the world picture. Here you see the deficit increase where there is a decrease – is there any reason for that?

Hari Dattatreya: Can I see this one? Yes, that is the period taking 2016 and 2026. I would say that if you look at Europe in the past years, the expectation on especially the imports of distillate, that has changed, so the consumption of diesel by the automotive industry and trucking, and what you also see is that there are quite a few investments that have been done to increase the diesel yield in Europe in itself. I think that is the main change.

So, what you can see is that these product balances are developing. You can also see that there are quite some differences with their own correct region. What you can also see is that regions are not only surplus or short; they have countries that are long, and there are countries that are short. To go maybe to the question on are we for imports or exports, I think the hubs, they typically are used to balance the longs and the shorts in a region but also between regions.

IMO 2020 uncertainty

Now, if we move to the next slide, that is about IMO 2020. Basically, if you look at IMO 2020, it is all about bunker demand. At this moment, if you take the slide on the left, you can see that Vopak has activities in a number of fuel oil and bunker markets. The hubs where we are active are ARA, Fujairah in the Emirates as well as Singapore: these are three locations for making a breakthrough, but also, they have very big bunker markets. In addition to that, we have some more specific bunkering activities in LA, Panama in the future, as well as Algeciras, and to a more limited extent in Hamburg. Now, Vopak E.O.S. is a different chapter that was part of the exports.

If you take this network of terminals, they are active in about 50% of global bunker markets. With IMO 2020, you will see changes there. There are a lot of uncertainties around it, but I would like to underline that the fundamental to the bunker market is that really a lot of ships are active there, and that at the end of the day, depending on the grade that has been consumed, the bunker markets will continue to be there, and to show some growth which is in general growing in line with the economic development in the area.

Speaker: Can I ask – I know this is a chart from Wood Mackenzie, but just reading the chart from 2020 onwards, I would suggest that Wood Mackenzie thinks that there is a phased implementation, or that the shipping industry for the sheet, it is hard to monitor obviously whether they are complying. What sort of discussions are you having when it comes to the IMO? Is there a chance of a phased implementation or is there an implementation from day one?

Hari Dattatreya: I am going to touch on that, because actually I think you raise a very good question, because if you talk about IMO 2020, there are a lot of uncertainties. I mean there are uncertainties on how IMO is going to be implemented. Is everybody aware of what IMO 2020 means? It is basically the 0.5% cap to bunker fuels, unless you use a scrubber to treat the exhaust fumes. Now, the expectation originally would be that it was going to be

implemented in 2025 upto 2030; that was basically rolled back to 2020, but at this moment I think the debate is still how is IMO going to implement the measures? I think that is a big question, at least that is what we hear from the markets, what we read, and there is no real certainty on that.

Another element of what you see is that compliance is also very much up to debate. I think that if you look at compliance, of course you have the fuel that you burn in territorial waters but in the open seas it is basically up to the flag states to enforce compliance. Now, that is a very interesting one. Also, if you combine it with the fines that are set on using a non-compliant fuel, and how are you going to check it? So, there is a lot of debate on the level of compliance. Some parties say compliance will be very high; others are much more negative on that, they think compliance will be low, so I would say the jury is really out how that is going to develop.

It will also depend on the region where you are. If you have ship owners that take a very proper environmental approach, you will see a higher level of compliance than maybe in other areas where the interest is much lower, so that is also one of the big questions which are there, and I think we show that on the left.

Also, a question is, if you talk about scrubbers, I don't know if you have read a report from the Deutsche Bank? They wrote a research on how attractive it is to invest in a scrubber. Now, basically with the anticipated difference between distillate and high sulphur fuel oil, pay-backs are estimated to be six to nine months for a scrubber investment. Also, for scrubbers, what you see is that, let us say, three years ago, an average scrubber would cost two to three million dollars, taking six weeks to fit it into a ship. Now, also in that field, there is a lot of innovation happening, a lot of new suppliers are in the market; the timing is much shorter. Some parties can even do it when the ship is stagnant, after some preparation, and the investments cost is also lower, so also there is lower penetration but there is a big question mark, how high will those be?

Now, if you take the Wood Mackenzie scenario, and I would really like to stress here that we call it a potential bunker scenario per grade, basically because the bottom line these scenarios will differ per region, but there are so many uncertainties that if you think it is going to be one scenario, you run quite a risk, so you have to be prepared for a lot of fluctuations in the scenarios, and that is basically what we aim to do.

Speaker: I was going to ask you that. I mean obviously that scenario is undoubtedly going to be wrong in some form or other, it depends how wrong it is, but in terms of when you look at how you are positioned, is there a big difference in the different scenarios between how you perform in the future, or actually is it very difficult to find a scenario where you would have big issues with your network?

Hari Dattatreya: The question is where do ships bunker. If you take our terminals, our terminals are in bunker locations, so it is about are you able to handle the future bunker mix which will be handled in these ports, and that is something where we focus at.

Speaker: Sorry, I am not a technical person but, for instance, the move from FO to MGO, is that a particular technical problem for your terminals?

Hari Dattatreya: That is something that we are assessing and preparing on a per location basis. So, if you take fuel oil as a starting point that is a product which has a high viscosity, which is black in general and which needs to be heated, if you take marine diesel then you talk about a cleaner product which is not viscous at all and which does not require heating, so in principle you can handle diesel in a fuel oil tank but not in the other way around.

There are also some other elements here. If you take a diesel or a fuel oil, and there is a big price difference between diesel and fuel oil, so what the market parties are currently doing is they are basically looking at how can we find the mix that is available in that specific market which complies with the 0.5%? What we show here is: we call it a very low sulphur fuel oil, for instance you take a lower sulphur fuel oil, you find some specific components, you can blend them together, and then you have a product which complies, but which is probably less costly than a pure distillate, than a diesel.

Now, if you look at very low sulphur oil, there are a lot of assessments going on at the moment, and a very low sulphur fuel oil is partly a blended thing, but it is also partly a matter of crude that you run through a refinery. You need to have a low sulphur crude, preferably which is pretty heavy if you want to produce substantial volumes of very low sulphur fuel oil. Now, the big challenge here, and the interesting thing is that very often fuel oil is sweet and light or sour and heavy, so there are not that many that really give that combination, and that is where market parties are currently looking at, what shall we do with our refineries? Shall we upgrade, or shall we try to get excess to the very low sulphur crudes? How much very low sulphur fuel oil will come out of it? What are the other components we want to blend in it? That is what most of the peer market parties are looking at currently. At the same time there is a question like, If I buy a blended 0.5% very low sulphur oil in Rotterdam, is that compliant if you mix it together when you fill up again in Singapore with the very low sulphur fuel oil that you get there? So, market parties are looking at it, and that is why in looking at IMO 2020, I would say there is a lot of uncertainty around it.

Speaker: Let us assume that this scenario is the one that is going to play out, how much time will it take to convert your high sulphur fuel oil storage into whatever is required here in Rotterdam?

Hari Dattatreya: Now, what we do is, we look at the changes and the potential scenarios which are there – this is one of them – and we prepare for that.

Speaker: When do you need to start? I assume this is going to be implemented in 2019, so you need to be ready by then, so does that mean that you have to already convert tanks potentially now, or can that be done six months in advance?

Hari Dattatreya: We have been active in supplying bunkers for a long time, so a lot of our terminals are very suitable to do these kinds of things.

Speaker: Just to clarify, earlier on, you said you do not really need to convert because the terminals are capable of storage oils of high sulphur and marine diesel. The difference will be clearly the blended market because if you do marine diesel, there is actually not a blended market, or do you have a preference for the high sulphur because you gain from the blending?

Hari Dattatreya: Our customers try to find a proper blended activity. That is why also if you take the ultimate bullet which is there, which is about how will the future be, if you talk to market parties at this moment, I think what you really hear is that they expect a period in 2019 and then you will see the real changes, but only in 2020 the reality will come out, and they expect at that time multiple grades with much more blending in the hubs. That is at least what is said there.

Speaker: But Hari, do you not think that the refineries are already too late because you can speak about them and say you will convert them into something else for marine, as marine diesel compared to what it is now is relatively weak compared to refining the changes, its opposite, do changes late, but at the end, if that is necessary that they make the low fuel oil?

Hari Dattatreya: I think we are not refiners, and basically, I can share what I hear from market parties. I think what you see is that a lot of investments are currently taking place; Every refiner is making its own decision, so that also has to do with what is the investment you need to make, or first is, can you go to a lower sulphur crude, scaling back on the investment? So, it is a very complex challenge in which a lot of opinions occur at this moment. If you leave it for us as terminals, we see the uncertainty and we see a number of different scenarios in the future; I think that is the key element.

Speaker: But basically, you are in 'wait and see' mode until clarity for ship owners and the preferred oil is decided on?

Hari Dattatreya: I think we put our ear very close to the ground, we listen to our customers, we work with them to develop and be prepared for 2020.

Jack de Kreij: And not with a big bang because, if I understand the questions well, is there a sudden point where you convert your infrastructure based on one scenario?

As we said, we feel that we are in the right locations for bunker storage. That is point one, because that would have been the first outcome of a strategic assessment that you believe that in the future scenarios you might be wrongly positioned. Now we feel we are rightly positioned. Second to that is indeed you look at your infrastructure: can we serve those different combinations and make different answers with different locations? Then the third one is, what is the phased approach, so not a big bang but the phased approach in terms of the development within such a regional market. The answer might be different for Los Angeles compared to Rotterdam.

In between, and that is the challenge, we try with a terminal master plan to plan that so smartly that you are not accumulating your capex investments too early at the wrong moment or, let us say, coincide with sustaining capex, and that is the art of it. So, we feel that we are not talking about conversions of hundreds of millions or whatever; they are single business cases for each region, planned phase by phase. In fact, what we are saying, we see multiple outcomes of those scenarios; we have no single version of the truth yet, so we need to remain flexible while accepting the uncertainty in the short term.

Speaker: Flexibility keeps the occupancy rate high in the key hubs in essence.

Jack de Kreij: What we said at Q3, if you looked at IMO, was that specifically for this segment we were not able to keep the occupancy rates high, or the fuel oils storage related to the bunker; that is the reason why we said that uncertainty is currently a given. The

strategic answer to that we say no big bang in the short term; we accept that uncertainty, but we have a phased approach, a phased scenario of how we could accommodate our locations towards whatever the outcome will be.

Speaker: Can we get maybe just some numbers or at least a feeling for where we are, like what is your current revenue per cubic storage metre? Where will it be in the worst-case scenario and where will it be in the most preferred scenario for you, and what will happen with your margin over time in both scenarios, just to get a feeling for it?

Jack de Kreij: I understand that. That is more a topic we might address during 2018. What we have now is an experience in a very short time frame, so what you get is either completely hypothetical scenarios. So, something in the course of 2018–2019 I think that we are well positioned to continuously update; the numbers we shared with you is that five million cubic metres of storage capacity is in fact linked to the fuel oil storage. The five million cubic metres of course is operated in group companies and joint ventures, so it does not have a one-to-one relationship with your EBITDA development, but it is a significant part of the business.

So, in this scenario analysis going forward, the question is indeed: is this the bottom that you have achieved? That might be a question from your side. What could be the factor which influences the developments positively? The message is, in the short-term, uncertainty is the leading indicator, so whatever is the solution in the short term is based by definition on short-term contracts, spot business, for which there is hardly any predictable indicator.

Then you take it further beyond 2020, and that is where all the questions come together. What is the step-by-step phased approach? That will be different from location to location. So what we hope to do as a company is we take you in our journey in the coming years, 2018–2019 so that we can continuously put that in perspective: what is the minimum demand we expect in the different locations? Can we already distilate that? No. What will be the factors that could have a positive surprise? We all know if there is a contango, that will be the positive surprise but that is not a structural solution.

So, in that journey, we will continuously share with you because we want to avoid one thing, and that is from the options value point of view: stick to a perceived single truth, and immediately adapt your infrastructure to that, while realising that there are so many moving parts; that is what we do not find smart for our shareholders. In the meanwhile, there is an understanding that is an unfortunate situation, but it would also be capital destruction if you move too quickly in one scenario while knowing that we still have a lot of flexibility in storing the different products. Maybe one scenario: if there would be a lot of blending needs, that could require most likely some additional investments, but then my assumption would be – 'assumption' underline in bold – my assumption would be that, if that would be a structural solution, that there would be also with interest for long-term contracts, so that would be then a separate business case for a certain location. So, on the one hand uncertainty, on the other hand I think multiple combinations of factors where we can still respond very actively to different changes in the market; that is the current situation.

Speaker: Sorry, can I ask just one final question, just in terms of the bunkering in location terminals that you have: do you look at what alternative uses they could possibly have under more negative scenarios?

Jack de Kreij: Do you mean complete other products?

Speaker: Yes.

Jack de Kreij: We have done that in the past. For instance, just for illustration purposes, without saying that we are going to do that – be careful of that – in the past, if I look at Rotterdam, and Hari knows all the details, I think it must be many, many years ago that we converted a crude storage to the fuel oil storage.

Hari Dattatreya: Yes, it was in 2002/2003.

Jack de Kreij: So, that is an illustration of a course that in the multiple focus approach, that if we feel that a certain product market segment has more fundamental demand rivals than another segment, and then take into account the available storage capacity in the market also by competitors, you make then the assessment, would it be smarter to concentrate on another segment, yes or no, and that is also location by location a completely different answer.

Speaker: How long does the conversion take?

Jack de Kreij: It depends. For instance, conversion from crude to fuel oil, that was not a big conversion because you are using just the same tanks, and then of course the question is do you have the right heating, etcetera, etcetera, in terms of each location. It might also be, as part of the terminal master planning, let us assume you have a tank bit with 15-year old tanks where the bottom has to be replaced. The size of the tanks is maybe not matching the current needs perfectly anymore. Immediately, you make a business case. Maybe instead of replacing the bottom, make a new tank– new sizes of tanks, maybe other configuration.

We are continuously trying to adapt the global portfolio in such a way that it is better-positioned for future developments. This is a good example – the fuel oil, let us say, uncertainty, whether that that would be the case. However, our answer is there is no immediate need, at this moment. In our view, it would be capital destruction.

To move to immediately another scenario, we think in the best interests of the shareholders, let us use that coming years intelligently to see which makes – which changes in which locations makes the most perfect sense.

Speaker: Generally, tighter specifications that we see globally come through. What does that mean for you guys?

Hari Dattatreya: Sorry, general type of?

Speaker: Tighter specifications like China wanted 10 PPM and blah, blah, blah.

Hari Dattatreya: For diesel?

Speaker: Diesel, gasoline – whatever you have. It is getting tighter.

Hari Dattatreya: Yes. If you talk about gasoline, I would say a part of tighter you should talk about – you can also say the range of different specifications. The amount – the more different specifications there are in a region on a per-country basis also, but also within a country.

Very often, you have for certain cities, you have different specifications than for the mainland. Now, what that means is in general, more blending. That is a value-added activity. It means

that more components are being shipped in. For instance, Alkylate is coming from Northwest Europe, going into the Chinese market in a certain period. It means more blending, more activity at blending locations.

Speaker: You are capable of delivering that?

Hari Dattatreya: That is what we do.

Speaker: How old is your fuel oil tank portfolio?

Hari Dattatreya: That ranges. The simple answer, but the oldest tanks are probably 40 years old. They are in Europort. The latest tanks, yes, are pretty new. We have Algeciras, which is in operation three years ago – three or four years ago, we put in onstream.

Jack de Kreij: As you pointed out, they were old. We designed and built in that period. After that, each critical component has been replaced. That is probably why it has been – but it gives you an impression that the tank size was built in – forty years ago based on the market circumstances of that time.

Speaker: Sure.

Jack de Kreij: Technically, it has been continuously – the bottoms have been replaced. It has been maintained, etc. However, the more market-driven question is that tank size in combination with maybe the pipeline, is that still accommodating all the developments in the turtle market with larger filling speeds, etc., pump speeds.

That is what we did at Europoort in one of our previous visit is. We have shown how we have increased the pump speeds enormously to handle larger volumes in the same. In fact, originally, we need four years built network to continuously upgrade that in a smart way to the new market dynamics.

Hari Dattatreya: All in all, in certain markets, some market parties are a bit reluctant if they look at the future and that is – yes, that is the situation in this moment of time.

Storage capacity in oil hubs has been expanding

If you then move to the next slide, this is about – we are looking at our hubs in the world. I think that what you can see is hubs, like what you just asked there on the gasoline part. They are key for logistic activities, for blending. It has value-added activities as well as the regional distribution. You see big flows moving into the hubs and being distributed from there.

Also, however, hubs have typically, received product from refineries. If you take Amsterdam, for instance, product from refineries in Northwest Europe is – are brought in, including France. After blending, products are being shipped out to the same area as well as to other regions. There is a lot of activity there.

I think I showed some of the, yes, regional imbalances, how they are developing. That is really a solid driver for hubs, longer term. What you do see is that yes, in this case, IMO 2020 has an impact on activity on hubs. You can see big changes in regional demand profiles. There is a lot of growth in Asia, in underlying countries.

Also, one element that I wanted to dwell here is the competitive positioning of local refineries. That is also a situation that if you have strong refining cluster in your hub, then the

redistribution purpose of the hub in the region is probably going to be more solid than in places where refineries are being closed down.

Speaker: It is reducing a lot of market share.

Hari Dattatreya: We assume a lot of expansions in capacity in the hubs, that is for sure. That is something that we would like to show here. Yes, ARA is one of them, but also in Fujairah, massive expansion, as well as in the Singapore Strait is.

Speaker: I think Fujairah does not include the refinery there? With the storage?

Hari Dattatreya: No, this is excluding the refiner.

Speaker: Okay.

Hari Dattatreya: Yes. It is a major expansion. You have a lot of local, yes, or regional parties that just invest in 800,000 cubic metres connected to the project. For us, what we have, we have our own jetties. That is really a competitive advantage. I think in general, what we try to do – and I mentioned some of the products here – is that overall, the capacity is increasing. What we tried to do is we always find ways to differentiate ourselves, depending on the individual products.

Speaker: In what way is the rising capacity of traders like Vitol, in particular in performance here? Are they still using that for dedicated purposes or are they turning into an outright competitor to you?

Hari Dattatreya: Yes. I think if you take – you mentioned Vitol. We have a company called VTTI that – yes, that is a competitor of ours active in the market.

Speaker: However, would like this? It kind of seemed that you had lost some market share over the years as we have been through the years when you had gone through the divestment period. However, hubs are quite important for you and your strategy. Is that something that you might change over time and make sure you grab back some? Do you think that it is very important for your competitive positioning to increase your market share in these hubs again?

Jack de Kreij: That is a good question – I think what we try to do is to create value for our customers. If you take for instance, the ARA, I think we have been expanding in Amsterdam in gasoline at the time when we thought that made a lot of sense for expanding gasoline. That is what we do. We try to really look at individual product market combinations and determine the steps that we want to take.

Speaker: Yes.

Jack de Kreij: I think overall, that is my personal view that just having market share is not an ultimate goal. The ultimate goal is to really create value in individual product market segments at the proper economies of scale and to really balance that properly.

You can give a nice example if you take cubic metres. Now, cubic metres is what you will rent out. However, what we would rather do is have customers that really use it. You can store products in a hub. However, what is the value of really throughput probably more in longer term?

Speaker: Yes.

Speaker: How much of the region's weaknesses in Rotterdam is driven by the refinery upgrades in Russia and how much is driven by the IMO regulation? Can we separate the two facts?

Jack de Kreij: That is very difficult to do because a customer will always take different factors into consideration when he decides what to do. At the mean of the day, they are commodity markets. It is like making a statement on the oil price. That is very – I do not know if you can make a statement on the oil price.

What they try to do is to make an assessment of what is happening there. I think just to go back to fuel oil, uncertain future. The normal supplier is basically shortened their window somewhat, which does not mean that they are not interested to really do something for a specific month. It is a mixed bag.

Speaker: Look at the Europe – at this – based on ARA region, is also in your import terminal strategy that you focus on growth regions. You explained yourself that Europe no longer is a growth region. It is kind of a declining region. Why not sell out of Europe, for instance, and really focus – refocus on growth regions?

Jack de Kreij: In fact, it comes back to the conscious decision of the portfolio mix we re-emphasised in 2014 where we said we have carefully looked at what is driving the demand for storage for transhipment for other services. We have defined that as one, hub locations are critical because they are, in fact, the connectors between supply and demand imbalances. They make part of our portfolio.

The second one goes separately, indeed, through the markets with structural deficit is because they will have a step-by-step growth facilitating an additional expansion opportunity once you have a footprint, specifically there is scarcity of land in those locations because those things are very often combined.

If you look at the availability of land in the Jakarta Port, for instance. Once you have a footprint, you can expand that. The third one is industrial terminals. The fourth one is, let us say, gaseous products.

As part of that strategy, we still believe that global hubs have a long-term, important, critical role. However, the question, from an investment point of view, is what is your diversification strategy? Do you want to grow faster in one of those segments? Do you want to allocate it equally? Do you want to accelerate in growth in one of these segments?

What we have tried to explain in the last couple of years is that we are focussing ourselves quite intensively on the growth in industrial terminals, on the growth in the gas markets that we try, of course, opportunistically to find interesting product segments to expand global hubs.

What you do not hear me saying that we think, in the best interest of the shareholders, that we should continuously try to only increase market share in global hubs. We think that the diversification of the portfolio with all these different drivers. At the end of the day, it is in the best interest of our shareholders.

Implicitly answering your question, 'Why would you sell, if this is a fundamental part of your total portfolio?' Let us say Europe is not a short market or an import market, but is really acting as a hub location. If you look at the role of Westpoort, it is really a hub location

incidentally located in the Netherlands. However, in fact, it has nothing to do with the demand in Western Europe or the demand in, let us say, the Netherlands it itself. It is really diverse.

Speaker: However, I thought you said – okay. Is it not better to, let us say, define it as an export location because it brings all your exporting product from Russia to the rest of the world and not only from Russia?

Jack de Kreij: If you look at Westpoort, that is transhipment location – that is why we call it a hub location – with different sourcing and different end-markets. If you look at, indeed, the – you were referring to Rotterdam for certain products.

Speaker: Yes.

Jack de Kreij: First of all, the crude market, nothing to do with Russia. Coming from different sourcing. Depending on the product segment, you might have certain flows, but not dependent on that.

Speaker: The crude market is, again, more for destination Europe, I would say, market which is also showing in future, it is a declining one – an accelerating declining market, if forecasts are right for liquid gas or you name it.

Hari Dattatreya: Maybe just to add something on crude. The crude that we handle in Rotterdam is all linked to the refining system which includes Rotterdam's part of Germany as well as Antwerp. That is a refining cluster where Clingendael, they published a paper on it where they basically say this is the last man standing in Europe due to the tremendous integration with petchem. That is the main activity for crude that we do.

Solid growth in major markets with structural deficits

The last slide. Okay. If you talk about distribution markets, you are looking at – there is growth in a number of markets. What is the reason of all the one-sided economic growth that really drives consumption up, which can lead to imports.

You can also see refinery closures that drive imports. Basically, what we do is we have a number of distribution facilities both in mature as well as in emerging markets. Yes, in some cases, we have been transforming existing distribution terminals to really handle our products.

Now, the countries that you can see are countries where, yes, the pretty dynamic situation is and their underlying amount it is growing. They are privatising and deregulating and offering an efficient and effective services that is really very useful in these markets. It is one of the short-market focus that we have.

Key messages

Then, we get to the last slide. It is basically summarising, I think, most of the items that we discussed. All in all, if you look at oil demand as we ship non-OECD markets. The petchem and transport sectors are the key drivers for the amount. Yes, we will continue to a lot of factors in the oil markets that will continue to change it.

Yes, current uncertainties on oil market performance and IMO 2020 are a key driver for the fuel oil markets. It is pretty soft in that sense. Then on the other side, you have the other,

yes, solid, long-term demand drivers for the activities in the key hubs. However, we do see a growing competition.

If you look at fuel distribution terminals, it is very much linked with the underlying markets that are, in many cases, pretty easy to predict. That was it.

Speaker: A small question here. You showed – you have showed Brazil is an import market. You are making an importer over there? What about Mexico then? Is Brazil delivering fuel to Mexico – or let me say world delivers to Mexico or what is this – what is the structure there?

Jack de Kreij: No. It is we do not have oil terminals there.

Speaker: In Mexico, they have imported most of the oil. Yes, we have imported oil.

Jack de Kreij: Yes. We are not active in oil, but we are active in LNG and in –

Speaker: No, but that is my question, about oil. Do you have plans there maybe?

Jack de Kreij: It has been, maybe not in the Dutch press. However, I think somewhere, you will probably have found that we are using some of our tanks and we are approved to import diesel by one of our customers.

Hari Dattatreya: Yes.

Speaker: Question. Nigeria, Tanzania – why are these circles there?

Jack de Kreij: They have logistical constraints. They are big import locations. Whereas for some of the other markets, it is pretty straightforward how deficits are developing, it is not that straightforward in these markets.

Speaker: Thanks, Hari.

Chemicals & LPG Market Update

Ismail Mahmud - Global Chemicals Director

Ismail Mahmud: Thanks for the chance to come in and share some thoughts with you on what is happening in the chemicals market. We have been watching this for the last few years and there is a lot of development.

I think it is the start of the story. Really, however, it comes back down to – thanks to the oil prices falling that chemical markets have come to be a little bit more buoyant. It is not just about demand, but it is about feedstock. Feedstock is currently really changing the chemical industry. We will enjoy a nice little moment, then I will try and touch on that a little bit later.

My name is Ismail Mahmud. I have been with Vopak now almost for about 20-odd years. I have been sort of in Singapore and Rotterdam and trying to see what is happening around the world and trying to put together our strategy for chemicals.

Vopak's well-balanced global portfolio

What I will talk about is chemicals, which is more distribution and hub locations along with industrial terminals. Together, they form an area of about 40% to 50% of our portfolio. The second part of my presentation will cover LPG which forms part of the gas business here. This is pretty much LNG, but there is much – a small part of that gas part is also for LPG. I will try and touch on them because chemicals and LPG are quite closely related to each other.

You can see the kind of the size of our overall business that we have. In terms of total terminals, we are looking at 43 terminals that are covering this space.

Growth in all three end markets

If I look at the trends in the market, for the chemicals environment, urbanisation is a key trend that will have a huge impact on the future of chemicals and mainly driven by manufacturing. I will touch on this in the next two slides.

Urbanization example of China

Urbanisation. What is really interesting to see – I would like to just give you a little feel for what this word urbanisation actually means. If I look at a country that is considered to be more urbanised is when half or more of it is population lives in cities compared to the rural areas.

UK took about 100 years to reach this stage where more than 50% of it is population lives in cities. US took 60 years. China has taken 35 years. You can see the acceleration of the move of people into urban centres. The reason being they have a higher level of income. They have more wealth. That is the personal drive to have a higher level of standard for living.

Eight mega cities expected. 23 cities with more than five million inhabitants in China. 221 cities. Currently, there are 170 cities in China that have more than a million people living there. We expect another 50 new cities to be formed – villages to become cities, which will be closer to the big, larger urban centres where 350 million more people will live in the urban centres in China. This is quite staggering, actually. This is just China alone.

They expect to build 50,000 skyscrapers – this is McKinsey's analysis – in the next 20 years. That is 10 New York Cities, to just give you an idea of what urbanisation in China means. Then you have India right behind. You have some other locations in Asia and the emerging world. That is what urbanisation means.

Manufacturing sector will double in the next 20 years

I will go into chemicals from thereon. Manufacturing is what supports urbanisation because you need buildings, housing. You need everything that goes inside that – furniture, equipment and so on and so forth.

Inside manufacturing, which is a $22 trillion market – that is what we spend in a year in total manufacturing – two of the main segments of manufacturing are automotive and construction. This 50% of total spend in manufacturing comes from these two sectors. Within – and the other sectors are all listed here. All of them are growing, so all green arrows going upwards.

If you look at the total GDP, which is approximately 3% for the world, you can see that most of them are higher in GDP growth levels, primarily driven by construction and some of the advanced industries and so on. By 2035, we expect these two sectors to go to $22 trillion on it is own, out of the 40+ that we expect. It is very staggering numbers here – trillions of dollars here driving this.

Speaker: Can I ask you just –

Ismail Mahmud: Sure.

Speaker: – something on China. As far as the chemical market is concerned, China has been quite important with LPG multiplier is consistently going down. Do you expect that trend to continue or do you see a reversal sort of GDP market via this multiplier?

Ismail Mahmud: Yes. China's output of chemicals drives equipment manufactured in China for export markets and that is where the trouble lies. At the moment, China is working on it is domestic credit – domestic markets. If that can improve a bit, which is expected around the corner, we expect that that will stabilise. However, I do not think you are going to see the same trend that we saw in the last 10 years in China.

I think you are going to see that probably in India now. India is going to start picking up. I have some numbers on the supply-demand on markets you see here just to give you some feel for that market.

Maybe we will just come back to that and see if I can answer that in the neighbouring slides and see if I can -?

Asia dominates growth of manufacturing

If I look at where this is going to be, again, it is this diagonal of growth in the world – Northeast Asia, Southeast Asia and really, the East of Suez is where the majority of this is happening, in terms of numbers. Africa grows high, but it is on a low base. Same thing for Latin America in later years. However, East of Suez is where the real action happens. Southeast Asia, 6.3% and Northeast Asia at 3.9% of the growth. Very, very fast.

However, in – other than volume growth – sheer volume growth, there is also substitution growth for chemicals. This is a very important factor here, where traditional materials are

being replaced by synthetics and fibres and chemicals. This is also something that is happening right here in Europe as well.

While you think Europe is sort of stagnating to some extent, there is actually growth of chemicals in Europe, believe it or not. If you look at paper, glass, copper, cotton being replaced by plastics, synthetics, PVC pipes, polyesters, you can see that trend also is happening.

When I talk about urbanisation and talk about construction, everything around us, actually, is a chemical – synthetic carpets, the foam that you sit on is formed chemicals very large, glue for furniture, paints, coatings, piping, linings. There is a lot of chemicals all around us that is consumed –

Speaker: Is it purpose of you to – not to mention in automotive?

Ismail Mahmud: – and automotive it itself. Sorry?

Speaker: Yes, forgot to mention automotive industry –

Ismail Mahmud: Yes. I did not mention it.

Speaker: – that is driving change in that.

Ismail Mahmud: Yes. No. Actually, this was just a sort of a substitution part. Of course, you have in automotive, you have the rubber going into synthetic rubber. You have glass. It might go into polycarbonate. You might be seeing that the metal in the body will convert to maybe some fibre to resin, mixed between metal and all. It all comes down to physics and nanophysics of how you can integrate the molecule. However, yes, automotive is actually one of the largest, that I mentioned, sectors of consumption.

Increasing chemical trade flows

If I look at global flows, you will see that Middle East and North America are going to supply the rest of the world. That is the general trend. You have all the other regions are consuming areas, importing areas. You have North America, primarily driven on low-molecule shale development of gas. You can see it has almost been tripling in that field already, with more coming in the second wave.

Middle East here, growing pretty rapidly as well – another 20 million tonnes of production. You will see how China continues to grow with it is imports. Southeast Asia also really growing. Here, we look at Europe as well.

This is the growth in demand. You do have some substitution and there is not much shutdowns in Europe on the chemicals space. Not expected, but you have a very highly integrated market here. In terms of feedstock and product balancing, it is very highly integrated. Therefore, you will not see any major movement behaviour.

Ethylene production increase

If I move on to where this is all going to come from and I look forward, and this is what the experts are saying. If I look at crude oil on the oil side, it is the ethylene molecule on the chemicals. If you say crude oil is typically 100 million barrels a day, today what is the chemical capacity in the world? It is a number of 160 million tonnes sitting right here in 2017. 160 million tonnes. That is the number, actually. That is the starting point of all the chemicals around us.

Where is this number going to go and as I said, if demand is to be met – on the previous slides, I mentioned about all the urbanisation and manufacturing growth. That number of ethylene, from 160 million tonnes, it needs to go to 230 million tonnes. That is a 70 million tonne ethylene expansion on the chemicals in the chemical industry, so more than 40%.

One wonders where it is going to come from. If we really ever meet that demand, who is going to build it? Where is it going to be built? Where does it make sense to be built? In which part of the world is it going to be?

North America clearly is 32 right now – going to 50 million tonnes of ethylene in North America. Middle East, expanding from 26 million to 44 million. China, South East Asia, you can see the numbers growing here. The advantage of the US and the Middle East is on very much cheaper feedstock.

There are two routes to chemicals for the ethylene market. It is either gas, which is ethane, or you see the naphtha, which Hari mentioned as a petchem use in the oil industry. Naphtha that comes off your refineries is actually a very, very competitive feedstock for ethylene. You have the gas coming from North America and Middle East and you have naphtha everywhere else in the world. All the expansions of ethylene happening in Asia are going to be based on naphtha. There is no gas there.

This is just very simple stuff, just break it – break up the feedstock 40/60 – 40, gas; 60, naphtha. That is how it is going be stripped. The advantage of naphtha is it gives you certain molecules which gas does not give you. Ethane gas gives you straight ethylene, but the naphtha gives you some more molecules which are very important for the chemical industry.

You cannot do without that naphtha. It is cheap to move it around the world. It sloshes around in 50,000 tonne–60,000 tonne parcels. Gas cannot be moved around that easily. It is only now that you have seen some gas move across the waters – ethane gas, but very limited. You will see naphtha being a major feedstock. Okay? Now, if there is –

Speaker: There is a lot of companies in Europe have been investing in the more complex feedstock side.

Ismail Mahmud: Yes.

Speaker: Total just completed the one-third upgrade. I think they now can use 60% of LPG there. Obviously as you just said, if you only use ethane and you do not produce some of the by-products – which earlier this year, also led some tightness and we had certain parts of, I think as far as ballpark is concerned, what is your exposure maybe across the entire value chain?

Ismail Mahmud: Yes.

Speaker: How do you think about investing more there?

Ismail Mahmud: I think that one of the topics was that. I just wanted to keep it very simple, so I said ethane and naphtha where LPG, actually, is a growing important feedstock for liquid – for chemicals as well. I think I will cover that in LPG slides as well on how that LPG is going to get consumed in the petchem. as well.

However, you are right. Naphtha crackers can up to 25% take feedstock of LPG. Right? In the past, they were built as naphtha – liquid naphtha coming off refineries. It was going into

the petchem use. However, because LPG is so cheap, and it can take up to 25%, you can easily blend in. Of course, if you have really cheap LPG, you can build the whole thing on LPG as well. It does not matter, but then you cannot take any naphtha at all.

Most of the new projects that are coming up are having mixed feed cracking. Mixed feed, without any major capital investment in the naphtha cracker, you can take 25%. However, if you want to cross 25%, which is happening in Europe, you need to make some major changes in the products which make it unviable.

To answer your question, if you know you are going to get a long-term supply of LPG nearby on pipe, you might want to design a full-scale LPG cracker. You can do that. However, it is still a little bit short of a true naphtha cracker. We find the result of what comes out of naphtha cracker is still more versatile than LPG, but it is still very highly economical. I agree with your point.

After having said what all is happening, what we did is we said, 'Okay, where are these things going to happen?' Because if you have a naphtha cracker, you cannot build an ethylene cracker or gas cracker on its own. It has to go with a whole lot of other equipment, other plants all around. That then becomes its – ethylene is actually the seed of the petrochemical complex.

Developments of industrial complexes

Then, we said, 'Okay. Then, that means that many petrochemical complexes are expected.' A naphtha cracker, on its own, is about $4 billion. If you put in a few other things like a polyethylene downstream or a polypropylene, butadiene and other derivatives, you are very soon going to be in the tens of billions.

Sadara, which just is starting up in Saudi Arabia in Jubail, spent $26 billion. Petronas is around – is going to spend $20 billion. These are like anything from $15 billion to $20 billion, $30 billion type of investments in each of these clusters. There is a lot of money to be spent in petrochemical cracking in the future and downstream integration to all the plants because without the entire complex, you just cannot operate. You cannot have a stream and export it because you need to have it consumed close by in a very integrated way.

These are some of the dots we put on the map saying there are many, many petrochemical complexes, either have been developed or will be developed. Green, where feedstock is advantaged. The pink portion is where it is going to get consumed. You can either be close to feedstock or you can be close to the end market, so you save on either the feedstock cost or the shipping costs.

Leading independent operator of Industrial Terminals

There is a lot of development taking place in the next two or three decades. That leads me to the – we showed this slide a few years ago, I think at the Capital Markets Day. I thought it was good to bring this back. What is the normal sort of industrial terminal? It is actually inside each of these petrochemical complexes. We have been operating this since 1973 actually. A whole series of industrial terminals in the US, UK, Thailand, Singapore, Middle East, with Jubail and Yanbu, Malaysia, China, Singapore. You can see how from the US to Europe to Asia has been sort of the evolution of these terminals, as we go forward.

The last several – the last four of them have been in China and in Asia. You have a Lingang here in trough. In 2014, we had the Haiteng acquisition position. In Jubail, we commissioned there in – this is where we do the Sadara and linked Sadara products. In 2019, we will commission at Pengerang. You can see that that is the kind of evolution.

Just turning to our terminals, there are very few companies that can compete with this type of portfolio. We have a lot of critical mass in how we operate these terminals through experience and knowledge, the ability to sign long-term contracts with many, many different types of companies around the world.

Factors of successful development of industrial terminals

However, the challenge is how easy is it to do this? How easy is it to set one of these terminals up? How easy is it to sign? The key question is, 'Who is the lead developer of a complex? Is it a chemical major or is it the regulator? Is it the port, the government or is it one of IOCs or one of the chemical companies?'

That is the fundamental question in the success of an industrial term because typically, it is in the mindset of a chemical company that, 'Yes, I am building a cracker. I am spending $4 billion. I am going to spend another $10 billion on everything else. A few 100 million for a terminal? I do not have the time for that right now. I will do that some time later in my plant.' That is how they approach this.

However, if you have a whole cluster, if you have many plants and you have some integration through the terminal – we have a single team in a control room running 12 plants. You have seen some of these presentations before, I think in the past, where you can serve many plants. That is really where the core benefit comes to having a central operator.

You – so, for us – for me, when we talk about projects, it is about convincing the producer to come together and cooperate with your neighbours. I think that is the real challenge. There is no other independent operator who can compete with Vopak, sorry.

However, if you have a regulator like Caojing or Singapore or Thailand or someone – some place like that or Jubail, they will want an experienced operator to come in and set it up, so they can attract other players saying, 'You come and set up the plant, I will give you storage. I have some expert to run the show for you.' It is a different approach.

In the West, it was pretty much done by the companies themselves. Like US, it is so far away. Every plant is standing on it is own. It is tough to do an industrial terminal here. However, in the East – East of Suez, it is a lot easier. We see a lot of industrials coming up there.

Site integration. You can see this is actually a picture of the rapid project here. This is where the rapid is going to build there. I think it is a 300 kbd refinery. Over here, you can see a lot of crude facility being built for high-plant connection to the plant, along with the petchem plant stream we had submitted in LNG. You have chemicals being built there. This will be operational in 2019.

Speaker: Can I just ask you, when you propose something to a company that is building a mega-complex is there an advantage to be exposed to all the different types of products – like yourself, with products and chemicals or is there no difference whatsoever? You can actually say, 'I am just going to do the chemicals here full-time?' The question is does it

make sense to be structured the way you or are there advantages in winning awards being structured where you are?

Ismail Mahmud: Yes, okay. Well, you can see that winning the Petronas project was not easy. Here is a company that is very strong, saying, 'Yes, we can handle this. Why would we want somebody else to come and do this for us?'

However, when you are talking of their joint ventures – and they have maybe four or five joint ventures coming. Some of the Japanese and the Germans are going to be joining hands with them. It is going to be interesting to see how that discussions goes. Is Petronas going to serve the Japanese and the Germans or do they want somebody else to come in and help serve them?

Then again, do not forget that since you have enough terminal experience, you can design where you opt in on. Typically, a chemical plant will just design a terminal just like they do with their infrastructure on site. Processing industries are a little higher cost than, I think, in efficient terminal operation. That is where they see the benefit.

I think we can bring in innovation from the terminal side. We can hire locally. We can train them in our system in a very short time or shorter than what they would do themselves, I think, from the terminal perspective. Again, we will just build just what is necessary. That is the kind of field that we have. I think we have a good dialogue with them. It is quite interesting.

Jack de Kreij: Maybe to add one small component. In some of our industrial terminal activities, we have, of course, multiple customers. Like in Caojing, we have eight, nine different chemical producers.

Ismail Mahmud: Yes.

Jack de Kreij: Being a customer of our industrial terminal, from their perspective, it is, in fact, an outsourcing to a shared service centre run by a, let us say, specialised company. That could also, from a governance point of view, make it much easier than if one of them should operate it. What we have now in the whole portfolio, we have industrial terminals with single or two customers?

Ismail Mahmud: Yes.

Jack de Kreij: Now, we have industrial terminals where we serve a complete petrochemical complex with multiple customers.

Ismail Mahmud: Yes.

Speaker: Actually, my question was something a little bit different. Are there any synergies between the chemicals business and the oil products business, with chemicals business actually being quite stable and growing the oil products business being very volatile and uncertain?

Ismail Mahmud: Yes.

Speaker: Split up the two businesses, you get higher multiples in the chemicals, may be not so high in oil.

Jack de Kreij: No. That is –

Speaker: Or does it make sense to be integrated and go to the customer, 'We can do this and that and that.'?

Ismail Mahmud: Okay. I understand.

Speaker: Does that facilitate in winning awards?

Jack de Kreij: Yes. However, the term 'very volatile', of course, is subject to multiple interpretations. If you look at the bandwidth, you would say it is volatile. If you compare it, indeed, with a 20-year contract, take or pay of an industrial terminal, any small movement is a volatility. That the oil business is completely volatile, that is not our message because we have underlying strong fundamentals supply-and-demand-driven, let us say, drivers for storage.

Indeed, however, if you look at the total storage capacity available in the world and you look at the fundamental drivers behind that, there is a part which becomes slightly more dependent on volatile factors of trading.

We think, at this moment in time – because what you are suggesting is, in fact, different model – different business models with different characteristics requires different channels. We think that the diversification is still the best value proposition for our shareholders. That is the current hypothesis in our business model.

What you are suggesting, indeed, and we have seen that in many other industries, of course, if you split up certain characteristics, what the valuation of one model compared with the other valuation would that be? Then the synergy is – the question is, 'Do you have different, let us say, shareholder structures in the same region where you are serving the same customer? Would that be a complication, yes or no?'

That, I think you have to take into account in that type of strategic consideration. For the time being, we strongly believe that a diversified business model, as we now are operating and, in fact, offering to our shareholders, is the best value proposition.

Speaker: Can I just ask a question? Just obviously looking at the last few wins you have had or new projects you have had, they have all been, as of say, East of Suez. Is there a reason for that? Because obviously, it is a big area. You probably argued you have been not so actively except throughout the start at the US. Is that still due to the MLP structures or are the structures there as just the fact that your approach is like nobody in the market trusts it?

Ismail Mahmud: There is a very specific reason for that, actually. If I look at the US and you see the expansions that have taken place here already, they are mostly brownfield, which means that entities who actually set up the new projects or new cracking projects in downstream already were – had operations there.

Exxon Mobil, Da, Formosa, Chevron-Phillips, Williams and many, many players already had their plants. They added on businesses on their own site. To bring in an operator there, we have had discussions with them. It was not easy. It just expanded marginally their own businesses and they went on to that.

If there is a new complex coming up, we have more than one player, then they need a central operator. Then, it starts becoming exciting. I think the second wave in the US is going to be more exciting because the first wave was the guys who already had their sites and expanded.

Now, you have PPP of Thailand. Shell has announced in the north of Thailand, PPP of Thailand. You have some of these Koreans. You have – some of the Indian operators are actually looking at sites which they do not have. They are all really greenfield operations.

Also, the US is such that they do on their own, single operations. They do not have a regulator. The whole structure of the land ownership and the board ownership is very different to Asia, East of Suez, where you have the Chamber of Commerce, actually, is the owner of the property.

The board has no real ownership of the property. They really do not care. They just run their channel. They operate the tugs and the pilots and all the other infrastructure. However, they do not incentivise the companies to come and invest on their port area, like they do in Asia, which then has a central sort of theme of collecting people in one place versus the US is very fragmented.

Those are very different. That is why you see that most of the projects we have done is where we have reason to be together, just to answer that question. I hope that sort of clarifies a bit.

Speaker: Yes. Just in terms of the competition, is it – do you see the same people competing against you on the industrial terminal site as you would on the – let us say if you are looking at storage projects or in the chemical side, would there be the same companies or is it a different sort of competition?

Ismail Mahmud: No, you have similar companies. Some of our competition is quite good in what they do. Maybe they do not have so many dots on the map as we do, but they have some good terminal operations. I think they are respected, yes, from our side.

However, they have just one or two locations. You can then obviously have more experience and more wide-spread network compared to them. However, on a standalone basis, yes, you are competing. However, no one – like I said, we have a nice record in the history of the portfolio.

I think to maybe to come back to you, you may have been asking, 'Should I carve out the oil separately into the chemicals side?' Was that your question as well or was that yours this morning? Do you personally to find it easy to market Vopak as an integrated entity or does it even matter, when you say that we can build the industrial terminals there?

Speaker: That is kind of the question.

Ismail Mahmud: Yes. I think it makes a lot of sense for us because when we go in there and say we will design the entire complex – storage for the entire complex and we are talking to one party, we also have in mind that other parties that are also going to need. We tend to sort of develop terminals that are sharable because that is where your value really is, to share the infrastructure.

We have one central team. If you go to one of our terminals, hopefully you will have a chance to see a control room. The guy sitting there has hotline to Exxon, to Shell, to all the customers that are around. It is the same team that runs many, many plants.

I think about 10, 12, 15 plants, 20 plants at times also have been run by one room. That is where the real value-add comes from a central site. Imagine each of these customers has

their own pipelines, their own storage, their own team running their own show. There is no way they can compete with one central team.

Speaker: Just your shift from the OECD in 30, 40 years ago towards East of Suez, does that generally raise – increase your risk profile now? If I look at Deer Park, Shell is a capable operator. Now, I look at Pengerang – now, Petronas, I am not sure we will find out.

Ismail Mahmud: Yes.

Speaker: A lot of these sites East of Suez are now being developed without a capable operator. Often, some projects are also lack financing. Yes? That in itself will lead to project delays and that in itself will lead to delays which will grow – growth.

Ismail Mahmud: Yes. Sure.

Speaker: How do you plan this?

Ismail Mahmud: Sure. Well, look, it has not been smooth ride. There is no question about that. However, I will tell you, most of these projects have been signed on long-term basis. The parties that could spend many billions to set up their project, they are not going to let that project go unoperated or operated below spec or capacity.

You do expect to have a good long-term contract. We have contracts with these guys that run 15 to 20 years. We are well into these. If you will see, some of these contracts are already coming up to renewals. However, you can imagine that we had fairly good experience on the long-term contracting part.

Jack de Kreij: Yes. It is a good question. Of course, in risk return assessments, you do risk profiling. However, in the situation of industrial terminals, you should assume – if you look at, for instance, Caojing, which is China, which had, at that time, maybe a slightly higher risk than, for instance, an investment you would make in Europe versus United States.

From a country point of view or from a business point of view, it was an emerging market. With increased volumes, you could say it provides more opportunities. Secondly, the customers we are serving in Caojing, based on 15 to 20-year long-term contract are all OECD-based, let us say, petrochemical industries, which have made the same assessment in the past by moving in China.

In fact, what you leverage on is also that assessment of does it make sense to start a petrochemical plant in that particular country. We have a contract with them, not with the, let us say, local Chinese player. We feel that within that risk assessment, we have done all the elements which were critical on behalf of our shareholders to mitigate the risk.

You see now, Caojing is already running since 2004. We have been able to expand it. The optional value of creating a footprint may be benefitting from also risk reduction in certain countries, we have seen.

If you look at many countries where we operate, and you look at the risk profiles 20–25 years ago and you look now, some of them have developed quite positively, as a result of which their country risks have come down, where, in fact, the business risks have even been reduced more significantly because of increasing demand for that type of services while the customers very often are the large petrochemical players based in the US or Western Europe.

Yes, absolutely, risks. However, I think I would say it is a calculated, conscious risk opportunity assessment we take very seriously.

Speaker: Let us say if the project is delayed by a year or two and you obviously to invested to build a terminal and you have managed to sign a 15–20-year contract, but it is one to two years delayed, do you get compensated for it or you do not?

Jack de Kreij: It depends, of course, if it is gross negligence, then more likely no, you cannot get compensated. There are many factors where they have to start paying you at the moment you have achieved a certain milestone, etc. That is all contractually, let us say, split out in milestones to be achieved.

Then a difference, what is caused by the customer – it could be that the delay is caused by the customer because they have continuous scope changes or is this something out of our control? It could be a tsunami in that area, as a result of which it is completely out of our control, that all those mechanisms are contractually covered.

Ismail Mahmud: Yes, absolutely. It is a great question, actually, and what really is a risk of signing this long kind of contract and spending hundreds of millions of dollars in setting up a terminal.

I think if you look at all these projects, you have always had a western IOC involved with the joint venture. If I look at even Thailand, for example, heavily dominated by PPP Chemical, they have done a great job. They have really done an amazing job. It is one of our best operating sites, I can tell, in the world.

If I look at Caojing, you have all the multinationals sitting there. If you look at Kertih, you have the Japanese and the Americans sitting there. Kertih was this one here, Malaysia. Here in Pengerang, you have Petronas, but you have more players coming in. You know who they are. They are non-Malaysian companies also joining hands with them talking about coming in here.

In Jubail, you have Sabic with all the joint ventures of Shell or Exxon, Mitsubishi. There are so many. You always have a range. You may have a terminal like Lingang, which is a pure Chinese SOE. That is where the question comes, 'Do I trust this SOE?' SOE, who is probably a $60 billion or $70 billion company, who is setting up yet another plant. They have so many running. You obviously look at that track record and say, 'If they can run all that, this looks a little bit easy. Maybe they can do it.'

They go ahead with it. We certainly signed out with them here in Lingang, which is a PDH unit. Very, very nice. They have an excellent facility. Mind you, these plants are world-class. Do not underestimate the quality of a petrochemical site in China. They can do a pretty good job. They are using the latest technology, the latest designs and they are willing to spec. Then, we signed.

I think from side, I think – but yes, you are right. Signing a long-term commitment, you have to make sure that you do it right. That is the point that Jack was making. You have to be sure that it is going to work, technology is going to be okay.

Speaker: Are there examples there where you did not join in the industrial terminal because of the risk or because of the country risk?

Ismail Mahmud: Overall?

Speaker: Declines, yes.

Ismail Mahmud: Did we decline projects because of this reason or this or this reason?

Ismail Mahmud: Well, I can think of –

Jack de Kreij: I can think very thoroughly.

Ismail Mahmud: I can think of a couple of places.

Jack de Kreij: Yes.

Ismail Mahmud: India, China. There is a couple of locations, like we said, we are not sure if this is tested technology – things like that.

Jack de Kreij: Yes, but they were all – as you know, we have this approach of identification stage, selection stage, definition stage. We have never declined a project at a latest definition stage.

Ismail Mahmud: Yes.

Jack de Kreij: It was all, let us say, at the identification stage.

Ismail Mahmud: Yes.

Jack de Kreij: That is not really declining, it is more, you have an idea, you might see an opportunity, you identify all the pros and the cons. We decide, 'Okay, we are not going to pursue it.' However, I cannot recall, at least in the last 15 years, any industrial terminal project which we brought to the definition phase and where we said at the end of the definition stage, 'Let us not do it.'

Ismail Mahmud: Yes. Jack, but the real part is that they take four years to build their plant.

Jack de Kreij: Yes.

Ismail Mahmud: We need it at one and a half to three years.

Jack de Kreij: Yes.

Ismail Mahmud: When they are – when they are halfway in their construction is when we start committing. We have the benefit of testing to see what is happening. Maybe some of that could be a reason also that we are a bit sheltered from that sign. Let them get going and let them see where it is going and what the progress is, only then do we start committing. That could also be a reason why we sort of reject it, in that sense.

Jack de Kreij: It is a long lead time, this type of business development.

Ismail Mahmud: Thanks, great questions. I think I can just keep pace here. Just to wrap up this first part before I go to LPG.

Key messages

Just to remind you, chemical demand in the manufacturing sector will double in the next 20 years driven by mega trends on diversification, which will have the biggest impact.

Asia, East of Suez, really is going to be already your area to focus on. Do not forget, it is not just not volume growth, it is substitution growth as well. Plastics and chemicals substituting

other materials. Opportunities for complexes – industrial complexes are expected to rise either in feedstock market locations or closer to end markets. I think we are quite well-positioned for this dialogue in this area.

Global LPG supply will modestly increase

If I move on to LPG, I have three or four slides here in a very exciting market of LPG. However, as exciting as LPG really is, it is a by-product. It is a by-product of refining. They are going after other products and they get LPG, which they want to do something with or they are going for methane or NGLs or oil and you get this by-product called LPG, which you can do something with.

While it is really a good product to have, it is really a by-product. The demand actually is driven by supply. If I look at supply, 2017, you are looking at around 300 million tonnes a year and it is up from 200 million in about a decade.

It is just because of tremendous gas extraction in the Middle East or the US and you get this associated gas stream, which includes the propane and the butane, which is LPG, but you also have the other stuff, which is liquids. At the end, it flows to chemicals. However, that is really where it comes from or refining expansion that took place maybe in some parts of the world, which have the refinery stream at the top of this deck.

That is really what has happened. The question is where will it be? If I look at this side, you have refinery. There is slight expansion over the years, but really the call growth has been up to this point really from the NGL part, which is a great portion.

I think everyone is very conservative on what might happen. Imagine if you extracted more gas or more oil, if you had to, you would see more LPG coming up. However, you do not because there is a limit on how much oil you might want to draw out, which also brings LPG up or how much more refining you might do to give you more LPG. That is why you are restricted here. It sort of plateaus around 300 million tonnes.

Where has it been? Yes, clearly, from 2017, you can see a really good spike up here on this North America. You have a bit of green line here in the Middle East up here somewhere in this area, already peaking around at 2017. You will not see too much more coming up, depending on what happens in Iran.

On the refinery side, you see greater Europe depleting as a refinery and sort of start to slow down a bit. You see lower LPG coming out. That is what you see right now. Slight increase in FSU, but really, the core – the regions to grow up are those two and a bit here, but not exciting on the Asia Pacific.

There is a bit of LPG in the market to be consumed. I think the point that I was also making here, that may have a problem in putting it in the right place as well. Petchem is a definite use. We will try to maximise the use in petchem. Wherever they can take it, they are already taking it. However, it needs to go into the household consumption. I will talk about that in a minute.

Growth in petrochemical demand for LPG

If I look at domestic demand, it will remain stable. However, petrochemical will grow a little faster. In the dark green here, a gradual increase in the domestic use of LPG and you have a slightly widening, a more accelerated growth here in petrochemical feedstock into 2030.

Remember, before petchem could take it, LPG was very seasonal. In the winter months, it had really high prices, in the summer months, nobody wanted it. However, now with household replacement of traditional fuels, especially in the emerging market, the people are still using kerosene or coal in the villages or wood or other natural material. They can be replaced with LPG and because LPG is cheap now. This the cheapest – it is really one of the cheapest it has ever been, $400 a tonne. It has been as high as $800, $900 a tonne as well. It is $400 a tonne, many subsidies can be removed from the – in terms on some of the markets and LPG can be put in the household consumption market as being clean fuel.

At the moment, you see in the straight section here on the top, there is an oversupply. Right now, you are sitting with an oversupply, so there are more floating products sitting around and looking consumption at the moment. However, we all know it is going to be consumed fairly quickly. Is it not –

Speaker: Two questions then from my side. One is about flaring of gas, if it declines and, of course, there is more LPG, is that general rule?

Ismail Mahmud: Yes.

Speaker: The second question is about if there are seasonal supply, then the price would go down. That must be enhancing consumption in the margin.

Ismail Mahmud: Yes, and that is true. That is happening right now. First question was on the associated gasses. When you are extracting oil, you have these gasses that are also coming out which you then have to manage separately. In that associated gasses, or what it is called, you have propane and butane, which is LPG, you have a bit of methane and ethane even from that side. However, the real packageable gasses are the LPG, so they are, or they are all available. That means, and like you say, in some places, flare.

However, I think that is just waste now. I think SABIC as a company, was formed because Aramco was just flaring everything. In the late 60s, they formed SABIC to convert this flared gas into chemicals, and look where SABIC is. This is like the 3rd or 4th largest company in the world because the flaring gas has been converted to petchem.

The second question you asked was on the – sorry, the second question?

Speaker: You see some oversupply. However, you might –

Ismail Mahmud: Yeah.

Speaker: Oversupply cannot stay that long if – let me say that the – because pricing would go down massively even below the four hundred dollar.

Ismail Mahmud: There is a lot of discussion in emerging markets today on this use of LPG for domestic use or automotive use, because this can be done very easily, relatively easy. Places like India, Indonesia and really large LPG increases and used there in those markets. Africa will come around where you need to have a system to distribute it from bulk into retail. How can they – in your barbecues, you have those little propane cylinders where you can do your barbecue. For me, they are a little bigger, 3 kg. If you go to 3 kg, that can be used for many days for a household in Indonesia or India.

The bigger ones that are lined are 12 kg. You get an idea of how easy it is to move this LPG around. Well, that is a little heavy. However, the smaller ones, you can put it at the back of

a bicycle and just take it to your home. That is really happening now in Indonesia, as a matter of fact.

With low LPG prices at this price, this is a great time for governments to take away their subsidies and make this product be consumed. It is being done. It is being done as we speak. That is why you will see this maybe even faster than this one. You might see this is a little bit faster.

Speaker: Sir, can I ask you a question?

Ismail Mahmud: Yes.

Speaker: Is the right graph on the – that is not correct, I assume?

Ismail Mahmud: This one here?

Speaker: It is the same as the one before.

Ismail Mahmud: Yeah. This is the same as the previous one.

Speaker: Oh, that is correct?

Ismail Mahmud: Yes. All we are saying is that where is it going to be, so you can see North America. You can see the tonnage here.

Speaker: Yeah.

Ismail Mahmud: You can see where it is happening. If you do see LPG, this is the actual supply. This is happening in the US?

Speaker: You are talking about demand, right?

Ismail Mahmud: Yes.

Speaker: Did you say this is supply here and on the – this is demand?

Ismail Mahmud: Yes. The demand, actually – because like I said, LPG is a by-product.

Speaker: Okay.

Ismail Mahmud: It is consumed – whatever is available is consumed. At the moment, you may have some surplus because of the – it cannot move fast enough for the infrastructure in there because that is the point that I allude to is the insufficient infrastructure at the moment for LPG to move as quickly as possible to get rid of the surplus.

Speaker: Yeah.

Ismail Mahmud: We will come to that in a second.

Speaker: Okay, cool.

Ismail Mahmud: We will just put the same chart to give you an idea of –

Speaker: Got it. Thanks.

Increasing need for LPG infrastructure

Ismail Mahmud: What is going to happen to the flows? The only difference between 2015 and 2030 is you see a massive increase of supply here. The Panama now allows you to take LPG out in VLGCs, Very Large Gas Carriers, through to Asia Pacific. You see something from

Canada in and out there. You will see doubling supplying into Europe, more consistently and especially for Latin America. You will see a better growth here at in the Middle East, not that much, but you will see that growing. However, the real important markets are here again in China and in India and Southeast Asia. There are just not enough infrastructures available to move this in large quantities.

LPG market requiring additional infrastructure

I think this is my last slide here on LPG. Again, just the same message, in blue, where it is available. The exports come from the US and Middle East. If I look at in yellow, where the domestic consumptions are going to be, it is very large in Asia. In the future, remember, all of these are still bankrupt now but in this time frame, 2030, we do not see too much bulk movement here. Yes, you will see some in these areas but the real growth here is going to be better in – we can use this one.

Key messages

Just to summarise on LPG, it is the oversupply makes it attractive feedstock for petchem, and a good replacement of traditional fuels for household consumption. We are growing in balance that will result in increasing global trade, require more infrastructure to support that and also for facilitating petrochemical feedstock.

That is the message here. I do not know if there is anything else I can help with to clarify it for once.

Speaker: Maybe my last question is, is there not a reason for the US chemical producers to use more LPG of course, with inland, and they can – it is a very cheap, it is a by-product, and I think they have already capacity I think Dow, for example. But they can expand rapidly in that field. Is that something which is going to happen or not?

Ismail Mahmud: Yeah. For petchem, yeah. Remember, petchem is ethylene. That is the centre of chemicals. Ethylene can come from two sources, naphtha and ethane. Only the naphtha crackers can take and consume LPG. Ethane cannot take LPG. That is just the way the technology works.

So, US has always been heavy on ethane, so that is why they can't easily put in LPG into an ethane cracker, it does not make any sense. It would not work. They need naphtha crackers in which they can substitute to a certain limit or just build completely fresh, complete LPG cracker. That is possible, as what Reliance is doing in Gujarat. They have got actually off the refinery, they have got a whole cracker earning just on – off gas, which LPG and other gases.

Speaker: Just on LPG, it is kind of easy to be bullish in the longer term like in, you know, very bullish outlook for chemicals longer term. What is the outlook in the next few years as far as ethylene supply-demand is concerned?

Ismail Mahmud: Okay.

Speaker: There are a lot of new possibilities on this.

Ismail Mahmud: Yes. Like I said earlier today that because naphtha has been so cheap on $50 oil, naphtha is half of what it used to be and half the naphtha feedstock and half the LPG feedstock, chemical companies have not been that excited about dropping their market

prices. They really actually have widened the gap. This may have come down a bit from the top. But the feedstock, also the margins are stronger than they have ever been.

And in terms of demand, we are seeing at any moment now, in the next two, three years, there is going to be a very significant shortage of chemicals. I think most of the oil companies that also have chemical businesses, which is typically that is how it goes. Because of the uncertainty in the oil side, boards of oil companies could not decide on major, major chemical projects. As a result, there is going to be a shortage of product very soon. That is what the industry is saying, all the analysts are saying, that you will see in the next few years a shortage as the demand start exceeding –

Polyethylene right now is in surplus, but very soon, in three years' time, you are going to have a shortage on not only polyethylene but also on the liquid chemical side. You are going to have all the derivatives of chemicals; the liquid chemicals are going to be short.

Speaker: Whenever I talk to industry consultants, my colleague who covers the chemical sector, and I have this model which shows the next few years, as far as ethylene supply and demand is concerned, it is going to be a disaster. Unless you tell me demand - GDP multiple will go from, I do not know, one time or two times or over six times. I think that is actually the sell-side consensus here, the chemical, base chemicals as far as ethylene is concerned in the next few years, utilisation are going to drop.

Ismail Mahmud: Okay. That is mixed feelings right now. Maybe we need to revisit that because this is the latest ideas from HIS and ICIS as well. Let me talk to them. This is their forecast.

Speaker: Yeah, and I will talk in the next few years.

Ismail Mahmud: Yeah, you are sitting somewhere here (Ethylene Slide) In the next few years, we are sitting here, already halfway. We are still looking at the 169. Right now, we are at 160, so eight, nine million tonnes more ethylene coming over the next few years. I think you will be short. Our view is that you will be short. That is why you see so much excitement on the petchem side. No one would want to invest in these locations if it did not make sense to these investors.

Speaker: Yeah.

Ismail Mahmud: Each of these is a multi-billion-dollar investment especially in that. So, there has going to be some sense for that to happen. We are just – if the complex comes, that is basically our view, and you see a lot of excitement.

Speaker: Surely, just like the Chinese, ten years ago, they had to do investments oh, by the way, the mistake they made is they overestimate the demand.

Where do we find ourselves today, in the surplus situation in China, and my colleague in chemicals, tells me there has been an overinvestment over the past few years, that's why it is going down the next few years.

Ismail Mahmud: Okay.

Speaker: Maybe the outlook after a little more healthy.

Ismail Mahmud: Possible. Yeah, possible. But right now, because of the very fast expansion in the US, 10 million tonnes of more polyethylene have come. Remember when

you build a cracker, the first thing you got to build next to a cracker is a polyethylene, 60% of the ethylene gets converted to PE. So, if PE is in a surplus situation currently, which it is, then the rest of it will not make any sense, because over all site will not be – you know, so do you defer the decision to expand on ethylene, too later or what we are saying is that, within a few years this ethylene expansion is – this polyethylene surplus, will go away.

I think in a few years' time, you say post 2020, just two or three years from now, you will see the need for ethylene again. At least that's our understanding of it. I am sure you can have a bit more discussion on this on this colleague of yours, we can have a bit of a view.

Speaker: This is my final question then, what is your ambition with regards with LPG then? How can it translate what let me say, the LPG market –

Ismail Mahmud: Yeah.

Speaker: Is that a thing? Yeah. I see it's 0.4% growth, I see opportunities in Singapore and flushing as LPG hub.

Ismail Mahmud: Yeah. Maybe I –

Jack de Kreij: Maybe explain what we have announced in the past. So in the last five years, explain the rationale.

Ismail Mahmud: Yeah. For petchem use, you know we established a large tank in Singapore which is connected to the chemical plant nearby – by plant, so we have got a long-term contract running therefore, supply of propane into cracking. That tank can take more, so we have some expansion possibility there. We are trying to establish some nice things around Singapore as well, but in China there is a bit of excitement around what they call PDH. So, you take propane which is LPG, the P part of LPG, and you put it into the hydrogenation unit that makes propylene, you take propane convert to propylene, and propylene is very important chemical that makes a whole host of different downstream products. So, in China, you have a large demand growth in PDH. And there are a lot of – so that is really LPG. Remember we also talking about domestic use, and household consumption so you are talking about just LPG for domestic use which means you just bring in a parcel, put it into a large tank, put into trucks, go to distribution people, so they can then lower the cylinders that goes into people's houses or you pour it to a pipeline, if it makes sense.

There are discussions going on in many parts of the world. LPG right now is a really hotly debated energy product for energy – for household use. In some Southeast Asian markets also, it can easily convert your gasoline run on the car to LPG as well.

Jack de Kreij: Very simple, if you look at those patterns, what did we do in the last, I think three or four years? We expanded in Singapore, we expanded in flushing, Western Europe and we announced the Altagas in Western Canada. So, in line with that, if you look at the forward-looking flows, we are investigating, evaluating of course, natural logic moments where additional infrastructure would be needed to facilitate, in fact the structural flows going forward, that is what we try to do.

As we said, during the capital markets day in 2016, the only point we would like to address every time is that the timing of those decisions is very difficult to assess at this moment.

We can only provide a direction where we feel that in line with our strategy, with the product market combinations there are opportunities, finding the right natural window, the right natural moment is a matter of risk return assessment. Do you want to build capacity without any commercial contract? Do you want to build capacity with let's say 50% covered commercial contracts? Or do you want to build capacity only with 100% because in those circumstances, when the predictability is maybe not as good as you would like, and at the same time, from an option value point of view, sometimes you would like to have a footprint as early as possible to expand.

Those four variables are in fact always the roadmaps for all our business development teams which are working in all the four product market segments, whether it is oil hubs, whether it is industrial terminals, whether it is gasses, LNG, LPG et cetera that is in fact more the conceptual answer.

Speaker: Great, thank you very much.

LNG Market Update

Ton Floors - Global LNG Director

Ton Floors: I hope there is some energy for LNG which is undergoing some major shifts in the world and obviously I can highlight a few of those. I would like to leave also some time in the room for questions at the end. My name is Ton Floors. I am 35 years in the energy business, 15 years in oil and 20 years in gas of which 8 years LPG and 12 years LNG.

So, this picture shows GATE, where some of you have been and have seen it. I will come back later to why I think it is so important for us to do branding and a proven track record to expand the possibility and opportunity for Vopak.

Vopak's well-balanced global portfolio

So, what we see – let me skip this one here. Obviously, there is to go. This has to go up and Jack knows all about it.

Speaker: So that is your target there?

Ton Floors: Jack, what is my target?

Jack de Kreij: More than you think.

Reshaping of the LNG market

Ton Floors: Okay, let me show you here how the market is at the moment is reshaping. If you look back at 2016 also the year of bubbles. And I think a decade of growth is that Qatar originally was the biggest supplier of LNG in about 60 million to 70 million tonnes per annum. What you also see and all you see is that Australia is one of the upcoming countries where it is produced primarily pushed by the IOC, so International Oil Companies. National Oil Company is obviously being Qatar. So normally we see in North America US shale gas, we have seen with the other products as well, mechanicals, and but that is a totally different one.

This is actually deep-sea drilling expensive LNG, North America cheap LNG, which is pushed by private companies like Chennai totally different dynamics, totally different financing as well. And that is really reshaping the market because it could mean if this FID was taken, it was all normally financing and ships included. We have North America it was only for 70% let us say financed, there was much more flexibility on the FOB sales.

This primarily CIP, and CIP means the assets delivered at the destination. In the US itself it is sold FOB, totally different dynamics.

Then another decade to 2035 you see that Australia is more like staying the same. It is around 80 million to 90 million tonnes. The moratorium has been lifted in Qatar for reasons of that the neighbouring country now is what is also say trying to explore the huge fossil fuels, part one, two and three.

So, they had to lift the moratorium to get also access to their gas and to make energy out of it. And North America is growing to 140 million tonnes. So, and it is exceeding in capacity in Qatar. And the mainstream, obviously, is the surges to the mature market Japan, Korea historically, and growing markets like China that you see like this year how China has grown, it is tremendous from 48% growth now. Before we would see more oversupply in the market

on energy, but it is not happening because India for some part, but China to a great extent is absorbing the current growth.

And you see here also Mozambique it is coming in but still that is a long shot. I mean that is – it is still really has to be proven. I think the main suppliers is Qatar Australia and North America. You see the blue, the light blue one is the share of the supply with future. Yeah.

Increasing LNG demand

Now where it is going, and I see that is a very interesting one here that 70% of the LNG growth is going to new countries. We call them recent or likely entrants. 23 countries have started to import energy new to the world, small in size.

And you see what I am trying to do here is that you see here the demand side here in 2016 is 265 million tonnes is taken by the countries. And the expectation is over the upcoming 50 years it will go to closely 500 million tonnes. Now next to let us say Japan and Korea quite stable. You see China, India, but the new countries and I have put them in here in 50% out of the 70% ballpark, Vopak is already active. We have a presence. And obviously that is more slowly alluding to what are we going to do – how are we going to capitalise on this tremendous growth in LNG?

So, turning to those countries for the moment, we like to believe it is. But these countries you see 11% for China and this in India we have people on the ground who can help us on the permitting side. It gives you those ears and eyes on the ground. But this is all the new entrants, Germany you know that we recently announced a project in Hamburg to get an LNG tank as one example.

LNG infrastructure demand

Now what we have experienced over the last 10 years as we ballpark, if you look at the normal S curve it is developing – you start here, and you grow, and you build experience and you end up at the top side. GATE was built in one go as one of the big terminal, building tanks in time in budget. Yes, there are bigger terminals around the world but never built in one go with two jetties and three tanks. You will see much bigger tank and bigger terminals in Japan and other locations in Korea, but it had been expanded over time.

The GATE in a way was our success story. It is nice when you start with a success story because when you are bored to get so excited well let us do more – ten more of these kinds of gates right, four, five very strong partners there, long-term commitments. And now we find out that this market, these onshore large-scale terminals if you look at rest of the world are primarily driven by government to government deals. It is very hard to get your – to let us say to get a stake in the pie so to say.

And if you looked at the previous slide here, these countries they are not all looking for large-scale or big terminals like these tanks. If you look at the Emirates say looking for practical solutions, the market is more fragmented. Still good size, but not anymore size of GATE. So, what we were – so reinventing ourselves and is highlighted by the Exmar transaction. That okay, what is – how we can be more flexible and adapt to this fragmented, sizeable market. So, we have to go down in the curve.

I do not have to tell you more about that one. But it was sort of getting a tow to the water on the FSRUs. Flexible approaches, it has got floating energy. It is a floating terminal. It

has quite same capabilities as an onshore, but it gives more flexibility as far as the time to market for example. You can just have a ship in 18 to 20 months, sail it in. If there is any country risk, you can set it out. So, the more people that we are looking at is more to flexible solutions.

Another one was the single tank. So dedicated terminals, one tank. We as Vopak, we always say aspiring to have open access, multiple customers. Yes, that is great but there was much more a need for a dedicate solution. People will like to go into certain countries, and bring the old molecules in like the Shells and BPs and Exxon Mobils. And they go, can you help me Vopak? But I would say yeah you are the only customer I do not like to be an extension of a Shell or Exxon Mobil.

We would like to open another terminal. And I say well I do not have appetite for that one. So maybe let us do it myself, right. So, I think we had to reinvent a little bit and to create – to be more creative – to be more agile in what the market is asking for.

LNG value chain

I would like to give you a sort of a little bit of a feeling on the value chain. And this came out of the Total presentation. Two weeks ago, it was held in Lisbon was the LNG summit by Total.

Now you know Total is the second largest energy producer after Shell. You know Shell acquired BG, more than fifty million LNG tonnes per year. Total is now doing with the acquisition of Engie, having now 40 million tonnes. But here it gives you a feeling of the chain. Regasification in the receiving site is our core market where we are looking at. It is 5% to 7% if you add more up and it is in dollar per Mbtu which is the common expression in the LNG market.

If you add more up in production down to the market side, it is about $10 to $11 per Mbtu developed full value chain. And we are presenting 5% compared to 7%. So, the value as such is not that big but it is very critical in the chain. And I was surprised also to see that a lot of companies, the large international oil companies due to their core business which is bringing out and sending the molecules. And in the search for LNG they like to create new markets and they like to approach and get Vopak's help in on getting this piece, maybe low in value but high in impact.

Vopak's vital role in the chain

So, what are we going to do? Why we have the vital role in the chain? When you look at the chain, LNG supplier would on purpose here red line here, we never ever go straight to commodity as you all know. This portion you will feel quite strong about. We will continue on onshore terminal infrastructure like Altamira, like GATE. We are good at it. We have built up a proven track record. And that is another phenomenon, which you have seen that before they start to trust you they first have to see in this very capital-intensive business that you can do a good job, that you have a safe operation and that you know what LNG is all about.

And it takes some time. And we have built now since 2011 six years of a very safe, reliable, being very safe and reliable operator. And then obviously – then the party starts to look at and say, okay well at least you can do it. It is your core business. Well maybe you can take

some capital of my balance sheet and take it. And you take responsibility over the jetty and onshore tanks or the FSRU.

So, we would like to continue on this piece, but I would also like to look at where on the project per project basis we can go into the FSRU business as you have seen by the Exmar, but also now where we are approached by a lot of barge shipping companies. Now it is a little better in the shipping world as you have seen now the day rate is going up to $40,000 to $50,000 a day. But for the shipping world to go into FSRU is usual the sort of a way to get a little more return out of the ship, right.

That was the main reason it was all started. So, we are now more seen as a reliable partner to go in LNG. But also know to see the tendering world is that you look at Brazil there are a lot or power tenders. Panama, South Africa, Morocco, and in Indonesia, a party approaches you saying well can you please do this one for me the O&M because it is a tender. And they have to show that they can do the operating and management of the jetty.

And these guys, they feel comfortable in the water but not on land. We feel very comfortable on land and this section we kind of say supported in the tender. But that is where I think it is the ideal marriage. And we call that the infra integrator so our onshore facilities. I know that we do not talk the language quite often, but we are running 300 jetties around the world. Now 300 jetties, for these guys it is very important. They say okay if you are already 4 years just operating 300 jetties, that must be a good partner. And that is what you see now coming back into the market.

Speaker: So, excuse me, can I ask a question on FSRUs. When I look at market it is going back to the point about who is going back into it. You just said it is the shipping people and they have a very different mentality. I mean just the other day Maran I think ordered two more FSRUs on spec. I mean how do you – when you think about your partnership with them? Obviously, they probably have a certain view because of the way the shipping works.

You have a different view because of your background. Do you think it is possible to marry the two up and for both of you to get what you want to have to? Because clearly operating on spec, taking these things here, and have got structures in place to get those available cost of capital so it is not a cost of capital issue. It is obviously something where what you can offer them that they do not already have. And what exactly is that and why have you not done something already I suppose is the question?

Ton Floors: You are right. I mean there are a lot of newcomers, GasLog, Maran and they order these kinds of ships on spec. Tricky strategy I would say, yeah, but what they are missing, what they do not like, if they need to have a jetty, otherwise the ship has no value to get onshore, you never get the permits for the jetty.

We have people on the ground who can assist it. You saw that the countries, 50% of the countries which are the new entrants we already have a presence. The value we have to them is that they shy away from getting with one foot on land. And when they approach we say okay how can you help me and in this tender because I need to prove that I have run jetties, they cannot. And say the ship as such is a commodity on its own, but the concept of these two or even up to here is totally a new concept for them to include in the pipeline.

So, they become a part of the consortium and what we let us say add value to them is this – say this kind of conformability with the onshore and offshore part.

Speaker: So, you are probably saying, I am not by the way putting words in your mouth or not. But the structure, you probably see yourself more of as a JV partner or as a partnership rather than giving your own price, may being operating at a 100%.

Ton Floors: Yes, you like to remain independent. So being the Maran or being at the BW, because they had four parties. How BW, Accelerate and Exmar, Exmar to a lesser extent. They are good because they are at the marketing or the ship management side. They all need Vopak to get on land. This ship is an enabler, an important enabler because you saw that the new entrants are all – it is a fragmented market. And the start-up, it is 2 million to 3 million tonnes maybe and it is very good, well served within FSRU.

And a new phenomenon is obviously you get the power options like in Brazil. It is called A-5, A-7, so there is a new auction written by the government, backed by the government, guaranteed by the global distribution companies like 30 distribution companies like Eneco's and other power companies in the world. They guarantee you certain fixed costs. And based on what they need in five years' time, there an auction and power companies can subscribe to that tender.

That is a phenomenon you see a lot in like we saw in Panama. South Africa is now working at Colombia, Brazil all on the coast line because they do not have a pipeline grid. They need power. But in order to get the power in, you need to get the LNG supply. You need to create and integrate this chain. And that is where Vopak is extremely well I would say positioned, because in those countries we know all about this. This portion we can decide project by project, how we are going to do it.

Should we just own our own ships, should we joint venture? I mean that is still open for debate. The power obviously is a new phenomenon because then we get into the whole chain on how this is financed right with all the cost, collaterals and etc. involved. The gas to power to LNG for 60% is going to power.

Development of existing terminals

Last but not least, this part of our branding, why we can do the previous slides, and why we are asked to go into gas to power and that is a new business. And to grow of quality workers in international oil companies is the branding. So, we have been there, like I said the GATE was built and operational as of 2011. It was aimed at having one entry and one exit, a throughput terminal. And what we see and maybe some of you have seen it the utilisation is not that high. But it is an assurance for these companies who have booked capacity here. Of course, some of these companies who have booked capacity here, that was an enable for them to trade to get access to – by their boards to buy LNG.

So at least always they have, at least always have a home. They can bring their cargos to Netherlands if they cannot sell to the higher markets like Asia. But the GATE was designed for one entry and one exit into lead the pipeline to it. What you see now is one entry and five exits. And that was one of the new services we are offering because now you can come in and you can regasify the product as you can see here. You can regasify into the pipeline. You can go out by trucking.

You can go out by this small-scale jetty which was announced two years ago which is the jetty on this slide, and you see it on the front page. It was the small scale which was growing now the LNG brokering business for the Maesk of the world. And you know Shell has purchased, launched a ship the Cardissa. Gazprom has a ship, and you see all small-scale business into Scandinavia. So, GATE has evolved from let us say improving its services by the large-scale jetty making available for small ships, adding trucks, adding the small-scale jetty.

Those all kind of services which is adding on for helping our customers to instead of being locked in with their LNG, that they can go out with the LNG as well. There is a new index now. It is called the SAX and the East – the Southeast Asia Index and the Latin America Index here in Rotterdam which is at two dollars. And there you can see retailers and traders coming to pick up a load from here. So, in a way it becomes a liquefaction plant.

It is producing the exporting. You see our products disappearing. It comes from Qatar. It goes – or from Trinidad comes into GATE, and then goes out back again to Japan or goes to – lots of it disappears into South America. So, it is an exporting hub.

Speaker: Can I ask you? You are fully contracted on the storage side.

Ton Floors: Yes.

Speaker: So, and in the past few years the utilisation rate has been lower. And the additional margin you would get is from activities such as reloading, is that right?

Ton Floors: Yeah that is the reloading, the trucking all let us say elements to let us say where you can increase the revenues.

Speaker: And reloading has been tricky because of the price differential until recently. So, my question I guess is as far as 4Q is concerned because you have seen a nice spread between NBP and spot LNG. Have you seen increased reloading activity?

Ton Floors: Yes. I could even show you a chart where all the products are going through. It is remarkable to see the changes that we just now said that there are only two containers to China, and one to Trinidad because they do not have the small-scale facility. So, we also can do container business. So, you can come in, with our ship you can go out of your partnership. You can go out through the small ship. You can go out with the container. You can go out even in the truck. You can go out in small ships.

That all is you need to have that to build your branding and also for the customer that they have as the flexibility that they never walked in with the product. Because you talk about a low utilisation but that is a regasification. Regasification is look, I agree, but look at the tank utilisation, people are talking and using it in a different way. They like to keep the LNG for the cold snap. And it is not like, okay I come in and I go out. No, I really – they use it as a training hub. And this is a three-day cold snap. They get more or less the value of one-year fee they pay to us to give you an idea about the benefit for them.

LNG Hub terminal business model

So, they are using it in a totally different way as we had foreseen actually. Now luckily, we could by the designer doing a plug-and-play terminal where you build in such a way that you never have any infringement on the customer service, on the service you have to say to offer to your customer. So, you do not actually have any interruptions, but we can do turn

shipments from jetty one to jetty two, by ship one to ship two. So, less boiler gas and you get money.

And to do so, to make that kind of adjustments we had no interruptions. And I think that is I think one of the critical things when they look Vopak saying help me design in this terminal in China right where we had the request. And but we not the contractor, so we all would like to ask more. And we say okay if we do so, then we would like to have also a stake in the pie. But the critical design of your terminal not only technical configuration, it does not have any interruption.

But also, commercially like at this is showed here, that you can service five customers, four customers in three tanks. You need to have a certain concept to do that because all commingled and everybody wants to know exactly if I bring in 100 units of energy here, not of any liquid of energy. I want to get the same energy out here. Would you bring in an energy value high and she brings an energy value low, so I have to be sure that I can give always your energy back in cubes, right.

So those, this model we built on the landing system and the energy system, we measure it in three ways. So, we always can do this on a commingled basis. This is unique. This is what partners see, in open access. But that is part of branding okay, where people are seeing okay, it is not only working, there is no fight in the terminal. It is even there is no operation disruption. So, this is interesting for us. And then also on top of having all this kind of different portfolio players, suppliers, some power companies in addition they add services. Okay let us talk with these guys. So that is really helping us in the branding over the last six to seven years.

Key messages

So, in closing for today, major changes in market due to the surge in LNG. Australia, US shale gas, so let us say to that extent will cause an oversupply. We had expected it already, but it is rebalanced by China, India for the moment. But we have to see how it will go. You see the importing, on the demand side the importing companies, you see is fragmented. People need let us say more flexible options.

They go for floating solutions. We will focus on those countries where we already have a presence, where we can rely on a small say core team here. I have got let us say five BDs working around the world. But we are also leveraging on the divisions in the world with the other – let us say other oil and chemical divisions. And GATE, without GATE we would not see – not be seen as a serious player.

Speaker: So, you are moving from long-term contracts to scale, to somewhat shorter-term projects as you are trying to capture new countries into LNG. Therefore, the financing structure will also change, and you will have a bit more extra capital.

Ton Floors: But I did not say that I was going to for short-term contracts. I said we need more flexible solutions. Most of the time if you look at the other 10 charters are 15 years. I agree with you that there is the impression that they want to have let us say short durations. But below ten years on the shipping side 10 charters and particularly if you look at the what is now Colombia coming up is 25 years guarantee that the government in Brazil, the power auctions is for 25 years. So, if you can be a part of this consortium, it is even more interesting, right.

Then you are linked to the consortium including the power plant, 20 or 25 years. So, we have the long term. But yeah then we have to really to look how can we be part of the consortium because it is all cross collaterals obviously. And you build a non-recourse in here then you obviously got forced into this kind of power business, you really have to be sure if you want to do that.

Speaker: Now let us say you have a stake in the FSRU and then you have the contract let us say El Salvador or whatever category.

Ton Floors: Yeah, sure yeah.

Speaker: And let us say it is because they do not know for how long they will use gas or how committed they are to gas. And the contract is only for three years.

Ton Floors: So, Egypt only five years, five and eight years because they have an instant issue. So, they have to bridge it, right. It is the same, like El Salvador.

Speaker: So, in which case the project financing be a lot different.

Ton Floors: True, yeah, a 100% right. And that is why also we have to look at the country deed like if there is an interim solution, for example China there is a project we are looking at where they need early gas. So fast track to the market, so for five years in FSRU and then it is time to get say also the permit onshore and you can build the tanks. Plus, China really is an onshore market. That is an early gas solution.

We have say interim solutions like Egypt, El Salvador is that interesting for us? I do not know. We have to evaluate that one. If that is interesting for us, I would rather go for the long term like I think the immediate tenders, power tenders. Pakistan has a growing market. Colombia backed by government for 25 years. South Africa's tendering coming up. So those are more let us say the big Brazil, it is a very interesting country with this kind of A-5, A-7, all backed for 15 years by the local distribution companies.

Those are interesting projects. To go for five – three to five years and yes, they ask for them. And I think you said very correctly that our shipping companies, ordering the ships on spec on a speculative basis, yes, they want to maybe do three or five contracts. It is not our business to really – to speculate like that. And they might have to do it because yes, the ship is coming out of the dock and then let us find a home for them, right. And if I can bring it under four or three years, great. But that will not our basic model.

Speaker: Okay last week Exmar announced that they have sold their 4 FSRUs 50% stakes to Accelerate. So that story is over. But they still have one nice barge where they are looking for employment. This is what I call option A. It has never been materialised. Is it something you considered or is it too small? Let me say it is not ambitions you had in FSRU market.

Ton Floors: No and I do not know. The vessel is almost ready. So, the vessel is for years has been ready. I mean so I – it is horses for courses. And if you can – it has a function because it has only 20,000 cubic storage. So, you have to lay an old lady next to it and an old lady being an FSRU. So, which you – because other come alongside this FU barge yet either you have we call it extended demurrage. The ship has to be there and has to regasify.

Now it has a large regasification capacity on the deck. But the ship has stayed for five to six days. We call it the extended demurrage. That is a model, but if the demurrage rates are

high, that is expensive. Or you put an upgraded older lady next to it with and it is 40,000 cubic or to the 20,000 cubic ship sizes. Then you have 140,000 you can now be having a bigger drop load. But still then, yes, you have to do the connections.

It could work. But the barge yes, is – you have to get it at a good price. So, it might work in some situations case by case. But in fact, the Shell's and Exxon's and BP, they like just to boom, throw one load of 160,000. And when I started the business LNG in ballpark, the average size was 145,000 cubes. And in those times, you had to Qatar Max 216,000 cubes, huge ships, and then the medium size for Qatar Max. But it is the last size what is built for from Qatar to America for import, long haul like the Airbus 380, long haul traffic.

But now we see with the new supply sources, there is much more need for the 160,000 and 175,000 cubic ship sizes. So, leave it up from the 145,000. So, the FSRU barge could do it, but you have to calculate in the delta, your capital cost of the barge, and over time, the extended demurrage costs.

Speaker: Okay well great, thank you very much Ton.

IFRS 16 Lease

Jack de Kreij, Vice-Chairman of the
Executive Board and CFO of Royal Vopak

Jack de Kreij: So completely different from any topic we covered to that today, because what we have tried to do in this half day is to update you about in fact the developments in the markets which are driving the volumes around the world or in deficit markets. Critical of course for transhipments, storage, blending services we could provide. The reason why we have decided to organise this day around these topics is that we noted in 2017 that we had quite some discussions with the investors and with yourselves about a specific segment which was fuel oil, bunker, IMO 2020.

And there was a lot of need to understand what is really causing that volatility factor. And that is the reason why we thought that we would use this afternoon to give a broader perspective of all the segments including IMO 2020. And then as from let us say the year end numbers and Q1, we can concentrate again on the implications on occupancy rates, financial developments. But I think we are then having a nice platform where we can look what is happening in the year 2018.

How does it correspond with the factors we have been discussing today, what is the factor which provides the largest uncertainty in that particular period? And then going forward of course when we announce in the future any projects in order to expand our network. We hope you recognise how it fits in, in the different product market segments we are continuously exploring. With that in mind, we realise that also from a reporting point of view there is one standard which might affect the reporting as from 2019.

So not 2018, but as from January 1, 2019 which is the IFRS 16. So, what we thought would be a wise idea to just share with you the preliminary assessment of what we feel could be the implications of the implementation of this standard of the reporting of our numbers going forward in 2019.

IFRS 16 Leases

It is a huge story on one sheet but in fact it has two components. On the left side you could say is there any contract you have with your customers where you would be seen as a lessor, yes or no.

And that is not the case. So, all the contracts in most of the cases are seen as a service. So, it has no impact on let us say the way we run our company. But also, not for the accounting and financial reporting consequences for our customers. That could be a difference in small situations, in a situation where you should assume you have one dedicated infrastructure for one particular customer, then that could qualify, according to IFRS 16, as a lease standard situation.

If that applies, it hardly has any impact because that will more likely or not be a joint venture. We are report net results anyway. So that is a minor area of attention. So long story short on the reporting of the way we run our business, there is no implication of the implementation of IFRS 16, also not for our customers, except for certain situations where

indeed you have one dedicated infrastructure for one customer that could qualify, but it is quite a minor area.

However, there is another area where the IFRS 16 standard has an implication. You can imagine by operating quite some infrastructure around the world that we also have many of those land leases. In those situations, we are not the owner of the land because port authorities remain the owner and lease the land for long periods, 25, 35 even sometimes 40 years. And the question is how should you treat those land leases which were up to now off balance sheet commitments, disclosed in our annual report as off balance sheet commitments. Is there a change effecting resulting from this IFRS 16 standard, and the answer is yes.

Implications of IFRS 16 Leases

As from January 1st, 2019 we have to recognise in fact the kind of net present value with respect to the commitments reflecting an ownership on the use of the land as an asset and a corresponding liability on the balance sheet. So that is change number one. We have reflected that in these metrics that you say, in fact, it is perceived as quite significant and also on the liability side, quite significant.

And we have disclosed I believe in Note 8.10 of the Annual Report 2016 all the old balance sheet commitments. So, you can see that we are talking about hundreds of millions, and not just tens of millions. The other point is that up to now, we have of course reported the lease expenses as operational lease. But if you now take in fact the IFRS 16 standard it does not qualify anymore according to that principle. You have to make a distinction between the amortisation element and the interest element.

So, in the P&L, it will be reported differently. That means that in fact you eliminate operational costs from your operating earnings. But you add of course interests and amortisation as a result of which your EBITDA goes up from a reporting point of view. At the same time, dependant on the composition of your land leases and the methodology you use, your net profit could go down. Because the calculation of amortisation and interest specifically in the first half of the total portfolio period is some higher than your operating leases.

So specifically, the interest component, so you get an impact on your net results in the beginning resulting from this reclassification of originally operating lease to a component amortisation and a huge component interest. That means that if you look at the return ratios that if you put more assets on your balance sheet with which you do not generate additional cash flows by definition, your return indicators according to the previous definitions will be affected.

And that is what we have tried to summarise here. By not providing yet any specific financial information because this is an assessment you have to make. You have to discuss it with our auditors, and it will be reported as from January 1st, 2019. And it is the so-called adjusted retrospective period methodology where you are not adjusting the figure from the past, but you take a new start. So instead of taking let us say, assuming that your lease contract was 35 years as from the beginning from 1995, you now start just with the remaining period.

Now you take that remaining period as the new lease period for this adjusted retrospective applied methodology for reporting. However, we have decided that instead of only reporting

2019 based on these numbers, we can imagine that our investors including yourself might be interested in what would have been the impact on 2018. So, we are now considering also although not required by IFRS to provide pro forma historical numbers of 2018 as well.

So, it is in fact a pre-notification assessment analysis first let us say indications just to assure that everybody understands we are not talking about small implications, minor implications. There will be an impact on the numbers we report.

Speaker: Why are they doing it?

Jack de Kreij: In general, I can say in order to have a similar treatment of different type of contracts with the impact on the balance sheet that is what you see here. That is why they are doing it. So, differences in finance lease and operating leases had a different implication on balance sheets and P&L.

What they tried to do and rating agencies by the way in fact were already applying these methodologies themselves. That is why they try to weigh the comparison at putting more off-balance sheet type of commitments with a high cash flow value, also very well represented on the balance sheet. So, in fact eliminating different accounting treatments with different consequence for balance sheet, that is what they are trying to eliminate.

Speaker: Which makes it very hard to compare it to US GAAP, so if you want to compare your income.

Jack de Kreij: Yeah, but the difficulty is that still if you look at the convergence which has been broached some ten years ago for US GAAP and IFRS there is still a list of quite some differences. One of the topics I think here, you will sometimes look at where there is a huge difference in treatment between IFRS and US GAAP is for instance is impairment analysis. And under IFRS you need to do absolutely a very detailed net present value calculation.

At the moment you are just below your cost of capital, you immediately trigger already under IFRS an impairment discussion even if there is no indication that there is a structural let us say decline of earning capabilities in the future. Under US GAAP, you do a nominal cash flow evaluation. So yes, alignment, but then, I think if that would have been the objective then you should have tried to align all the important matters in that particular concept.

Speaker: Does that also mean that anything that is project funded on the P&L as equity funded overall.

Jack de Kreij: Project, no that has no impact.

Speaker: No impact?

Jack de Kreij: Not at all. Not at all, because the project funding is in fact, assume you have a joint venture, then the project funding remains the same, that is the debt funding of the total project is not seen – is let us say the financing of the whole operation. It is financing of the whole operation, and it is separate from your commercial contract. And so, you have – in fact if you have an industrial terminal, then you have a commercial contract for 15 to 20 years, which provides a detailed list of all the services you provide for that particular period.

Separate from that with a complete different party being the port authorities, you have a land lease for let us say 35 years. And the third party you are involved which is that with a group

of banks, you have concluded a project funding. They are all different contract parties, completely independent from each other.

Speaker: Would you reconsider to renegotiate land leases? If you negotiate your land leases, if you make them shorter your liability effect is smaller obviously. Will that change your policy going forward?

Jack de Kreij: The point is that we come from of course a period that is where we thought both, where we felt that investing in a long-term focused asset should also be secured by a long-term land leases because otherwise if you do not do that, that might be a risk that every three or five years dependent on whatever development in whatever country, they might also renegotiate higher rates. So, from a cash flow point of view and from a business value creation point of view we feel that the business model we are using is still in the best interests, but are shackled by using long-term leases instead going to short term. Specifically, when land becomes scarce in a certain port you may be exposed to unfortunate increases. But that could be technically all right, technically all right.

Speaker: And do you have any liquidity covenants from the debt today?

Jack de Kreij: No on the covenants, it has no impact because you always use Frozen GAAP. So, what you do –

Speaker: And the Frozen GAAP is tax accounting.

Jack de Kreij: No Frozen GAAP means that the moment you sign a US private placement you agree that the way you calculate any covenant is based on the applicable gap at that particular moment. That is the reason why we are using the word frozen gap. Of course, over time when you start including new use of private placements, then at that particular moment, there will be a new.

So, you have to at a sort of point you have to maybe negotiate or agreed a new set of criteria using these new calculations. But it has not a significant impact on the net debt EBITDA ratio, but of course it has an impact.

Speaker: The bonus schemes of management, are they also at Frozen GAAP?

Jack de Kreij: The objective of any bonus scheme is very simple, is in fact provide an incentive for a real value creation. And there is always a beautiful paragraph, any change in accounting policies, any one or so whatever will be adjusted. So, it has no – normally it has no impact at all.

Speaker: So, we can expect the target for your key ratio, that is CFROGA to go down then under the new –

Jack de Kreij: You should not expect anything at this moment, but that it will be carefully looked at. At that particular period, we will look at that particular period, yes, absolutely.

Speaker: I was going to ask a similar question. Now you've given a sort of an idea of bandwidth that you expect with regards to being, while you are going through the next couple of years. Really that is going to change significantly given that – will that be a certain level of either retrospective idea of what the number would have been under the accounting or some other restatements about the range.

Jack de Kreij: We might look at. So that is the reason why we said at least what we will do, we will provide comparable figures for 2018. If it is helpful at that moment that you will also provide comparable numbers without the metrics that will be assessed at that particular moment at the beginning of 2019.

Speaker: Thank you.

Speaker: So, if you look at the 53 million, do you have any idea how that splits between amortisation and interests? And what kind of interest would you use there because it is not official?

Jack de Kreij: That is the point, but it is a different methodology. It is not that you take this amount and split it. You have to take the total amount of liabilities and then do the interest methodology. So, in the beginning it could be that your calculation demonstrates a slightly higher amount than the 53 million if you add the amortisation and the interest, because this is not the starting point. The starting point is the total liability and then you calculate it.

Speaker: What kind of profit before tax would the impact would be there? Would it be small? We are talking about 5%, 10%?

Speaker: So, what we have said here let me see. We said the impact on the net profit itself will be limited. But when you are searching for it, you have the EBITDA of course up. Then if you look at EBIT, EBIT for it, then you get the difference. In the beginning the interest component is probably higher than the amortisation component. So, you get a less significant impact on the EBITDA development if this composition is different, I and the A.

Speaker: So, last question, looking at these two components, if you look at them and you will have to say – you have added the 793 million to your debt, quasi-debt. Would you then reconsider saying, well, if that is quasi-debt, it does not make any difference whether I rent a property or own it?

Jack de Kreij: If that would be an option in a life. But the point is the port owns the land. You cannot be the owner. So, there is only an exceptional situation I believe indeed in Deer Park, Houston we are the owner for the land. But in many jurisdictions, there is no opportunity. So that would not be a strategic option.

Speaker: But also not for new tanks?

Jack de Kreij: No, because it is the policy of the port authorities to remain the owner of a strategic asset, being in charge of allocating and that is more important for the port authorities. It is not only being the owner of the asset, but also have a say in how to allocate land to different activities in the port, not only for industrial use, container use, tank storage use. So, the likelihood that they will change that concept seems to be quite remote. So, this was just a pre-notification because we wanted you to be aware that okay it is a fact, it is a reporting metric. It has our attention. We made the assessment. These are indicative implications.

In combination with the annual report, I think you have quite a good understanding about what type of amount we are talking about. The ultimate calculations of course still have to be done, because it is an application in January 1st, 2019 for the year 2019. And then we do of course on the same methodology a pro-forma calculation for 2018.

It has to be reviewed by the auditors of course, also first time for them. So, you get quite some details and reconciliations in work. And if there is any metrics where you feel that comparability would allow you, that will be assessed at that moment. We are always open for that. Because at the end of the day, as I said the total cash flows as a result of this will not change. That will be always the same. It is a matter of reporting assets, liabilities and a particular classification in your P&L.

Speaker: With regards to extensions and that sort of thing, are you going to do, based on something like an option value, or let me say your rent from the Europoort for until 2020 to 2029. And then as an option, how are you going to handle debt sort of things? You are going to zero in and then you start all over again then?

Jack de Kreij: Probably, because if it is an option from a legal point of view it is not a commitment. So, it means that you have to make an assessment. And then the question is, let us say you exercise that option three years prior to the expiration, then more likely than not then, immediately, you have to include it, because you have created a new commitment. And so that is the way how the system work, but the fact that you have an option has no impact. There is no impact.

Maybe more important than this, is another milestone we achieved, which has being released this morning is that we completed the whole non-recourse project financing of the Pengerang PT2SB, which is the industrial terminal. So, it means that as a result of that, that also from a funding point of view this is signed, sealed and delivered in the coming weeks down.

And that means that we create some additional flexibility for ourselves because the third-party project financing of course comes in place in the joint venture. Any shareholders loan, we had provided in order to make the first action possible will be reimbursed to the company and this is in line with all the concepts that we have following lately. With that, I think I would like to wrap up. As said, the objective of today was in order to provide a common understanding of all the developments in the different product market combinations we are serving.

Whether it is sub-locations oil or chemicals, whether it is markets with structural deficits, industrial terminals, and whether it is gas or LNG. We all noted in the dialogue we have been developing in the last year that there are few markets like the oil markets where there is quite some uncertainty and volatility in specific segments. In 2013, we were talking heavily about the low occupancy rates in Rotterdam, because as a result of the sanctions we were not able to increase our occupancy rates in the crude segment.

This year the focus has been and will be on fuel oil. Could have been any other turmoil in any other market, I think the answer is clear. That could be. On the other hand, you should not overlook one fundamental factor that also in the oil markets, there is very strong fundamental demand resulting from supply and demand imbalances, which are going forward to develop in a positive direction. However, it is also fair to say that as explained in our Q3 report that there is some uncertainty and volatility with a certain part of our capacity.

Because the capacity expansions which we have seen in Rotterdam, Fujairah and Singapore might even exceed what you normally would see from supply and demand structural imbalances. As a result of which a part of your capacity becomes more exposed to other factors. And the other factors are trading-related factors. And as a result of that, contango

and backwardation comes suddenly as a factor of explaining why you are not operating at 95%, and whether or not you can predict whether it is 88% or 90%.

So, we hope with this half day that we provided a good basis for a further dialogue in the course of 2018 and 2019, how our network is performing, developing why is the occupancy rate in that region at that level, why is the occupancy rate at that level, what is the implication of your pricing strategy. And as a result of that we hope that we have put the EBITDA and occupancy development in not only a strategic perspective where are we in our journey and on which S curve or which product market segment, but also where the uncertainty lies.

That brings me also to the second half of 2018. Because in the second half of 2018 after we have explained of course in February and in April and in August the developments within the year 2018 also more important is looking forward to the period beyond 2018, 2019 and 2020, because we promised that during our Capital Markets Day in 2016. You might recall that we had one simple overview saying what is the capital efficiency of this company, what is the strategy, and what are the options we might explore in the two-year to three-years' timeframe.

So, we will absolutely adhere to that. So that in 2019, we have a good understanding that based on the analysis we just shared with you whether we have been able to identify not only new projects but whether we have – would be able to make investment decisions. Because that flexibility, that was our proposition to the shareholders, that we said you know we think it is wise not immediately trying to change the capital efficiency. But provide us that flexibility in order to explore new growth projects.

At the same time, it also implies that if in 2019 we come to the conclusion that we have not found sufficient, attractive risk-return, attractive projects justifying capital allocation and you would still have a relatively low net debt to EBITDA ratio that the company should come then with an answer about what is the way forward. So, in anticipation of that, that is the reason why we organised also the H2 2018 Capital Markets Update, where we will provide the framework.

And then in 2019, we come back on all those principles which we have explained in 2019. We hope that gives a bit of a clarity about the step-by-step journey we are making in not only having excellent capital allocation, at the same time evaluating flexibility versus capital efficiency. But we want to do that with very much experience and insights and we need this period to ensure that we make those decisions very carefully and thoughtful, well explained to our shareholders.

But time is of course now of essence because 2016 is already one and a half year ago. So one and a half year left to provide the clarity. And the reason why, of course elaborating on this because this is a topic where many of our investors are interested in with different views. Some of them you recognise that have a long-term view appreciate our capital discipline. Others are concerned that maybe we are paying insufficient attention in the short term to capital efficiency.

And be assured that both aspects are absolutely on the agenda. But as I said the timeframe we set is in line with the Capital Markets Day of 2016. For two to three years period, we need

to make that assessment properly in line with the explanation of today where we explore different projects in different product market zones. Are there any remaining questions?

Speaker: So, do I understand correctly that mid-February we can expect let us say roughly guidance for 2018, and not further? And that let us say in the second half of 2018 we will see a new let us say three-year plan or targets with even on EBITDA, capacity, etc.?

Jack de Kreij: No, it would be inappropriate to say that you can expect that, because that is something I feel the executive board should look at in February. And it is specifically not in my situation now to say that that should happen. So, you should assume the executive board will determine in February what is deemed fit for purpose at that particular moment. And I think, you have seen in the past we always try to do our best. If something is felt to be relevant, we try to share it.

If it is difficult because there are all kind of composite effect, so sometimes you need a bit more time. Because then you see the implications and you can share it in a better way. And we have seen that in the year 2017. We gave quite an early warning, be careful 2017 will be lower by definition. It was impossible for us at that moment with so many scenarios we give to provide any intelligent range.

It became clear in somewhere in July and August that because of the expiration of fuel oil contracts not being renewed that we became more exposed to spot business, which is not predictable. You could assume in line with this, I would say a responsible care, we find very important in our communication with our stakeholders that in February, the executive board will look at it, and then they determine what they feel is appropriate at that particular moment. So, I cannot confirm and do not want to create any expectations. I am not in the right position for that.

Speaker: Thank you.

[END OF TRANSCRIPT]