Technip's Technology Day
November 5, 2013

QUESTIONS AND ANSWERS SESSION

Mick Pickup, Barclays

Good afternoon, a couple of questions, gents. Obviously, thank you for this morning and obviously it is a Technip view of the world. Just on the ethylene side, could you talk about the competitive landscape? I know you have been talking about this 50% market share, but that has been a lot around the world. How do you think the US players are going to be competing back in their home territory?

Stan Knez, Senior Vice-president Process Technology, Technip

Just within the ethylene technology, Technip Stone & Webster competes against a number of ethylene technology providers. We do so on a global basis, it is not just in the US, it is everywhere in the Middle East, in China, all the markets that we license to technology globally. The competitors are probably known to you, but CB&I Lummus and KBR are the main competitors.

The key here is that yes, you saw the numbers, and we have been very successful both as Technip before and at Stone & Webster now, we put that together, but I was also trying to make the point during my presentation that where there is technology, you cannot stand still because your competitors are always a bit on your heels, the technology really you are looking for interest, for every little bit that you can advance. So, you have to invest on R&D. You have to basically continue to improve the technology. You have to offer other services that provide value and that are what we need to continue to do. So, we obviously are not kind of stand where we are, we do not want just to maintain, but also grow and we are going to invest, we are going to keep fighting for the market share. Jean-Paul, do you want to add anything?

Jean-Paul Laugier, Vice-president Ethylene Product Line, Technip

In addition to what Stan said, in Asia, we have an active R&D program. We have also alliances with some suppliers to improve the technology and to deliver the best solutions. There might not be identical in Middle Eastand in USA so that we have to adapt our answer to the customer using our R&D program as well as alliances with other suppliers.

Stan Knez, Senior Vice-president Process Technology, Technip

Just another point, you know our customers, we want our customers to be first-repeat customers. So, if we deliver on their existing projects, the plants start up well, they meet guarantees and they do as they are expected to do. Then, I think that we will be in a position to try a turn that into first-repeat customers, but you have to prove yourself every time you go out on your projects.

Bernd Pomrehn, MainFirst

Good afternoon, gentlemen. We heard a lot of the market opportunity in the US or North America provided by the shale gas opportunity, this of course represents an upside for you and a nice midterm upside, but what regarding the global market demand. Isn't it that we will see a corresponding decline for the demand in Europe because we just see an increasing capacity potentially in the midterm in the US and a corresponding decline in the European market, and probably also in other markets like South America?

Nello Uccelletti, Senior Vice-president Onshore, Technip

The question is mainly related to onshore business ends?

Bernd Pomrehn, MainFirst

Yes.

Nello Uccelletti, Senior Vice-president Onshore, Technip

First of all, if there is one market that is drying for sure is Europe. Europe is offering very little opportunities. As you know, this morning, I was presenting a refinery that we are building in Bulgaria for instance, but really this is a single opportunity that we have been able to catch thanks to the relationship with Lukoil that lasts since this time. I believe that the markets that are still active are North America, Middle Eastand Asia. These are the three markets we see. Frankly speaking, the number of opportunities that we see in North America is not the same as we see in other countries, also because as far as the concept of accessible market, it is really a concept that is changing over the years. We believe that really in the United States, we have the opportunity having the technologies and having a capability to work locally, but at the same time to pick up the execution by our historical onshore offices. We believe that we are better equipped to compete in certain parts. We are still in the Middle East, not only for big projects, but also thanks to our presence in Abu Dhabi. You know that we have an office in Abu Dhabi with more than 1,000 people. Asia, in a selective way, we are following some important prospect like the rapid refinery for which we are completing the front-end design. Then, I believe that these three are the markets. Later on, if you go to Latin America, Africa again, we have some specific opportunities that we have targeted thanks to our relationships with the client access to technologies. But really the markets that are more important for us remain these three areas.

Bernd Pomrehn, MainFirst

Ok, thank you, Nello.

Stan Knez, Senior Vice-president Process Technology, Technip

I would just add that the businesses cyclical has a commodity chemicals, so US as you heard this morning has a feedstock advantage and everybody is focused to take advantage to that. China and Asia, of course, is the proximity to the end-products kind of manufacturing all over the world. So we are continuing to focus, but you know, particularly, we held this ethylene forum, it is a global business and you know Middle Eastwas built in with a lot of capacity, because they had advantage. Now, US are looking a capacity. Asia continues to build, and these things will equilibrate on traditional supplying demand. Obviously, we will have cycles you can may be over build, but I think we are starting to see a lot of attention in the US, but as I have just said, marketing in the Middle-East, Asia will continue to look on our opportunities.

The ethylene business is global. Jean-Paul, how many plants, 200 plants worldwide? It is 260 plants. For instance, we have also opportunities in Russia to upgrade, to modernize, not to add capacity necessarily, but use our technology to modernize. Again, we will look to take advantage on those opportunities as well as the new plants that come in. So we have the revamps on the new plants that we would come for.

Chase Jacobson, William Blair & Company

Outside of technology in chemicals in the US, can you talk about the market share that you are kind of targeting there and with some of the US C&Cs seeming to be a little more aggressive terms and full scope including construction? Do you think you have to add capabilities to be really relevant as an EPC in the US?

Thierry Pilenko, Chairman and Chief Executing Officer, Technip

I will start with the question about market share. First, the market share that we are talking about the 50% is about the technology, when the technology has been selected. It does not mean that we are building 50% in an EPC contract for all the plants. I think it is very important that as far as technology is concerned and the very front-end, a part where we maintain a good presence, but we are not to give ourselves an objective of a market share on the EPC side. We really want to be selective. We want to take the right project and with the right risk profile.

And coming to your question about the US, I think that the market is kind of shaping itself at the moment where obviously as some of our clients are coming back with experience from outside the US where the lumpsum turnkey is often the classical model, they would like to bring that model into the US for this new developments after ten or fifteen years of almost zero development. The market has not completely reacted to that. You hear a lot about: yes we can take all risks on construction and so forth, but we have not yet seen our competitors on the market responding like they would respond for a plant in Saudi Arabia or Qatar, and so forth, where you have very well-known construction resources in terms of quantity, but also in terms of productivity. So the uncertainty that you have in the US at the moment is the productivity and the potential inflation of the rates in the future as the market builds up and hits up. So, this is why I think you are going to start to see people talking about the concept of lump sum, but will that be a full lump sum, it is not completely decided.

The other thing I would like to say is unlike what we saw two or three years ago, in the US, we had a subcritical mass in the onshore business. With the acquisition of Stone & Webster, our footprint changes dramatically, our reputation changes dramatically and to the point that some of the major US contractors, those who can be considered sometimes as our competitors, are actually talking to us, or we are talking to them, and we are going to work in alliance with them. We will bring in may be more of the technology and engineering, and may be bring in more of the construction resources, and so forth. So, those types of agreement are being discussed at the moment. So, it may not be just head-to-head competition, there will be consortiums that are to organize themselves like we have seen with CPChem for example. With them, we have a construction partner and we are doing the engineering procurement and the project management. Against us, we have another consortium. Over the next two or three years, you are probably going to see a number of alliances between major contractors that will present different types of contractual schemes. I am not sure there is yet any contractor who is ready to offer the full lump sum turnkey as they would do in the Middle East or in other markets.

Chase Jacobson, William Blair & Company
Ok, thank you.

Jaideep Pandya, Berenberg

Could you give us some color as regards to growth prospects of the feed business in onshore in relation with your onshore business? So, you expect over the next five years that the engineering business will grow faster than the onshore business?

And with regards to margin profile of the feed business, is it higher than 6 - 7% or is it more in line with the 6 - 7%?

And then, the final question is really could you give us a little bit more color of how much of this is really pure licensing versus the more men hour business where you could have more competition in the next four of five years?

Nello Uccelletti, Senior Vice-president Onshore, Technip

First of all, as far as this approach for frontend design, as you have said, is a way to be at early stage in the project, because we believe that in certain cases clients are selecting the feed contractor going through, in open book estimate, and later on negotiating the EPC. In other cases, like it is the case of certain projects, the client, in any case, allows the feed contractor to be one of the competitor for the EPC, then being the feed contractor, we are already familiar with the project. You are in principle better placed to have a very comprehensive proper proposal, limiting also the risk because having had the possibility to know the project and get familiar with it during the feed, obviously you are better placed to proper estimate the project cost later on. Any time we identify a project that fits within our strategy as we have said, good technology per content and possibility later on to have an interesting EPC work, so we are competing for the feed. Obviously there is not a standard margin approach

for any feed. It depends case by case, but we believe that the mix of the feed project, service project and EPC is still in the range that we are announcing to the market.
To anticipate which is the percentage of feed vis-à-vis the engineering services only, I repeat: it depends on the interest that we have for a specific project. We have done in the past also project for the detailed design under the same pole services lump sum because we were interested to get the reference, to get the reference on certain specific technology, then we are open to participate, but we are very selective at very early stage, identifying prospects, having a proper technology per content and making a differentiation to the market.

Question

Any color on how much is managed versus licensing?

Nello Uccelletti, Senior Vice-president Onshore, Technip

Actually, licensing is a limited activity, because together with the license you are providing also the process design book. Then in this case actually it depends on the size of the plant, how many units, how many trends, but in principle, the licensing and what we call basic design is a limited number. Man hours can then be between 10,000 not to 30,000. No more than that. Feed: there is not a single definition of feed because normally a client issuing a tender for a feed is listing the deliverable that he wants and there is what we call a light feed, a more detailed feed to enter later on in the execution phase. In any case, in terms of man hours for us is in the range between 3 and 5% over the overall man hours for the EPC phase later on.

Ryan Kauppila, Citi

Stan, how has your Stone & Webster sales pitch changed sitting in Technip versus Shaw?

Stan Knez, Senior Vice-president Process Technology, Technip

Very good question. The sales pitch has actually been energized, sitting within the Technip umbrella: under Shaw we are part of energy and chemicals. Shaw was a different kind of corporate entity and power. We have a better home, personally, in Technip. Technip knows our business. They are focused, as you saw Thierry speak this morning, on the same kind of values, focused on safety, real big commitments strategically on investing, whether it is a subsea, the offshore, the onshore. Coming from the technology front, I actually came from the Shaw Stone & Webster side where technology coming here was a breath of fresh air to have that strategic commitment to innovate technology, to use technology in the way we looked at this morning, the early positioning, having now, obviously ethylene having the ability to sit down with what was once a competitor and put everything on the same table. It's something that happens once in a lifetime if you're lucky. I think we have the opportunity to improve that technology, to add more value to our clients. I think the response has been overwhelmingly positive. When I travel, whether it is China or India, South America, or even in the US Gulf Coast, it's very positive. We have the technology, we have the people now. You saw the capabilities and the breath of capabilities. Personally, and I think from Technip's new Webster PT perspective, very positive, and I think really energizing and motivating for the people to take this to the next level.

Thierry Pilenko, Chairman and Chief Executing Officer, Technip

What's really interesting is to see among the key leaders and the key technologies coming from Stone & Webster… people are not quitting anymore. They are not losing people. Stone & Webster, under Shaw were losing people. Not only are they not quitting anymore, but we have been able to attract people who had left when they did not see that strategic direction in their lives or with their colleagues. They are not coming back. This is not only technologies, it's also project people who want to participate to that growth adventure? It's been very positive I think.

Chase Jacobson, William Blair & Company

Maybe outside of the US, you have talked about the US a lot today… can you talk about the outlook in the Middle East. I know they are talking about all this big integrative projects again. Could you give us an update? I apologize if you talked about this on the earning's call the other day. Those big integrative projects, demand competition: what do you see in there?

Nello Uccelletti, Senior Vice-president Onshore, Technip

As far as hospitality is concerned, first of all, as I have said, we have an advantage for medium size projects having an office in Abu Dhabi and an office in Doha. Then, many times, when we have brown field product with a certain portion of revamping, being present locally is an advantage because we can be close to the plants, making side surveys, providing detailed design, being very close. What we have seen in the last years, when starting from 2009, we have increased the quantity and quality of our people in Abu Dhabi, that we have been able to access prospect and project that were not accessible to us before. As far as the big project, you know that Middle East is the arena preferred by certain contractors, mainly Koreans, but I would say also Japanese, Indians and so on. Then, having always in mind this target that we want a profitable growth. We are very selective in identifying projects that are accessible to us. The concept is always the same: technological content, capability to have a clear plan of execution, mobilizing a partner for construction since the proposal phase that we can tackle the proper challenges of the cost of action. This is the reason why for instance we are competing in these days for two petrochemical complexes in Qatar, because its' our technology, we know very well the country, we have a good construction partner for that. It's typically the case, that we are actually more than eager to compete. When we look at the upstream market where the barrier technology are very low, technology per content is relatively limited, and there is sometimes a list of competitors that have no specific knowhow and skills, but competing on your price. It's a market that is not interesting for us.

Mick Pickup, Barclays

On ethylene today, you talked about any opportunity you see further down the value chain. I think you're going to go into fertilizer and to polymers and moving down that way. Secondly, when you mentioned the opportunity set, you did not mention Latin America at all on the opportunities there. Your biggest project is down there at the moment. What's going on down there please.

Nello Uccelletti, Senior Vice-president Onshore, Technip

First of all, if you want Mexico, or Latin America, where we are doing this petrochemical complex, that we have been following again since the feed phase and now entering the construction, having almost completed the home office activities. Latin America is offering opportunities for the first phase in terms of basic design, in terms of front end design, but sometimes, due to the lack of financing, projects are systematically delaying the possible type. Then, as you probably know, we have a presence in Columbia. We have an office of 600 people. Again, working for engineering services, small projects for Ecopetrol, but it is a typical case: Ecopetrol has announced for two years now, the modernization of the Barrancabermeja refinery that is an important target for us, but still, the tender is not on the market and things are shifting. Other countries are mainly depending from financing coming sometime from China and things are late. While we look at Latin America being present in Venezuela, in Colombia as I have said, and in Brazil, then we are ready to catch any opportunity that is accessible to us, for the time being we don't see a very bullish market there.

As for the fertilizers, first of all, as we have seen this morning, we had some opportunities, maybe to do the gas price in Peru for instance, but later on, when they discovered the shale gas was starting here in United States, investors… because in this specific case there was an American investor supposed to export the product to United States that decided to revisit the investment. We had another opportunity in Peru for an ammonia plant for a private investor, but again, due to the lack of financing, things are delayed. Then, obviously, fertilizers, in particular ammonia are products very interesting for us because in terms of the number of competitors having the experience for this unit, there is not a large number of contractors. We have access to the best technology that is at the top for ammonia, and the club of contractors working with this technology is limited then for sure. We are monitoring the market and ammonia units are on top of our list, but again, for the time being in Latin America we don't see short-term opportunities for that.

Jean-Paul Laugier, Vice-President Ethylene Product Line, Technip

I think that that's quite interesting to see, and Stan is really upstream in the process here – if I may say so. It's interesting to see that the changes that we see in this market actually have an impact on the decision process in Latin America, where people are saying "while, you know, maybe it is better to produce the fertilizers for example or the ethylene in North America where the price of gas seems to be low and much more predictable at a low level, and available – it's not just predictability of the price, it's also the availability of the resource". And you can see that the first wave of investment in the US is led by companies that have strong footprint and infrastructure in the US – in general. There are a few exceptions like Sasol, which maybe is more bullish as a foreigner I would say. But then, in the second wave of projects, we start to see potential investors like Chinese companies that are actually looking at potentially delaying projects in China to benefit from the cheap gas in the US. And I think, Stan, you've been working with your team and, without revealing which customers, but…

Stan Knez, Senior Vice-president Process Technology, Technip

No, for sure, I mean, we'd like to talk about the second wave: it's quite positive if we say there's something else coming. The first wave of course of the projects that you well known have been announced – the second wave, as Thierry had indicated, you know, having technology gets us in very early. So, and then also having a global presence with a global client base. We built plants for clients in China, Korea, India - those clients then are coming to us. And they were actually coming to us several years ago when they first heard about the Shell gas opportunities, and they were trying to understand: "is it real? What's happening?" And now they're seeing announcements in the paper, in the press, that, you know, there's going to be multi-billion dollar investments. So now they see that it's real, and now they want more detailed information, because of course, either they run projects overseas or they are looking to expand their own facilities and be in a global business, they need to understand: "is there an arbitrage opportunity? Is there a defensive position we need to take?" Etc. So there's a lot of dialogue going on, very confidential, about, you know, what could happen. But we get involved where there's a pipeline of these things, but obviously, as time moves forward, only a few of those will go forward. But there's a lot of excitement I think in terms of trying to understand what's happening here. Now, having said that, when the market turned down post 08-09, a lot of the projects, they were planned, and the rest of the world were put on the shelf. We're actually seeing some of those opportunities coming back, just because the global economy seems to be coming back. So, being a large commodity global business, you're always going to have opportunities and not just where there's advantage, but also where there's growth, which is of course Asia.

Unidentified speaker

Could we talk a little bit about challenges that this business face, from a pure supply chain point of view? Because, it seems that a lot of people want to construct big crackers in one region. So, do you think that we are seeing on the subsea side, where the market is quite tight on the subcontractors' side could be the case for the chemical side as well - because obviously it's quite a cyclical business. So, do you think there could be delays or some cancellations because of that, do you think this is a threat?

Nello Ucceletti, Senior Vice-president Onshore, Technip

I think really much, because really, as you said; the challenge is mainly in connection with construction. Because actually while for these big project we have, in terms of procurement, normally a worldwide vendor list. Then we don't have a specific limitation, there is no specific requirement of a local content. Also if, for practical reasons, sometimes you are maximizing the procurement activity in the United States, but, generally speaking, we do not see, for the time being, any problem as far as materials indicate from the market. Then the challenge is mainly coming from construction, and also the clients that are realizing that this is the bottleneck the problem and for these reasons there is a sort of race to arrive first to secure the resources. To tackle with these risks first of all, as we have said, we are not taking any lump sum risk on construction. We are associating construction partner at an early stage of proposal, having evidence of the availability of resources. Because sometimes, these contractors have mobilized in the region that you are mentioning and are able, having completed certain works, to shift the workforce to other projects. This is the case of our partner for CPChem, that is a project that we started two months ago, this is the case of Sasol, where actually since the autumn book estimate that this is going on for the petrochemical complex, we have already identified the resources - and this is our first priority anytime we are entering a proposal: we are targeting a contract to be sure to have the proper and solid execution plan for construction. The bottleneck is mainly construction, really.

Unidentified speaker

And just a question for Jean-Paul: if you look at the outlook for the next 3, 4, 5 years, how many big ethylene projects do you think could come?

Jean-Paul Laugier, Vice-president Ethylene Product Line, Technip

For the next 5 years – because the time for deciding the investment is not 2 or 3 years, it's more 5 years – so next 5 years…between 8 and 12 plants, worldwide.

Unidentified speaker

…the average capacity of them?

Jean-Paul Laugier, Vice-president Ethylene Product Line, Technip

Between 1 million plus, and 1,500. But this is worldwide.

Thierry Pilenko, Chairman and Chief Executive Officer, Technip

And ethylene really grows at world GDP to an extent, but it will go up and down, so if you translate that, it's probably 1 or 2 plants a year, from that regard.

Nello Ucceletti, Senior Vice-President Onshore, Technip
We need to build, because we are so proud – I don't know if you have seen this morning – to have built the biggest ethylene world worldwide. Saudi Arabia is still the biggest capacity then we have to either want to remain on top of the rank.

Thierry Pilenko, Chairman and Chief Executive Officer, Technip

I think that this is going to happen in the market, going back to the question that Bernd was asking before, is the fact that with the new plants, the ones that are already in service, that we have put in service recently, such as you know Yansab, Ras Laffan, the Kuwait, and so forth – those plants are modern, they are efficient, and we are going to see a major restructuring of the market, particularly in Europe. You saw the numbers this morning, this is actually worse than what I thought: I was always saying "Europe is doomed as far as petrochemicals is concerned", but I think today we are really touching it when you look at the gap that there is on the OPEX side compared to – because of the cheap fit stock. So in Europe, you don't have the cheap feed stock, and you don't have the end market where you transform those derivatives into plastic and things like that. So, as a result of that, I think we're going to see a major shrinking in Europe capacity. Those ethylene plants, and Jean-Paul knows them pretty well, because I'm sure he built some of them, are much smaller and much less energy efficient and the feed stock is…so we're going to see a major restructuring. And at the end, you'll see the US, you'll see some places where the gas is cheap and available, like maybe Brazil, Malaysia, and places like that – and China of course, because they have the role chain beyond petrochemicals into plastic and I would think so – that means, for us, we need to be always very aware of those mega shifts and to position ourselves. And again, we don't need 10 projects, we just need to win the right project at the right time, with the right profit. And I think positioning ourselves with technology, ahead of time, will help us select those projects. But again, our objective is not to take 50% market share in all the constructions in North America.

Stan Knez, Senior Vice-president Process Technology, Technip

And just to add to Thierry's comments, not just in Europe, but the rest of the world; you're always looking to improve your profitability over your asset. So whether you have a plant in Europe or in Russia or in the Middle East, you're always looking: you're looking at the feed stock, you're looking at economy's scale, you're looking at other costs. So around the world right now, there is a lot of studying going on about how to make sure that my asset is running correctly, it's making money, it's profitable? Because there is a big shift, and that shift is really, the other part of that, it's really ethane-based, which is only a slice of the market that goes into the polyethylene. And as we saw this morning, there is the heavier side of it, and a lot of Europe's integrated crackers of course I think are going to be thrived in that environment, because they are taking their product downstream. But there is a nock gun effect of this big ethane-based petrochemical industry that will have to be solved, will have to be addressed. It's currently being addressed obviously through the naphta feed stock. And so that will have to stay in place, or other solutions will have to come in. So I think we're going to see how this plays out over not just the next 5 years, but the 10, 20 years, and I think it'll be very exciting for the industry, that really was dormant here in the US, but I think it will have nock gun effects for the rest of the world.

Thierry Pilenko, Chairman and Chief Executive Officer, Technip

And for us that means, you know, of course we want to target the grassroot plants, and be there again at the early stage, when the plants are selecting the technology. But there will be plenty of work to re-vap or adapt – in fact, today at lunch, I had only customers at my table. Some of them were talking about big programs, big CAPEX programs, but most of these CAPEX programs were re-vaps or expansions and so forth. So I think this is also the thing that maybe sometimes we have had difficulties to maybe convince the market, or that our opportunities are not just with new plants or new infrastructure. It's also adapting existing infrastructure to the new feed stock that we were talking about this morning. And I must say that in spite of being in the business and hearing our people every day talking about the opportunities. I learnt a lot this morning from the IHS presentation and from Claire's presentation, and so forth, because they were pretty clear that the opportunities were there to shift from one feed stock to another.

Jean-Paul Laugier, Vice-President Ethylene Product Line, Technip

And just to…as a complement, I did my presentation very fast, just to reply for capacity increase: the increased capacity is made 80% on grass roots, but the remaining 20% - 15 to 20% - is modernization and expansion. And this is estimated to occur almost everywhere but in particular in Europe. In Europe they have 300 to 400 kiloton plants, which is 1/5 or ¼ of the plant of US. With the cost of Naphta, which is far higher to attain. So what the customers are asking – because we have close relationships with customers, and you saw that we have 50 companies – we are doing right now, studying for 5 different customers, European customers, to convert their facility either to import ethane from US – because between the 2 waves, we talked about waves in the US, one probability is to have a small excess of ethane, and to export it in Europe, which is not far away, or to import LPGs, which is, let's say, more usual, or integration with a large refinery that we may have in, let's say, in the Benelux area. So this is way, the sky in Europe is not so dark. They have the possibility to close the gap, to minimize the gap in operating costs. But still they are suffering.

Kimberly Stewart, Head of Investor Relations, Technip

I actually have a question from Phillip Lindsay at HSBC who had to go, and his question is, he would like you to discuss the revenue opportunities across the different businesses, and if possible, profitability for licensing equipment provision and EPC.

Nello Ucceletti, Senior Vice-president Onshore, Technip

As far as, I repeat, licensing and associated with the licensing, we have the service to provide the process basic design – actually, in terms of revenues as we have really often said it's at maximum could reach $10 million. This is more or less the range. Obviously, this is a business that can give us a little bit better margin than we used to see for our onshore business, but as you can imagine, it's marginal in terms of contribution to the overall revenues of offshore-onshore bend. It's a good business, we are happy to be in this business, but it remains marginal vis-à-vis of the volume of revenues for onshore-offshore. Then again, as I have said a few minutes ago, when we speak to the market making, addressing the range of between 6 and 7%, we are already taking into consideration the fact that we have this business that is marginally gaining in terms of revenues, it's not reaching 10% of our onshore overall revenues, also if it's a little bit better profitable, but the mix is still in the range between 6 and 7%.

Ryan Kauppila, Citi

Over the last 12 months or so, how have your customer attitudes changed towards the sustainability of the resource and the gas price in the US? And what would you say about 1 or 2 things that are really holding them back from making green fuel investments?

Stan Knez, Senior Vice-president Process Technology, Technip

I can have the first go at that. I mean, clearly the first thing is the gas there, it's the natural gas liquids there. You know, that's being answered by this first wave. Then they ask us about what are the environmental regulations, particularly in the US Gulf coast, of course we can help them with that – because they see a lot of things coming out of, you know, on that front, are they going to be potentially things that are not surmountable or not as competitive. Then of course they start asking about Total installed costs, obviously as was discussed here quite prominently, they asked the big construction question. You know "how are these plants going to be built" etc. So I think they're beginning to get educated about the system, about, they're monitoring very closely the progress, they're also trying to understand about the shops and like none have said as a global sourcing business, so we don't see that being too much of an issue. So I suspect that there'll be a number of clients out there, potential customers that are doing their feasibility studies, that are trying to understand, you know, everybody in that room when they saw that margin potential, you know, their eyes lit up, they have to study up, there's just too much of a potential advantage there. But then once they get into the details then they'll begin to look at that. So what I say was that I think they're going to go and we'll look at the studies. But some of them are going to sit back and look and see actually how it develops, they're going to wait until these plants start progressing whether the construction are there, whether the CAPEX estimates are coming in, etc. Because they really want to see whether this is something that can be sustained on a larger scale with not just $20 billion of investment, but potentially twice or three times that much when you start throwing in LNG etc. So I think each customer in its own, depending on how they look at projects, how they look at risk, some of them obviously wanted to move very quickly, and were willing and understood and others I think may be a bit more cautious. But I don't think we'll see a wave, I just think we'll see each customer just take their time and their place in line based on whatever their particular situation is.

Thierry Pilenko, Chairman and Chief Executive Officer, Technip

So I would say, compared to 1 or 2 years, I think there is, in a nutshell, more certainty about the availability of the resource and the sustainability of reasonably low price for the feed stock, so therefore a good OPEX environment, but a little bit of anxiety about the cost of CAPEX because nobody has really done it yet, and so it's, this is where the different models are being analyzed and so forth so that, I think they are very sure that this is the right thing to do for the long term but the CAPEX is often much higher than a similar plant in the Middle East, for example. And so that's why it takes some time for clients to make the final investment decision. So it's not about the long-term environment, it's about, you know, how do we make that if we commit to our shareholders, that we're going to spend, I don't know, 2.5 billion to build 1.5 million tons per year, that we are going to be at 2.5 billion, and we're going to be on time and on budget. So I think this is the type of discussions that we're having, and this is why it's important to be in the room when these discussions happen.

Jaideep Pandya, Berenberg

Just a question on the derivative products. Obviously we talked a lot about ethylene today, but this is going to have a situation on the propylene and the butadiene side, given that this is not something which you can get easily out of ethane. So, you know, as Technip, you obviously have a very strong position in Ethylene, would you think about the other cluster within the chemical free, from a petrochemical point of view, that's the first question. Secondly, as you sort of developed this business going forward, a lot of big players in the Middle East and China, actually do not stop at the first derivative but also want to go further downstream, so how, can you give us a little bit of color about what is your technology platform, on real sort of downstream special chemicals, really, what can we expect there from you?

Stan Knez, Senior Vice-president Process Technology, Technip

Yeah, I'll go first and maybe Nello can also add some to this. Really, we talked a lot about ethylene, the propane to propylene is obviously also a very active area – we don't have technology and what's called the propane dehydro, but we are very active in that market from a front end perspective, we have know-how, so we're working with technology providers. And again, early days, but that is something that we will follow through and obviously as Technip we have the EPC capability again if it would have the right risk-reward profile, it may be something that we would take forward. And not just in the US market, I mean, we see those kinds of opportunities globally also. Obviously, if you go to the C4 type of chain, there is a lot of talk about the fact that this is going to be short, and where it's going to come from. Actually that's an area that Europe I think is probably focused on, trying to make sure that they fill the gap. Obviously, like I said you're going to need crackers based on heavier feeds, and that's going to continue because the polyolefins, being the polyethylene and polypropylene chains can get quite saturated relative to being the ones that have the feed stock advantage. Just to finish the propylene story, we of course have a long standing relationship with a leading polypropylene technology provider, so we get involved very early downstream of the crackers, either for polyethylene or potentially for polypropylene, so we can do that, bringing the basic feed engineering, and then of course we have a track record of also doing EPC on those plants. So that's clearly within the box of what we would be looking for, not just the ethylene but obviously pulling it all the way down. And sometimes we don't do the ethylene but we would do the polyolefins downstream of the ethylene plant. So that's clearly on the radar screen, not only in the US but on a global basis. From a technology perspective, strategically we get feedback from the market and we are trying to understand where the trends may be on a go forward basis. I mean, what everybody is talking about today is gas to chemical, sort of gas to everything. So that's an area that obviously we're very focused on. And you know we have a number of avenues that we can, you know improve the technology we have but when you look at trying to add technology, that's a different game. So strategically we're focused on finding those right opportunities and seeing if we can grow our portfolio so we can grow the overall opportunities that we have with technology.

Thierry Pilenko, Chairman and Chief Executive Officer, Technip

I think a good example here is CPChem, you know. And CPChem, we've been working with them both at early stage ethylene and polyethylene, after competitive tender process they decided to award the ethylene part to one of our competitors, but this is still going to be Technip technology. And we are getting the polyethylene part. Ok? So I think we are in a space where we have the ability, some cases we have more technology, some cases we have proprietary technology, some cases we have more alliances and so forth, but we certainly are in that space, and we'll continue to be in that space, and we'll continue to look for opportunities to develop our portfolio of technologies across that chain.

Thierry Pilenko, Chairman and Chief Executive Officer, Technip

Well, thank you very much guys for taking the time to come all the way to California, and spend time with us. I hope you've enjoyed what you heard this morning and that we've been able to answer your main questions. So thank you again, it's always a pleasure to have very good questions from the financial community and from our shareholders, so thank you.