

THE BROOKINGS INSTITUTION

THE ROLE OF NATURAL GAS IN  
EUROPEAN ENERGY SECURITY

A CONVERSATION WITH  
EUROGAS PRESIDENT GERTJAN LANKHORST

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## P R O C E E D I N G S

MS. MALONEY: Good morning, and welcome on behalf of the Brookings Institution's Foreign Policy Program. I'm Suzanne Maloney, deputy director of Foreign Policy at Brookings, and I'm especially pleased to kick off this event on behalf of my colleagues in the Energy Security and Climate Initiative.

ESCI, as the initiative is known here within the building, focuses primarily on four important dimensions of the policy debate surrounding energy and climate. First, energy markets, where ESCI scholars examine the fundamentals of supply, demand, and price, and the ways in which policies and institutions of major actors around the world shape trade and these market dynamics. Second, climate. ESCI's work has sought to highlight non-fossil supply sources, policy tools that incentivize their use, the implications of alternative technologies for markets and states, and the international arrangements needed to cut global emissions. Third, energy access and identifying policies to address the 1.5 billion people worldwide who continue to lack access to modern energy. Finally, the geopolitics of energy where ESCI's work endeavors to explain the intersection of politics and energy, the risks facing both consumers and products, and the way in which energy demand drives national security decisions.

The objective of all of our work here at Brookings is to guide effective, pragmatic policies to address these and other U.S. and global energy security issues over the course of the next decade. The issue that we're here to discuss today, the role of natural gas in Europe's future energy mix, touches on all of these central policy dilemmas that are the stuff of the work of the Energy Security and Climate Initiative. And so I'm especially pleased to welcome Eurogas President Gertjan Lankhorst for a conversation around European energy security. After his initial remarks, Tim Boersma, who has been stewarding our Energy, Security, and Climate Initiative as its acting

director, and who has written extensively on questions of European energy will engage in a discussion and welcome your questions and comments.

Thank you.

(Applause)

MR. LANGHORST: Well, good morning, ladies and gentlemen. Thank you for a very kind introduction. I just happened to pass by Washington, so it's a great occasion to be here. I was this week in Cartagena, Colombia, where there was a gathering of the International Gas Union, the council meeting of that International Gas Union. Currently, the International Gas Union is -- the presidency is in U.S. hands. U.S. presidency organizes six big events over the three years that they preside over the International Gas Union. The first of these events was a council meeting in Cartagena. A beautiful city, I must say. I had not been there before. But it gave good reason when Tim Boersma was so kind to invite me to visit Washington on the way back to the Netherlands.

Ladies and gentlemen, I'm extremely happy to be here. And let me start with taking you with me in some things we can imagine. Imagine a region where gas plays a key role. A role to curb emissions in a growing economy, and a region that foresees an ever-growing role in the near and distant future for gas. Accordingly, investments in the gas industry are increasing in a truly booming gas industry of which the employees are proud to be part of.

Now, imagine another region, a region where coal plays a dominant role in the power mix, a region where import dependency is regarded as a matter of insecurity; insecurity because a perceived lower security of supply, but also because the imports might fund some third countries that are seen as adversaries or even enemies.

The above descriptions are real, and actually, they summarize the view

of the global gas industry almost a decade ago during the World Gas Conference in the capital of my home country in Amsterdam. The first region I described was then Europe, and the other region was the United States. Some change, don't you think? We only need to sort the names of the regions and what do we get? We get the current situation.

And this is what I would like to discuss with you today: what caused this fundamental change in just a decade? What can we learn from it? And of course, what can we, living and working in different regions, what can we learn from each other?

Ladies and gentlemen, I believe the shift I just described is a powerful example of how market developments interact, or should I say, collide, with views on what needs to be done. Let me start briefly with the market just to get the facts straight, and then I will unfold my view on what is going on in Europe.

Gas demand in Europe has been declining over the last years. The key causes are the sterling economy, low coal prices combined with low CO<sub>2</sub> prices, and warm winters. Last year was extremely warm, the warmest year recorded in history for the past century. So gas demand stalled at some 409 billion cubic meters. Excuse me for using cubic meters, but the exact figures are not so important, it's more the changes. Because 409 BCM (billion cubic meters) is almost 23 percent lower than the high demand of 2010, which recorded 527 BCM. So a 23 percent drop in just four years.

As you will understand that year in 2010, more factors worked in favor of gas, especially cold weather. But the present low demand is a key concern and relevant to our debate because it results in lower investments. Why? First of all, investors are more inclined to spend in a growth market than in a shrinking market, of course. Nevertheless, although demand is relatively low, we need investments in the gas infrastructure to complete the internal European market and to safeguard security of supply.

An interesting development, an interesting business model of the last years has been the re-export of LNG. I must say it's probably a niche market, but it's very interesting. The Asian premium on prices for LNG clearly made it more attractive for LNG ships that came to Europe to return the cargo and lock in the price differential and ship the LNG to Japan.

And although that Asian premium is disappearing, it does not directly result in more LNG supplies for Europe. For example, in Spain, where there is not necessarily demand for LNG due to low primary energy demands and an increasing share of renewables. Consequently, LNG terminals in Europe are running at only some 20 percent of their capacity. Billions of investments hardly used.

In terms of pipeline gas, there's also interesting developments. The most concrete development is a recent announcement of a doubling of the pipeline system from Russia through the Baltic Sea to Germany, the Nord Stream. There will be a doubling of that pipeline; at least that is the intention of a consortium consisting of Gazprom, Royal Dutch Shell, and some other European companies. It's heavily debated in politics, but the question is will this extension of that capacity result in a higher dependency of Europe on Russian gas?

Also in this case, it makes sense, I think, to let the facts speak for themselves. Only a few countries in Europe are fully dependent on Russian gas. Together, these countries account for only 22 billion cubic meters of gas demand out of a total demand of more than 400 billion cubic meters in Europe. Only 5 percent of the European market is fully dependent on Russian gas, and only temporary. The creation of bidirectional border points in Eastern Europe brings about diversification of gas supplies and thus the opening of these markets. I will come back on that later.

Ladies and gentlemen, don't get me wrong. I still believe that new roles

for gas, such as maritime transport, create new opportunities for the industry and help to counter the declining trend over the last years, but its consequences for investment are profound. Based on these developments, we could directly enter into an interesting debate, but I would like to take this opportunity to first give you my views in three key messages.

First of all, energy policy, European energy policy, should not target lower import dependency as an objective in itself. To secure security of supply, continue to finish the internal market and let that market do its beneficial work. That is the best way forward. Second, the image of gas should not be framed by showing burning tap water but should reflect its value as a reliable source of energy. And third, whoever said this, I'd like to stress, "No produce, no presence." In other words, the gas industry needs to show its commitment as an industry that contributes to lower carbon emissions.

So my first point, a call for more markets. This might sound quite obvious to you, but I'm concerned that in Europe nowadays, the importance of the internal market is somewhat less felt than before, especially for gas. You had Vice President Sefcovic here as a guest this week, and last year, when he became part of the European Commission, when he took that position as vice president for the Energy Union, the Energy Union concept was introduced. And this Energy Union concept has very good elements, such as an intensified focus on CO<sub>2</sub> reduction. But if you look at the origin of the Energy Union concept, it was an extremely strong attempt to get a political grip on the gas market. The idea was to introduce collective buying under political leadership from Russia. Gas imports from Russia should be done in a collective effort with the political guidance by the European Commission. After more than 40 years of uninterrupted supplies from Russia to the Western European market.

In a later communication from the European Commission, earlier this

year, the whole concept of collective buying was watered down a bit into voluntary demand aggregation as one of the instruments to increase security of supply. Ladies and gentlemen, I just don't see how this can be matched with competition law in a liberalized market or with the rules of the WTO for that matter.

My bottom line is when in Europe we have a problem with the dominance of an external supplier, and we all know that I talk about Russia, in certain European regions, the solution should not be to have less buyers of gas but to have more suppliers of gas. Diversification is the answer. A well-functioning, competitive market. That takes away the possibility for a supplier to have a dominant position. And therefore, the currently evolving oversupply in the LNG market worldwide is a very welcomed development.

So although European policymakers now seem to understand that demand aggregation or collective buying is not the right answer, and consequently, pay less and less attention to that concept, regulatory pressure on the gas market is not off the radar. Far from it. The Commission announced a new package of potential regulation, regulatory proposals that are expected in January 2016, and that's a good example. It will contain a revision of the European Security of Supplier Regulation, LNG and Storage Strategy, a revision of the Intergovernmental Agreements Decision, and a Heating and Cooling Strategy. All these elements of that package seem to have one overarching objective -- reduce gas demand in order to reduce import dependency. And import dependency refers to dependency on Russian imports, but rather than focusing on this issue, we need a consistent diversification policy. In this context, the European Commission does not have to push for more LNG receiving terminals since the market shows that they are used at only one-fifth of their capacity today. But I'm convinced that we need to complete the internal market so that gas from all import points, whether it's

pipeline gas or LNG can flow freely through Europe based on market-based price differentials. That's the kind of diversification policy Europe needs. And in that respect, an extra pipeline from Russia brings the possibility to create more west to east flows in Europe that may sound strange. But if you, instead of bringing gas in through Russia through Belarus, through the Ukraine, and so on to the core to Central Europe, if you bring it around through a pipeline that lands in Germany, the gas gets on shore in a region where there is full competition, where there is competitive prices. There's liquid hubs in Germany, so then if you have more supply of gas in Germany, you can ship it from west to east and bring it also into Central Europe at competitive prices.

In general, I welcome all new investments in pipeline systems for Europe, whether they come from the north, whether they come through Turkey, it is very good to have more possibilities for international trade in gas. There is plenty of unused LNG terminal capacity and that will eventually lead to retracting more LNG. The market will do its work. If you look at the forecasts for LNG production worldwide, it will double in the next 10 years, and I know that all these projects from Australia, from other Pacific countries, are delayed, but they are still in construction and they will come to the market at a certain moment. So between now and 2025, there will be a doubling of LNG supplies for the world market. Well, add to that the U.S. market that is becoming self-sufficient, that will also become an exporter, I think there is enough gas available also for the European market. So don't make the European market a political market; let the market fundamentals do their work.

This brings me to my second point. Some of you would probably argue for more domestic production in Europe to reduce import dependency, but the reality is that Europe will not copy the American shale gas revolution. It's simply not possible because the circumstances on both sides of the Atlantic are so different. For example,



subsurface resources in Europe are owned by the governments, not by the landowners as is the case here in the U.S. Well, the size of the proven and potential reserves is much larger here in the U.S., but there's another more pressing issue, that is the perceived risk of shale gas production. Videos, like Gas Land in which contaminated tap water is set to flames had a very, very, very large impact in Europe. Gas, in general, is framed negatively, with grave consequences for our industry's perspectives. The high population density in most of Europe makes this issue even more vital as drilling operations generally do not take place far from a backyard.

We cannot expect that society, people in society, understand the technical differences between drilling techniques, convention or unconventional fracking, so the shale gas debate in Europe casts a shadow over natural gas in general. With bans to shale gas production in place in countries like France, and delays and reduced exportations in a country like Poland, I can only conclude that the current shale gas debate in Europe will be detrimental to the image of gas for at least the next five years.

My last point is relevant for all of us in the room representing the gas industry. The public opinion in Europe about gas is simple: gas is bad because it equals fracking, it's Russia, it's fossil, and it's expensive compared to coal. The liberalization of downstream markets in Europe has made end-consumers more outspoken in a society that is already very vocal. So instead of responding criticism on gas with our well-known messages about how clean gas is and how flexible it is and so on, we should try a different approach. We must engage with society to earn and keep our social license to operate. Personally, I spend much time on doing exactly this, by regularly addressing audiences across Europe where and whenever I can, not to spread my gospel but to really discuss with them and hear what their concerns are and see what we can do about it. And therefore, I'm also happy today here as your guest because I think I can learn a

lot from your comments.

A key global event held in Europe will be the forthcoming climate negotiations in Paris, COP21. And I strongly believe that we should underline the qualities of gas there. The benefits it brought to the U.S. speak for itself -- cleaner air, less greenhouse gas emissions, a boost for the economy. But we, the gas industry, also have to walk the talk. Whether in production or transportation, I'm sure we must aim for the lowest emissions possible. No prudence, no presence. It's as clear as that.

Ladies and gentlemen, I hope that you are eager to start a debate. So to conclude, I expect a convergence of policy goals in the U.S. and Europe, but a divergence in the way these goals should be achieved. That's quite interesting because some aspects in the European context are similar to the situation in the U.S. a decade ago, and I believe that in Europe we need more union in the Energy Union. But at the same time, we need to stick to the primary objective of completing and improving the internal energy market and promote market mechanisms also in a global setting. This will in the end produce the most cost-efficient solution, and I remain confident that gas has much to offer in this respect.

I appreciate your presence here today and your interest in my views, and I'm fully aware that I have not covered all your questions, so I'm looking forward to what no doubt will be an interesting discussion. Thank you very much.

(Applause)

MR. BOERSMA: Thank you. Thank you very much. Thank you all for coming, of course. Thank you, Gertjan, for a very interesting and, at times, provocative opening remarks. I have no doubt that we'll have more follow-up questions about them going forward. I'll try to open that up with just asking two or three questions and then we'll turn to the audience. We have a lot of time to take any questions and have a debate

about what you just said.

So there are two or three issues I want to touch on. The first would be the notion that you laid out that completing the internal market is the best way forward in addressing energy security concerns. I'd agree, and I think there's a lot of evidence to support that notion, and we've seen a number of countries in Central and Eastern Europe be much less vulnerable than they were just four or five years ago, by improving their connections with neighboring countries, by increasing their access to alternative supplies.

As you've described, there are still a number of countries in the EU that are vulnerable where single-source dependence is still an issue, and you hinted at the Energy Union as an option to improve that and to make those final missing links appear, so to speak. I'd like to hear what, in the debate that is currently unfolding on the Energy Union, and we know that's a work in progress, but whether you see new incentives emerging to address those bottlenecks and whether you're confident that the Energy Union as such will be able to deliver on the completion of the internal market.

MR. LANKHORST: Thank you for that question, because the Energy Union is the concept that keeps me as president of Eurogas busy mostly, of course.

The Energy Union is a great concept. The idea that Europe now has to become a market that's a real liquid, deep market for energy, where there's a lot of trade and so on, and a good internal market, good -- no differences in availability and pricing of energy whether you're in the north or in the south, apart from transportation costs, perhaps, with a vision that it will deliver good results in terms of CO<sub>2</sub> emissions and so on. I think that's great. So there are a lot of elements in that Energy Union concept that I like very much.

The only thing I don't like is the idea that the gas market in Europe could not deliver results by itself, by the actions of market parties. We have a market design in

Europe where transportation is regulated and trade is free. And I think that is a good concept. And if you then look at the success it had in let's say the northwest of Europe -- UK, the Netherlands, Germany, Belgium, France -- there is a flourishing market, a deep liquid market where buyers and suppliers know that the price they pay or get is a real market price. It's not influenced by just one or two parties. Then you must look at what are the costs of that success? And I think it started with having good regulation. Having a government that really sets a record where they say, okay, this is the domain we regulate. It's transport. And this is the domain of the market and here the market parties can compete and supply the market.

Second, they said, okay, we want to get away from the oil -- gas to oil linked pricing. We want hub prices. So they asked the transmission system operators to start a hub, to facilitate a hub where parties can buy and sell gas. Then, of course, you can organize infrastructure and so on, but then you need market parties to drive on that, on those roads. So, for instance, my company was addressed to become a market maker for certain products, and we did, and it worked, and you see that that market -- well, it started in the UK, then the Netherlands, Germany, Belgium. In that part of the world there is full competition, strong competition. It's working well. It's spreading out like an oil spot, so I think it could go further. But when you look at the implementation of the legislation, of the regulations that we have in Europe on the infrastructure and on the market design, it is not well-implemented yet in some Central European countries. And that was my first basic point. First, you need the legislation, then you need the transportation infrastructure, and then you need the market parties. If the first factor is not realized, then you can forget about the other two.

So therefore, my focus should be on implementing all the legislation that we have first, and that gives trust to market parties that it will be a well-functioning

market. If you say, well, we forget about that and we start with making it political and organizing who is allowed to buy and sell gas, you're doing it the wrong way around. I have had several talks with Vice President Sefcovic on it and many, many parties, of course, have this. I think he realizes this, but on the other hand there is a strong sentiment in Central and Eastern Europe that the real danger comes from Russia and that political interference has to make the dependence on Russia lower. I think it's the wrong method. It's the wrong method.

MR. BOERSMA: Is it your -- just to build on that, a number of these countries, they're small in terms of gas volumes being consumed, and so I think, in my view, the question is legit whether the market itself is going to take care of all this. It may just not always be that interesting. Maybe on aggregate it would, but then these countries would need to cooperate more than they already have. How do you foresee that happening?

MR. LANKHORST: Well, I think if you look at the European map, and you look at the infrastructure that you need in order to get better supplies for countries like Slovakia, or Poland, or other countries -- Bulgaria is an example of a country that is really 100 percent dependent on Russian gas still. But it's not so difficult and not so expensive to create the infrastructure that is needed to connect them to the European grid. And that can be done by the regulated parties that provide the infrastructure.

So your question was, is there enough demand? Is there enough incentive for investors to go out there? I think there will always be, because the demand for gas in Europe is not growing dramatically. We are doing good on efficiency and so on, and so therefore, if you look for growth as a company, if you look for new markets, I think you are very interested also in the central markets in Europe.

MR. BOERSMA: Okay. So you talked about domestic production. You

touched upon shale and the, well, somewhat toxic debate that has been going on about this. I wonder if you can say a little bit more about domestic production in general. Maybe give us some background of what's been happening in the Netherlands over the course of the last two or three years, and what you think is going to happen going forward. And I guess that, combined with your outlook of unconventional production in Europe combined, what does that mean for imports? What does that mean going forward for EU, the general gas portfolio?

MR. LANKHORST: Well, if you look at the gas market in Europe, Europe has always been dependent on imports for its gas since the 1980s, I think. The whole gas market in Europe started when gas was discovered in my country, in the Netherlands, in 1959. That was such a large deposit of gas that was found. On the basis of that infrastructure, all through Europe was created. We export gas all the way to Italy, Germany, France, and the UK. Then, in the '70s, Norwegian gas came into the system, and end of the '70s and early '80s, still under the Cold War, Russian gas also came to Europe. It's very striking, given the current debate, to realize that the first Russian gas in Europe came -- the first flow of Russian gas was in September 1967 -- 1968. That was just a week after Russian troops invaded Prague. And in Austria, they were cheering that they got Russian gas.

Europe is dependent on Russian gas for a long time already. The only country that was not importing gas but is a net exporter is my country, the Netherlands, but the rest of Europe, they are all net importers of gas. Now, that will grow in the future, and I see that for a long time, the only focus has been on Norwegian and Russian gas, and maybe some gas from North Africa. But the nice thing about the current developments is that more and more gas from all over the world gets available for any market that's willing to pay the price. More gas from the Middle East, more gas from

North Africa, more LNG. So I think the potential to have a market that is robust and that is not reliant on a dominant supplier are huge and we should grab them.

MR. BOERSMA: Okay. The final question before we turn to the audience will be about Nord Stream 2. You've talked about the debate and how many questions there are about whether or not that pipeline should or should not be built. The European Commission has expressed its concerns, suggested that -- I mean, if I summarize it then, you know, obviously, if in line with existing regulations, then it would be hard to prevent it, but it would be displeased if that pipeline were built. It would rather not see it happen. We've seen what happened to South Stream and how, you know, the European Commission can have a major impact on what happens in this front. There are a number of countries, and in particular, in Central and Eastern Europe where there have been very grave concerns. One of the arguments being, you built this pipeline. It will take a number of years. It may well be that by that time the internal market is not completed yet. And what if a situation arises in which the pipeline is ready, more shipments come through in the Baltics, but we are not ready to transport that gas freely, in particular to Central and Eastern Europe? Do you share that concern? Do you think that's a concern, or are you confident that the internal market will be completed by then?

MR. LANKHORST: Well, I think this is typically a concern that should be with the parties that take the risk and the parties that invest in the pipeline. It's not the European Commission who is investing in the pipeline. It's Gazprom, Shell, E.ON, and some other companies. If their outlook is that the European market can absorb that extra gas in the near future, I think they can take that risk. If they don't, okay, that's fine. But personally, I'm happy with all infrastructure that is created to bring more gas to Europe. From a security of supply point of view, I think it's good to see that the Russians still think that there will be a market for that gas in Europe, because otherwise, they would not

invest so much money in pipelines.

You mentioned South Stream. South Stream is dead, but Turk Stream is a potential new project, which will probably bring the same gas through Europe, but I know there are experts on the Turkish market here in the room, and maybe people who are more legible on that, so they could say a little bit about that. But to have more infrastructure is a guarantee for security of supply.

MR. BOERSMA: Okay. Thank you.

I want to turn to the audience. If you have questions, please raise your hand. If you make a comment, please make it short. We prefer questions.

We'll start with the young lady here in front. Please introduce yourself.

MR. THERMA: I'm Ali Therma. I'm at the AU.

You emphasized the emissions or the emission-related advantages of gas, and at the same time the struggle for investment in natural gas. And so maybe you can talk a little bit about your thoughts in this context, and the EU ETS, and which reform it might should undergo and how optimistic you are that this reform will take place.

MR. LANKHORST: Okay, thank you. Yeah, I realize I didn't mention too much about the ETS in my introductory remarks, but the ETS is a cap and trade system. I think you're all familiar with that. And what happened is when it started, far too much emission rights were given to parties, were grandfathered. Now we see that this system doesn't deliver a price. The price is between 5 and 10 euros per ton of CO<sub>2</sub>, whereas to have an impact on the market you would need a price of at least 50 euros per ton of CO<sub>2</sub>. Then there would be an incentive to burn gas instead of coal in power plants, for instance. This is caused by too much rights for the market at the start, but also by the recession that we had in the past decade, which reduced demand for electricity dramatically.



Now, the talks about repairs of the system, lowering the threshold and so on, have taken many years, and finally now there is a compromise. And the compromise is that we will reduce faster, but we will start with that by 2021. And then I think if you now agree that you will reduce faster, why not start today? If it's an urgent problem, and I think climate change is an urgent problem, then if you take yourself serious and you want a system that has an impact, then you must repair it and fix it. And, of course, you must not repair such a system overnight. There must be stability in the market. There must be for the industry something they can rely on, something they can make their calculations on and so on. But after such a long debate, then to wait five more years before you implement something, I think that's not going to work.

So I hope that in the forthcoming climate talks in Paris, other regions, other countries in the world, like China and the U.S., will make also concrete steps towards reduction of CO<sub>2</sub> policy, and that might help Europe to see that they're not on their own there and that they can afford to do something more without harming the competitiveness of European industry too much. But it's hope, and I'm not sure about that. But I think the talks between the U.S. and China over the past year were the most hopeful signal for global climate policy that I have seen in a long time.

MR. BOERSMA: Charlie?

MR. EBINGER: Charles Ebinger, Energy Security and Climate Initiative here at Brookings.

Do you have any concerns that with the U.S. likely to have low gas prices for the foreseeable future, and Europe much higher prices, how does that play into a transatlantic partnership and a free trade agreement? Or is there a risk that with a free trade agreement we would see the further deindustrialization of Europe as more countries came to take advantage of cheap gas here?

MR. LANKHORST: That is indeed a huge risk. It is something that has been materializing for a long time already, of course. When you design as a continent, a region, such a system on your own, you have to be very careful that it does not impact the competitive position of your industry. So for the large industries in Europe, the chemical industry and so on, they get allowances under the ETS system so that they can compete. The problem is not in the carbon prices for them to make it more competitive to produce in the U.S., but the normal price differential that there is between gas and energy for that matter in Europe and energy in general in the U.S. The success here of the EMP industry in producing shale oil, shale gas (inaudible) has given the U.S. really a competitive advantage that is huge. And that cannot be compensated by any policy. The only thing you can do is open up your market and make your market attractive for more suppliers, which will bring the price down, because I think energy prices in Europe compared to the U.S. are relatively high and that is the basic reason. It does not have to do with the regulation, the carbon regulation. It does have to do with, well, what I talked about, too little incentives to make your market a real reliable, open, competitive market where every supplier will be happy to ship his gas to.

MR. BOERSMA: The lady down there.

MS. ENSABLA: My name is Ikater Ensabla. I am from Russia (inaudible). You mentioned Turkish -- the Russian and Turkish project, and your concern about the situation in Syria and crossing the Turkey border of Russian jets, and can it impact negotiations, and are you concerned about this?

MR. LANKHORST: Of course, as all of us, I'm deeply concerned about what's happening in Syria and in the whole region there, and currently in Europe the debate is not on energy policy but it is about the large number of people that tried to get away from that region and find a safe haven in Europe.

When it comes to energy projects, pipeline projects and so on, I think I'm less concerned because we know that Turkey is going to play a very crucial role in -- well, being the corridor for gas that can come from Russia, but that can also come from Turkmenistan and other countries, and potentially also from Iran and other countries to Europe. And I think the Turkish government knows that very well and they are really making themselves ready to play a very important role in that region. Gas infrastructure projects, other infrastructure projects take a long time to develop, and conflicts -- regional political conflicts, they are terrible, but they have the tendency that after a few years there is a new kind of peace or whatever. So I think that it will not harm the projects. It may delay things, but in the end, these infrastructure projects will come through. I don't know which of all the initiatives that are discussed today will be realized, but I'm sure that as long as Europe is going to use gas, and I think that's for many decades to come, there will be new infrastructure projects in Turkey.

MR. BOERSMA: The gentleman over there.

MR. VERONA: Ed Verona with McLarty Associates. Thank you for a very interesting presentation. I have two questions.

The first is regarding the South Stream project. The fact that it was canceled because it didn't conform to the Third Energy Package, the requirement that the upstream producer of the gas not own the downstream and transmission networks. The Nord Stream 2 project, which has 51 percent Gazprom participation, would feed into the European system. The OPAL Pipeline, which covers the first two branches of Nord Stream has a carve-out from the Third Energy Package. Fifty percent of that capacity can be given to Gazprom. It was an exception. Gas that would come in through the Druzhba Pipeline system, through Belarus and Ukraine, presumably, will be subject to the terms of the Third Energy Package. Why would Europe make a particular exception

for Gazprom gas coming in through Europe? It would put the transit countries on the Druzhba system at a competitive disadvantage. That wouldn't seem to be consistent with competition policy. Gazprom is subject to a major investigation by the directorate for competition. We'll see where that leads, but there is at least a lot of circumstantial evidence that there were differential pricing mechanisms which discriminated against a number of the consumers.

My second question if I could, is about Norway. It isn't a member of the EU, of course, but it is an adherent to most of the Acquis Communautaire of the European Union, including competition directives. They're now the larger exporter of gas to Western Europe this year, and their production has gone up -- or their exports have gone up by 9 percent, if I'm not mistaken, and likely to go up much more as they bring new capacity online. The Troll field being a very notable example of that. In that context, couldn't this whole debate be seen in part as a competition between Statoil and the members of your consortium, including Royal Dutch Shell? And I don't mean to be too provocative, but would that be so far out of line to ascribe this in part to a competitive process between private companies? Thank you.

MR. LANKHORST: Thank you for those very good questions.

First of all, Russian projects and exemptions from the European region. Exemptions for new pipeline projects are more the rule than the exception. When new pipeline projects are constructed, for instance, our company constructed 10 years ago a pipeline from the Netherlands to the UK, it also got an exemption from the European regulation for the first 10 years in order to make it possible to recover your investment costs. The idea that more infrastructure is important prevails over having competition in that new infrastructure immediately. So that was also applied for the first Nord Stream. It was not allowed for South Stream, and the reasons you mentioned are absolutely the

ones that we heard. I think there were more reasons why South Stream was canceled, but I'm not too deep in that debate to know all about it, if anyone knows what is the reason behind decisions that are made in the end in Moscow.

I think that the pressures on Russia to change its gas policy are tremendous. It's market pressure, but it's also the pressure coming through that investigation. And I know that in Russia there are very intense talks going on, and we might see and hear things in the coming months from that. The export monopoly for Gazprom is under debate. Other Russian companies want to get access to the export market as well. There might be some unbundling. And whether that's caused by market forces, the state of the Russian economy, or the pressure from the European Commission, I don't know, but it all builds up. And I think we are going to see some change. And it's very interesting to see what kind of change that will be and whether it will make Russia a more acceptable partner also from a political point of view for Europe. Let's hope that this will be the case because I think it's important. It's not only important when you look at it from a perspective of gas supplies for Europe, but it's also, I think, important if you have this big neighbor and this neighbor for its economy is very dependent on energy exports and you say, well, we don't want them anymore, what then will be your economic relation in the future? I think in the end, after all, political problems have to be solved on the basis of better economic cooperation.

Your second question, Norway -- can Norwegian production be increased, and is that maybe competition with Nord Stream 2 project? The Norwegians themselves keep saying that their production will not be increased. There is, of course, this year, an increase. You are right about that. But it's more temperature effect, the flexibility that is in their contracts, and this winter was colder. This year was colder than the previous years. So I think that is the basic reason for higher Norwegian production

this year than last year.

I think there's potential for more energy production in Norway, but if you look at Norway as a country, well, that could open up a whole new debate. They are extremely rich on energy. It's a small country, only five million people live there. And there are a lot of forces internally in Norway to say why do we produce all those hydrocarbons? Why do we do that? Why do we export them? We can afford to have lower energy production here and that might be better for the climate because the new gas has to come from arctic regions which are more vulnerable and so on.

So I don't think that we will see an aggressive Norwegian increase in production that is competitive for other projects that potentially could supply Europe. In fact, in the last year, when there was the huge crisis with Russian gas through Ukraine and so on, there was a huge call in Norway, could you increase your production? And they kept saying, no, we are not going to do that.

MR. BOERSMA: Okay. The lady here in front? It's coming.

MS. SAKARA: Good morning. My name is Rosemary Sakara. I'm the president of (inaudible) Energy, and we've been communicating with the people in the Netherlands.

Looking at the LNG, what are the possibilities of now importation of LNG from Europe to other countries? And the other thing is looking at the protection and the exports, do you think African countries that are now dealing in gas and energy, like crude oil, exporting to the European Union or what would be the cost in the future? Because I hear many talk with one market in Europe but I don't know how they can go about it, or if it's going to happen, or if it will never happen. Thank you.

MR. LANKHORST: Thank you for that question.

I think when I was talking about LNG, Europe is now talking about

developing a LNG strategy, which in itself I already think is a bit funny because if you have 15 LNG terminals on your coast that are used at the capacity of only 20 percent, then to say, well, we must invest in LNG infrastructure is a big strange. What you must analyze is why is it underused and why don't they work as a means to get gas from the rest of the world into the core, the center of Europe? And then comes the internal market, of course, again, at stake.

For potential supplies for Europe, we are -- companies in Europe are looking at all different options. Currently, Qatar is the most important supplier of LNG to the European market, but there is also gas coming from Algeria, from Trinidad and Tobago, and, well, we focus now, the public debate focuses very much on LNG from the United States, but I think, well, maybe the U.S. will start exporting some LNG, but I think if I was a U.S. supplier of LNG, I would look at the Japanese market, which is providing much higher prices than the European market.

Africa is low on the radar, but potentially, there are projects going on in Angola, in Mozambique, in other countries, where a lot of European countries are involved as investors. And that potentially could bring a lot of gas, LNG, to the markets. Maybe also, first and foremost, the Pacific market, but if that is supplied by other gas, then there will be more room for LNG to come to Europe as well. For me, it is not so much interesting what is the source of the gas, because all I know is it will be a world market that is well connected and the gas will flow to the places where the prices are best.

MR. BOERSMA: Thanks. Kevin?

MR. MASSY: Yes, thank you. Kevin Massy with Statoil.

Thank you for your great presentation.

MR. LANKHORST: Maybe you should have answered the question on

Norway.

MR. MASSEY: Well, I do have --

MR. LANKHORST: You are going to do that?

MR. MASSEY: I just got back from Norway this week and you're right to a degree, that there is a conversation, a very high profile conversation going on there about the role of Norway in the global climate challenge. But I think there's a consensus, or at least a strong view widely held that probably the most effective thing that Norway can do in terms of climate action and reducing carbon emissions is sell more of its gas in Europe and displace coal in the power generation sector there.

There's also, I think, a view that is not entirely coordinated with yours on the adequacy of resources of the Norwegian Continental Shelf. There is, I think, a confidence certainly among my colleagues in Norway and Europe that the NCS has a long life ahead of it and certainly a competitive supply position into the European market.

MR. LANKHORST: I'm not challenging that because I'm sure about that as well, but the question was whether there would be a big increase in Norwegian production.

MR. BOERSMA: Yeah.

MR. LANKHORST: I think, what I know about Norwegian policy momentarily is it's much more at keeping it at the plateau that it's now for a long time, so extending it, but not increasing it. But if you have new information --

MR. BOERSMA: No, I think that's right. And I think the question last year around how much Norway could ramp up in a short period of time was probably the wrong one to ask. There is a long-term strategy, and it's not really -- it's not designed to be responsive to political crises in that way.

My question actually relates to the issue of emissions in the European



power sector. It's an interesting day to be here discussing this. Today is the day that the Clean Power Plan, the emissions performance standards that the Obama administration is implying or imposing on the power sector here gets entered into the Federal Register, which is the day that it becomes real, so to speak. It's curious that in Europe we have a market mechanism for controlling emissions from the power sector, and in the U.S., which is typically seen as a more market-focused economy, we have a very command and control centralized regulatory approach.

I wanted to get your views on how the concept of emission performance standards is viewed from Europe. Is it being considered as something that can supplement or complement the ETS if the ETS reform doesn't take place in the way you said you hope for?

MR. LANKHORST: Very complicated question. If you -- well, what we have experienced over the past years is that the ETS is not delivering the right price incentive to reduce carbon emissions. One of the reasons is the recession, but there are more reasons. And another reason is, in my view at least, that when you heavily subsidize renewable energy sources and they grow, that will also reduce CO<sub>2</sub> emissions. So all those factors that you add to your ETS system to do more to reduce CO<sub>2</sub> emissions, will result in a lower price for CO<sub>2</sub> under your cap and trade system.

And that's my hesitance with an EPS emission performance standard system as well, because if you do that, that will reduce emissions. And when emissions are reduced, then the price of your ETS system will go down as well. It's the law of demand and supply. And I think that a consistent policy that says, well, we cannot solve all the problems of the world at one time and reduce CO<sub>2</sub> and invest heavily in renewables and create jobs and become import independent, and go on and go on.

The biggest problem is carbon emissions. So focus on that and create a

single target, a target that reduces CO<sub>2</sub> emissions to the level that you think is acceptable. Then think about the instruments. And when you have instruments like ETS and you say that's the core of our system, then don't add other instruments that conflict potentially with your ETS. So I think if you have sectors that are not part of the ETS and you do something there, like incentives to insulate houses better, that helps. But to do things that have a real effect on the sector where the ETS is applicable, I have my hesitations whether that would be a smart policy.

MR. BOERSMA: Can I build on that? It's not as if the European member states all agree on this. It's very tough to get some form of coherence among the 28 --

MR. LANKHORST: Absolutely.

MR. BOERSMA: -- as to where to go on this on this issue -- how to reform ETS. A couple member states are pretty much opposed to do this. So if this is the system and this is what the EU needs to work with, how do you foresee in the coming years that that will really change the fuel mix as you have it today? Or will the current sort of constellation which was described earlier, will that be it for the, you know, say the next five years or so?

MR. LANKHORST: Well, to be honest, I'm afraid that what is now foreseen as too little too late so it will not have the effects that we hope for.

MR. BOERSMA: Thanks.

Nikos?

MR. SAVAS: Thank you. I'm Nikos Savas, a consultant.

I wanted to take you to the beginning of your presentation where you talk about the mood. And I wanted to ask you, especially when you think about companies, what will it take to change that mood and go from essentially companies seeing this

sector as a declining politically charged, no one really wants to raise their hand and say, "I work in natural gas." Companies are trying to figure out where to put their capital outside of Europe. You know, what do you think it will take to change that mindset and to really have companies see this as another sort of exciting growth area where they want to put capital, where they can attract talent? Is it, you know, what does it take?

MR. LANKHORST: Well, that's a good question. Less regulation. Deregulation. More focus on policy. As I just was saying, consistent policy not with ambitions in five dimensions but just make sure that -- well, we know what it's about when we talk about energy. You want secure energy. You want competitive prices, and you want a cleaner environment. That's the three parts of the trilemma, as we call it. Anyone who says I can solve the trilemma is cheating because you cannot solve it. It's always the three. And when you do too much on one side of that triangle, then the others will be affected. So it's very complicated to have the three of them realized at the same time. That's complicated enough. And then don't add that you want jobs and that you don't want import dependency and so on and so on. So more focus, simpler regulation. The regulated business is the infrastructure and the market should then play its role. And you can facilitate that market by making the right decisions in infrastructure. I think that if the European Commission would sit around the table with the regulators of Europe and say, "Well, this is the amount of money that we have for infrastructure projects and gas, what are the five priorities?" Not 50, five. And if you work on that for two weeks, I think you would deliver more results than by all the mechanisms that we have today with lists of important projects for the community, and then when something is realized in one of the 28 countries, the other 27 also need a piece of the pie. That's not the way it works.

So to have a policy that is not saying, well, you get a ripe return, all the 28 countries. No, that really makes decisions and says this is the focus of our energy

union, I think you could achieve a climate that gives trust to the business community and would say, okay, this is really a future.

And still, gas as a fuel, in the fuel mix, that's also a debate, of course. If you go to a climate-neutral, CO<sub>2</sub>-neutral energy mix by 2050, as is sometimes advocated as an ambition, not only in Europe. It was also the G9, I think, that in 2008 said we will be 80 to 95 CO<sub>2</sub> reduced by 2050. It was also the U.S., and China, and Russia. They all were there. Europe is the only continent that seems to take this seriously and says, okay, we have to deliver on that. And if you make your forecast for 2050 and you say we have to reduce our CO<sub>2</sub> emissions by 80 to 95 percent, then there is hardly any place for fossil fuels anymore. Do you really want to be consistent with that? Then you will also not use much gas by 2050.

If you go back to today and you say, well, what should I do to achieve that result? And in the meantime you need lots of gas. We have seen many roadmaps drafted. How can you arrive at 2050? And in most of them, gas demand would grow over the next decades instead of decline. But if you see the current policy in Europe, coal consumption is growing, and renewables are growing, and gas is squeezed. Coal, because of market forces, it's cheap, and there's no price on the CO<sub>2</sub>. Renewables, because they're heavily subsidized. That is strange. It is a very expensive way to achieve a target that you could also achieve by having a more balanced mix in which gas plays a much bigger role.

So, well, I get a bit emotional after such a question because I am in this industry, and indeed, people are a bit depressed and say, well, what's going to happen to us when everyone says we don't need you anymore? Whereas you can see at the same time that the reality is that you will be needed strongly, how do you work that out? But then I think that's our task as responsible people in that industry to make clear that

despite what's happening, these are the facts and this is what's going to happen. And this is why our products will be needed. And there are more products that we consume in our daily life that are not very popular but there are still people working in those industries, proud of what they do, and I think that you don't have to have pity with me or anything because we still deliver a great product, and I'm sure that there's a big future for natural gas also in Europe.

MR. BOERSMA: Thanks.

MS. SHUKER: Thank you. Patricia Schouker for Pipeline Oil and Gas in Dubai.

I wanted to ask you about the East Mediterranean Pipeline that you haven't mentioned yet and its potential to both diversify energy resource and create new connection. Of course, and you mention it, we all hope that the pipeline could be a source of cooperation and stability as opposed to competition. What do you think are some of the main issues that need to be engaged with or resolved to make sure that the vision of the East Mediterranean contributes to promoting regional cooperation and stability as opposed to competition? And so what are some of the challenges that you see in this project? Thank you.

MR. LANKHORST: How should I answer that question? I think it's a very important project. Like all projects that create new infrastructure in Central Europe, Eastern Europe, Southern Europe, those are critical and crucial for the future of the gas market in Europe.

I remember that some 20 years ago I was at a conference with people from countries all over Europe and the debate was on the Central European gas market. What does it need? And there was a man there in the audience who stood up and he said, "I'm from Hungary. I'm an engineer. I'm from Hungary. And if you look at the map

of Europe" -- and he showed his hand like this -- "here's Russia and here are the pipelines. And they all go that way. And of course, we must look at whether we can use them also in a different direction, but the most important is that we get this. That we get north-south connections in central Europe to connect these markets and to make it possible that gas flows in the direction where the market wants it."

I think that's still true. But to make that a reality, the focus of policy in Brussels must be on realizing that internal market, and I have already mentioned some of the elements that need to be done there. Maybe focus on those five critical infrastructures. But also, the governments in the countries in Central and Eastern Europe have to make clear that they want a market that is in line with the European regulation.

Well, I mentioned this engineer from Hungary not just by case, because if I look at a country like Hungary, I'm very pessimistic on what's happening there. They are not conforming to any rule of the European Union anymore. Well, this is public, I think, so I must be a bit calm. I'm just a modest person from the gas industry and not a politician. But the record of some of the member states of the European Union is such that industrial companies really withdraw their assets from those countries because they have concern of what's happening. So that's where it has to start. You must have a reliable, stable, regulatory system, and then you can invest, and then you can get a market. Well, I hope that the project you're referring to is one that will be a success because I think it's an important one to realize this.

MR. BOERSMA: Thanks. More questions?

Yes, please, sir?

MR. NIKOLAIDES: Thank you. My name is Andreas Nikolaidis. I'm the deputy chief of mission, Embassy of the Republic of Cyprus.

My question, you refer to Iran which has vast natural gas potential. And

there is a lot of debate here in D.C. what will the future development of the Iranian natural gas industry? Some are predicting that it just won't be developed because the costs of development are exorbitant. And then if it is developed, the question is which would be the best potential buyers? Would it be towards Europe or would it be towards the Gulf States, even though there are political considerations? I would like to know your opinion about that.

MR. LANKHORST: I'm afraid I don't know the answers to that question because it is for me as much a question as it is for you. Will it be developed? I think yes, because the world, and I'm really thinking global, has such a hunger for energy that those resources will be somewhere developed as well. The cost might be high. On the other hand, there are more projects developed today, deep water, shale, or whatever, with high cost as well, and they are developed. So I think it will be developed. But what direction that gas will go then, you see that gas consumption in the Middle East itself is also increasing dramatically. So maybe it will play a major role locally as well.

You see extremely interesting developments in the upstream gas business. For instance, you mentioned you are from Cyprus? Well, the Mediterranean, all the gas fields down there are discovered now for the coast of Israel, Cyprus, Egypt. It's huge, and it could have such a major impact, not only on the region, on the Middle East, but also on the European situation, that I think you could have another person talking about only that region and gas developments there for a few hours. It's extremely interesting, but also very uncertain how it will be developed, where it will flow. We get a lot of people to the Netherlands from countries like Egypt, from Israel, to see, how have you half a century ago designed that industry? What have you set up as government policy? How have you organized the whole sector to make sure that it is developed at the lowest cost but that the revenues for government are the best they can be? And I

think that all these countries around the Mediterranean Sea are busy with that kind of analysis now, and I hope that we will see the results of it in the next decade.

MR. BOERSMA: Thanks. I would like to ask one final question from my end and then we can go to the audience and see if there are others.

It seems to me, listening to you, and we heard the earlier comments about Nord Stream 2, and the grave concerns in public political debates about this. It seems to me that there's a mismatch between the political debate on the one hand and the way that industry views what's going on Europe and what the outlook is. Is that a fair assessment? And is there a mismatch between political and private desires? And if so, what can you do, or what do you do to bridge that gap to explain to others that there's another way of looking at this?

MR. LANKHORST: Tim, I don't know whether I would look at it that way. Maybe my thought is that there is a public perception on gas, and that perception is that gas is dangerous because shale gas ruins your environment; that gas is dangerous because it comes from Russia and makes us more dependent on Russia; that it's dangerous because it's fossil and so it's harming the climate. And I have the idea that politicians tend to listen more to these perceptions than to look at the facts momentarily. So there is alignment but in the wrong way. And what we need is more leadership here, people who are brave to speak out and say these are the facts. And you might like it or not, but we can produce gas in a safe way. We can produce gas environmentally friendly. We can have a gas market in Europe that is flourishing, that is not dependent too much on Russia. We will need Russian gas, but we don't have to put all our eggs in one basket. We can have gas from other regions as well. So there is a real good story to make of gas. But if you make it very political and you want to get voters and that's your priority, well, that doesn't fit too well with gas. My plea could be summarized in just



one phrase, "Don't use gas as a political weapon." That is what is happening today and that is dramatic for market forces.

MR. BOERSMA: Thanks. Are there any final questions in the audience? Issues that haven't been addressed that you'd like Gertjan to address?

Yes, sir. Please. The mic is coming.

MR. SULTAN: Mike Sultan with Energy Intelligence Group.

I just wanted to see what your opinion was of the Croatian LNG terminal on the Island of Krk. What are the prospects for that?

MR. LANKHORST: Croatian LNG terminal? Well, I think it's a very good question. Croatia, but also Serbia -- Serbia is not a member of the European yet, but it's one of the countries that is very dependent on Russian gas -- could use another source of supply than Russian gas. So like in the Baltics, Latvia has invested in a LNG terminal. It has -- they have paid half a billion dollars for that, but it has not resulted in lower gas prices from Russia for the Baltic States. So you pay but when you create the possibility for competition, it works. That is shown there. The same might be true for Croatia, Serbia, and so on. But if I look at the available infrastructure that there is already in Italy and I look at the connection point that could be made there, I think it would be cheaper to build a pipeline from Italy into Croatia. Italy is very long on gas. They have so much supplies contracted. So I think that is one of the examples of the priority infrastructure, and it should not always have to be LNG. Also, in pipelines, you can make the better connections and the LNG could land in Italy and be shipped to Croatia and Serbia easily.

MR. BOERSMA: We heard yesterday, as Mr. Vice President Sefcovic was in town, he was fairly optimistic. He mentioned this facility a number of times, fairly optimistic that it would add to and would be part of the strategy.

MR. LANKHORST: If it can be done, fine. As I said, I'm in favor of all

infrastructure, but you always have to look at what is the most cost-effective option. And I know that the Italians, they would like to have more infrastructure that brings gas across the Alps north ways or east.

MR. BOERSMA: Thanks very much. We're a few minutes ahead of schedule. It's very Dutch of us, I guess. I want to thank you for stopping by. I very much appreciate your comments. Thank you. And thank the audience for your great questions and comments. We appreciate it. Thanks for coming, and please join me in thanking Gertjan for stopping by.

(Applause)

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