

# Pipeline Politics: Energy and Power in Europe



**JULY 23, 2019**

**Briefing of the  
Commission on Security and Cooperation in Europe**

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**Washington: 2019**

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The Helsinki process, formally titled the Conference on Security and Cooperation in Europe, traces its origin to the signing of the Helsinki Final Act in Finland on August 1, 1975, by the leaders of 33 European countries, the United States and Canada. As of January 1, 1995, the Helsinki process was renamed the Organization for Security and Cooperation in Europe (OSCE). The membership of the OSCE has expanded to 56 participating States, reflecting the breakup of the Soviet Union, Czechoslovakia, and Yugoslavia.

The OSCE Secretariat is in Vienna, Austria, where weekly meetings of the participating States' permanent representatives are held. In addition, specialized seminars and meetings are convened in various locations. Periodic consultations are held among Senior Officials, Ministers and Heads of State or Government.

Although the OSCE continues to engage in standard setting in the fields of military security, economic and environmental cooperation, and human rights and humanitarian concerns, the Organization is primarily focused on initiatives designed to prevent, manage and resolve conflict within and among the participating States. The Organization deploys numerous missions and field activities located in Southeastern and Eastern Europe, the Caucasus, and Central Asia. The website of the OSCE is: <[www.osce.org](http://www.osce.org)>.

## ABOUT THE COMMISSION ON SECURITY AND COOPERATION IN EUROPE

The Commission on Security and Cooperation in Europe, also known as the Helsinki Commission, is a U.S. Government agency created in 1976 to monitor and encourage compliance by the participating States with their OSCE commitments, with a particular emphasis on human rights.

The Commission consists of nine members from the United States Senate, nine members from the House of Representatives, and one member each from the Departments of State, Defense and Commerce. The positions of Chair and Co-Chair rotate between the Senate and House every two years, when a new Congress convenes. A professional staff assists the Commissioners in their work.

In fulfilling its mandate, the Commission gathers and disseminates relevant information to the U.S. Congress and the public by convening hearings, issuing reports that reflect the views of Members of the Commission and/or its staff, and providing details about the activities of the Helsinki process and developments in OSCE participating States.

The Commission also contributes to the formulation and execution of U.S. policy regarding the OSCE, including through Member and staff participation on U.S. Delegations to OSCE meetings. Members of the Commission have regular contact with parliamentarians, government officials, representatives of non-governmental organizations, and private individuals from participating States. The website of the Commission is: <[www.csce.gov](http://www.csce.gov)>.

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## **Commission on Security and Cooperation in Europe Washington, DC**

The briefing was held at 11:00 a.m. in Room 1334, Longworth House Office Building, Washington, DC, Danica R. Starks, Senior Policy Advisor, Commission on Security and Cooperation in Europe, presiding.

*Panelists present:* Danica R. Starks, Senior Policy Advisor, Commission on Security and Cooperation in Europe; Ed Chow, Senior Associate (Non-Resident), Energy and National Security Program, Center for Strategic and International Studies; Colin Cleary, Director for Energy Diplomacy for Europe, Western Hemisphere and Africa, U.S. Department of State; David Koranyi, Senior Fellow, Energy Diplomacy, Atlantic Council; Energy Policy Advisor, United Nations; and Efgan Nifti, Executive Director, Caspian Policy Center.

Ms. STARKS. All right. Well, good morning, everybody. It's 11, so we're going to start. Good morning to everyone, and to our distinguished panel of experts. And welcome to this briefing by the U.S. Commission on Security and Cooperation in Europe, better known as the Helsinki Commission. My name is Danica Starks and I'm seconded to the Helsinki Commission from the U.S. Department of Commerce, where I was the policy team lead for the Office of Russia, Ukraine, and Eurasia. I'm pleased to be here today. We're going to have an amazing panel of our distinguished experts, but I would be remiss if I did not acknowledge thanks to the chairman of the Helsinki Commission, Congressman Alcee Hastings, for the opportunity to be here, as well as our chief of staff, Mr. Alex Johnson.

We're here because part of the mission of the Organization for Security and Cooperation in Europe is looking to promote a strong and vibrant transatlantic relationship and foster a peaceful and prosperous European continent. Slovakia, which holds the chairmanship, has named energy security a priority for what the OSCE terms the second dimension, the economic and environmental portfolio. And this briefing is aimed to move the dialog forward on those issues. We acknowledge that energy security, writ large, is multifaceted. It's not just about the pipelines. However, if we look at the headlines we know that what we're terming pipeline politics has become a key issue of the day in discussion here on the Hill, in the administration, and across Europe.

The United States in the 1990s championed many efforts in terms of looking at building the diversity of energy security in Europe, particularly in terms of the diversity of pipeline routes, with the signing of the contract of the century for the Azeri-Chirag-Gunashli oil field, and most famously the Baku-Tbilisi-Ceyhan pipeline between Azerbaijan, Georgia, and Turkey. This effort to create new and diverse routes across the Caspian was seen as crucial in order to avoid the very subject of the briefing, which is the ability for any one country to be able to use energy as a political tool and leverage.

The term “pipeline politics” in and of itself has somewhat of a negative connotation in the sense that we are specifically talking about the potential malevolent use of energy, in some cases to achieve foreign policy goals. But in reality, it’s actually a much broader concept. And I think today we’d like to bring some nuance to that concept and talk about what actually is the ability to use energy politics, to use pipelines, especially these projects that are long term, in some case 20 years developments, for specific short-term political goals.

This discussion has taken on renewed importance recently especially since 2014, and the Russian aggression in Ukraine, and the development of the Nord Stream 2 pipeline. And today’s briefing is an effort to sort of take a step back away from the headlines and the rhetoric and have a really rich discussion and shed light on the myriad of issues that are underlining the current pipeline politics in Europe. So we’ll look at how this is crucial to the long-term transatlantic relationship.

We’ll look at current work in the progress of Nord Stream 2 and TurkStream, which I know a lot of people are so anxious to talk about, but also the status of the Southern Gas Corridor. But also, what are the other efforts that are going on, to put in context the importance of these pipeline politics, and who the winners and losers are within Europe that are behind this. Further, the U.S. is currently considering various measures of carrots and sticks to try to influence the pipeline politics in Europe. And part of what we want to discuss is how viable this is, given the issues of political and commercial viability.

Joining me today for this discussion is a wonderful panel. I’m going to do a brief, just one-, two-sentence introduction because you have bios in your handouts.

To my left is Ed Chow, the man, the legend. He is a long-term colleague. He has worked as an international energy expert across the U.S., Europe, the Black Sea, and the Caspian. And many know he worked for 20 years at Chevron Corporation, at headquarters and in overseas assignments. To Ed’s left we are happy to be joined by Colin Cleary, who is a career member of the Foreign Service and currently serves as the director of energy diplomacy for Europe, the Western Hemisphere, and Africa in the State Department’s Bureau of Energy Resources. Mr. Cleary also served as political counselor at the U.S. Embassy in Kyiv, as well as science counselor at the U.S. Embassy in Moscow.

To his left we’re proud to welcome Mr. David Koranyi, who came down from New York. He is a senior fellow for energy diplomacy at the Atlantic Council’s Global Energy Center. Mr. Koranyi also, notably, served as undersecretary of state and chief foreign policy and national security advisor to the prime minister of the Republic of Hungary, and is a member of the European Council on Foreign Relations. Welcome, David.

And last, but certainly not least, Mr. Efgan Nifti, He is the executive director and a board member of the Caspian Policy Center. We met a couple of years ago at the first Trans-Caspian Forum, and he has been a colleague ever since. He previously worked for

Georgetown University as a research assistant and as a faculty development coordinator, and as a lecturer for the Azerbaijan Diplomatic Academy, which I believe is headed by the former Ambassador of Azerbaijan to the U.S., Mr. Pashayev, a wonderful friend.

I will now give each of our panelists about 5 minutes to do some brief opening remarks. I have a few questions I'd like to ask to start the discussion. And then later we will open up for Q&A from the audience. And unless until we get a roving microphone, we actually have a microphone on the side for questions. And when you ask questions, and I'll repeat this, we ask that you give your name and affiliation. And please ask a question—statements can be made in comments on Twitter after the program.

So thank you. And, Ed, if you'd like to start.

Mr. CHOW. Thank you. Thank you very much, Danica. I know you want to have as much discussion as possible, so I'm going to keep my opening remarks very short, and maybe not even use the 5 minutes you gave me.

It's an honor and pleasure to once again have the opportunity to participate in a U.S. Helsinki Commission briefing. As an energy expert, I tend to look at pipelines first from the standpoint of economics. Permit me to do the same here, in order to set up the discussion with my fellow panelists, who are all much more expert in politics than I am.

Mega pipelines are expensive projects. They cost multibillion dollars, and they take a long time from conception to completion. Three to five years if everything goes well, frequently longer. This was my experience working in the region in question on the Caspian Pipeline Consortium when I was with Chevron, on the Baku-Tbilisi-Ceyhan pipeline and South Caucasus gas pipeline, when the U.S. Government sent me to advise then-Georgian President Eduard Shevardnadze on these projects as part of the effort that Danica mentioned earlier.

Although such projects are examined later from a foreign policy, geopolitical perspective, they have long-planned commercial justifications. Simply, pipelines are sponsored by oil and gas producers who seek to bring their product to market in the most efficient way possible. In the case of gas pipelines, which are more difficult to finance due to the transportation economics of gas versus oil and from the different nature of gas markets from oil markets, gas pipelines generally also require the involvement of long-term gas buyers.

In the United States the government does not get involved directly in building pipelines, except in land acquisition, permitting, environmental and safety regulation. In other parts of the world, governments may subsidize or invest in pipelines as public infrastructure. Nevertheless, unless the government is willing to bear the full financial risk, these projects require financially committed shippers of oil and gas, and a bankable market or creditworthy buyers at the end of the pipe.

In Washington, there's a lot of talk about whether certain projects are economically viable or politically motivated. To me, the pertinent test is whether projects are bankable or not. If they are bankable, they will be built. If they are not bankable, they won't. And they helped examine some of these projects, including U.S. initiative, in that context. I hope this helps tee up the discussion for later.

Thank you.

Ms. STARKS. Thank you, Ed.

Colin.

Mr. CLEARY. Thank you, Danica, for the invitation, and for the opportunity to be here before the Commission. Ed mentioned that he's an economist and focused on the economics. My specialty is actually in the political side or the geopolitics. And so I'll look at that from the U.S. Government perspective. I actually have a statement, so I'll read it, and then I look forward to Q&A after that.

America's commitment to European energy security goes back decades. The reason for this is straightforward. The U.S. and Europe are connected by deep political, economic, cultural, and historical ties. We're invested in Europe's political and economic welfare and stability, and energy security is part of that. As is well known, Europe relies significantly on Russia to meet its energy needs. Russia supplies 40 percent of Europe's gas imports, but the distribution is uneven. Thirteen countries approximately, mostly from the former Soviet bloc, depend on Russia to meet between 50–100 percent of their domestic gas demand. We know that Russia is willing to use energy as a geopolitical tool, because they have done so. And we're all familiar with Russia's track record of destabilizing countries it feels threatened by or seek to dominate. They can use military might or they can use effective hybrid tools, such as economic pressure, including energy.

As far as the pipelines, the politics of the pipelines, we regard the core rationale for the Nord Stream 2 and the TurkStream 2 pipelines as to be fundamentally political, not commercial. Russia's desires to bypass Ukraine—is to bypass Ukraine for gas transit. And these pipelines are, in essence, diversionary pipelines. The goal is to destabilize Ukraine economically and strategically, and to punish Ukraine for choosing to step outside of Moscow's geopolitical orbit, and in doing so to deprive Ukraine of approximately \$3 billion a year in gas transit revenue that it's currently getting.

But it's not only Ukraine that's subject to energy as a political weapon. All countries that are highly dependent on Russia for energy are vulnerable to Russian political and economic pressure. When Gazprom has monopolist or near-monopolist power, it uses it. It has been common practice for Gazprom to charge countries that are in favor with the Kremlin, such as Germany, less than countries that are in disfavor, say Poland. So the differential pricing is due to political factors, fundamentally.

And so the State Department—that's our role—works with countries to implement policies and projects that can reduce their reliance on Russian energy. Danica mentioned diversification, and I would say if you had to summarize it in one word it's to foster diversification.

One example is diversification through LNG, liquified natural gas. I'll point to three cases in Europe that are topical to this—Lithuania, Poland, and Croatia. They've each led the way with choices to invest in new infrastructure, deepening their access to world markets.

Lithuania has a floating LNG terminal that's provided the first means for a non-Russian supply of natural gas to the Baltic states, compelling Gazprom to play by free market rules. The result? Gazprom cut the price of Lithuania's supply contract by 20 percent and saw its share of Lithuania's gas market reduced from 100 percent to a range of 25–55 [percent], depending on price and demand.

Poland has invested significant resources in LNG facilities on the Baltic, and the results are impressive. Thanks to its far-sighted policies, by early in the next decade Poland will have gone from being completely reliant on Russian natural gas to being able to meet its gas needs without Russian imports. By providing Central Europe with a means

to import non-Russian gas, Poland's LNG infrastructure can strengthen the energy security of its neighbors as well.

Last, Croatia. The U.S. has been involved in trying to help provide technical assistance to a floating LNG terminal in Krk, again, which would offer an avenue of diversification in the southern Balkans.

Another avenue of diversification is nuclear energy. So in addition to LNG, new nuclear energy and diversified nuclear fuel supply should be included as a viable means to enhance and expand Europe's energy diversification. Diversifying nuclear fuel supplies for Russian-built reactors, for example, would also promote greater energy security and independence for Europe. Renewable energy also plays a role. The EU has, as we know, ambitious renewable goals that will help provide important diversification and energy security.

Diplomatically, the U.S. has been very supportive of the European Union's projects of common interest. These have provided for greater interconnection in the European gas transit system. The projects have also supported LNG hookups, as well as such initiatives as Baltic Pipe, which is underway to provide Norwegian gas to Poland. So there's a lot of avenues of diversification going on.

I will move quickly. We also support, as you were mentioning, the Southern Gas Corridor, which has provided gas—Caspian gas—and is another avenue for diversification. That's coming online next year or the year after.

In short, our policy is to foster options, flexibility, redundancy, and diversity. It should come as no surprise then that we strongly oppose projects that would do nothing to advance Europe's energy diversification goals and would maintain or increase its vulnerability to Russian malign influence. We count Nord Stream 2 and the second line of TurkStream among these projects. Far from advancing Europe's goals, these two projects will only reinforce Russia's pernicious influence on Europe's national security for decades to come.

Finally, you're mentioning the big picture. I just want to offer a brief comment on the macrotrend that does impact this discussion. And it's the shift in the United States from a posture of scarcity to abundance in oil and natural gas. Just a couple of quick facts. The U.S. is today the world's largest oil and gas producer. We have become a net natural gas exporter in 2017 and are projected to be a net oil exporter by the end of next year. That is for the first time in 70 years. And these volumes will continue to grow in the years ahead. So it's changing the dynamic and it's giving the United States a welcome opportunity to help other countries achieve their energy security goals.

Oil and gas exports from the United States, by adding volume to global markets, can lower energy prices. As countries seek to diversify their energy supplies, LNG imports from the U.S. can supply them with one additional option. There are other options to the Eastern Mediterranean. So there's new sources and new opportunities for diversification that are very encouraging. So the opportunities are growing.

In conclusion, with reference specifically to Nord Stream 2, we're not alone in opposing it. The neighbors in the Baltic largely oppose it—some very, very strongly. The European Commission and the European Parliament have denounced it as politically inspired. So I would call your attention to those. And the United States is far from alone in its posture. We consider it a pipeline driven more by geopolitics than economics.

Thanks.

Mr. KORANYI. Thank you, Danica. And thank you to the Commission. It's a great pleasure to be here. Let me just say it's always intimidating to be on the same panel with Ed, because when he was advising Georgian President Shevardnadze I was about 10 years old, if I counted correctly. So, again, it's my great pleasure to be here.

Let me start on a personal note. In 2009, the last major crisis between Russia and Ukraine that impacted European energy security, I was posted in Brussels, working in the European Parliament, and then subsequently I worked for the Hungarian Government. Let me also emphasize that it was a different Hungarian Government. If you follow the Hungarian political developments, I advised a different prime minister, the predecessor of the current prime minister. And of course, I remember very vividly how frantically Europe as a whole reacted to the crisis, and how unprepared most of the Central and Eastern European countries were back in those days.

I look at the picture now, a bit more than a decade later, and I have to say that we have come a long way. So my own country, Hungary, has about 6.3 billion cubic meters of gas storage facility. We are actually filling up those facilities as we speak. So by the end of September, it will be fully filled. So that means that we have gas available for the entire winter, more than 8 months' worth of supply. We are in an incomparably better situation than we used to be 10 years ago. That's not true across the board, so we have a lot to do still. It's a glass-half-full situation. But let's recognize the progress that we have made in that regard.

Danica in her introduction mentioned carrots and sticks. So let me start with the sticks. Nord Stream 2 you mentioned already. The way I look at it—I've been on the record, I've written articles about Nord Stream 2, I'm no friend of Nord Stream 2 and I see its dangers. Yet, I find the almost single-minded preoccupation with Nord Stream in Washington, DC somewhat unhelpful. I'm not saying it's a constructive pipeline. I'm saying that TurkStream, for example, which is aiming to circumvent Ukraine from the south—the second leg of TurkStream which aims to supply Bulgaria, Serbia, and Hungary is way more dangerous in terms of blocking Central and European markets than Nord Stream 2.

So I would advise a refocusing of efforts—a more balanced effort in terms of in addition to focusing on Nord Stream 2, focus on TurkStream, and especially the second leg. And then sort of keep it coordinated with the Europeans, and make sure that the ongoing pressure on Nord Stream 2 and the threat of sanctions is used in a coordinated fashion with the Europeans, so that it leads to an agreement with Ukraine on the transit agreement.

This was a complicated sentence—[laughter]—but what I mean is that the—at the end of this year, as I'm sure you all know, the existing agreement between Ukraine and Russia is going to expire. We are in this situation that nobody knows. And that's part of the reason why we are putting in so much gas into the storage in Hungary and all across Central Europe. It's very uncertain how that agreement is going to continue. So if you want to guarantee quantities in the Ukrainian pipeline system, in the transit system for the next 10 years, then using that leverage, the threat of sanctions, is going to be crucial. But again, coordination between the EU and U.S. is critical.

Let me just say a couple of words about interconnections, which is a critical piece of the puzzle. I have had the pleasure to be part of the original study at the Atlantic Council that initiated the Three Seas Initiative back in the days. And I've been really happy to see it evolve to the point that now we are talking about an actual TSI fund.

So there is actual money put on the table by Central and Eastern European States themselves to spend it on finishing these missing pieces in Central and Eastern Europe, along the north-south corridor. And very concrete suggestion I have in this space, looking at Senator Chris Murphy's bill, the potential one billion support for private sector investment, mobilization in Central and Eastern Europe, I see a very interesting opportunity in terms of co-investing from the TSI fund and the Central and Eastern European side, and from this potential U.S. pot of money. So that would be a very powerful transatlantic message, and actually put the money where our mouth is in terms of finishing these missing pieces.

Diversification. The Krk LNG terminal in Croatia, again, we have been talking about it for 10 years. I think there is finally movement. I see a good chance of it actually happening.

There still needs to be pressure applied on both Hungary and Croatia to remain constructive and to integrate their markets, and to come to terms with regard to the equity stakes in the LNG terminal, but then also opening up the market so that the gas can be evacuated from Croatia to Hungary, and potentially to Ukraine as well. Black Sea, I see a very dangerous situation evolving whereby the situation—political situation and the regulatory regime in Romania has been evolving in a way that jeopardizes the exploitation of those resources, which will be a very sad situation to witness.

And then finally, the East Med. So there was a lot of talk, or there's been a lot of talk in town about the potential for East Med natural gas resources. And I would caution against putting too much hope in terms of the East Med becoming a major source of natural gas to Europe any time soon. Part of it is just how the pipeline geopolitics is, but part of it just the economics—what Ed was referring to at the beginning. The reserve base is small. The political issues are complicated. The one critical piece of the puzzle there that I would pay a lot of attention is to make sure that energy, as such, is involved or integrated into the next round of the settlement negotiations between the Turkish and the Greek Cypriots, because the fact that energy was left out from those negotiations had a very detrimental effect on the outcome of the latest round.

Final point, if I may. We tend to have a very gas-heavy conversation in this town when it comes to transatlantic energy security. So I would also caution against that. I see conventional wisdom has it that Europe, of course, will have an increasing gas demand. And this is what this picture is as we look at it today. But we live in a fast-changing world. So I see high degrees of uncertainty in terms of gas demand in Europe as a whole, Central and Eastern Europe, 10, 15, 20 years down the line. So I would advise keeping the transatlantic energy security dialog a broader dialog than natural gas.

Thank you.

Mr. NIFTI. Hello, everyone. It's a pleasure to be here. Thank you, Danica, for inviting me over here. And it's an honor to speak here. And also everybody mentioned about Ed. I also want to mention Ed because I took energy classes with him in grad school. So it's another honor to be in the same panel with him. I know we addressed multiple political issues here. I also primarily focus on more Southern Gas Corridor, which is the fourth main energy corridor for Europe that will be receiving gas in 2020.

I'll try to 5 minutes, emphasize five points, actually, a brief outlook for European energy outlook, then some remarks on the history of the Southern Gas Corridor. Also current State and progress, how we are—what's happening with the progress. And obviously

another key question is potential suppliers, but there are current suppliers for the Southern Gas Corridor, but it can be—with the expandable capacity, may reach more capacity. And also, what are the potential markets, actually, for the Southern Gas Corridor?

I know the Caspian oil and gas history was more about oil up to 1990s. And U.S. spent a lot of energy and political will in facilitating that progress. There was also a commercial project as well, but now I think the history is also about how the natural gas resources of the Caspian that should be delivered to the European continent, also neighboring countries like Georgia and Turkey as well. In that respect, I'll briefly give some data. I'll try to be providing some data on the European energy outlook, and then move onto the Southern Gas Corridor.

European Energy Union that has been in place for a couple of years now has been targeting to diminish European dependency on the single supplier, and also diversify resources. But what we see, despite the initial projections, now we are—European import dependency is actually going to rise to 88 percent in coming years. And it's mostly about not the growing demand but rather declining domestic production. And just to give you another number on this, is that Europe had been importing in 2014 150 bcm of gas from Gazprom. Now it has reached almost over 200 bcm. So there is a lot of talk out how European Union and European partners are trying to diversify, but I think to what extent it has been materialized is a big question.

On the other hand, we can see that, yes, there are other ways to diminish the consumption of the natural gas, but with measures on the renewables and other supplies. But approximately 24 percent of the energy mix will stay natural gas for Europe by 2030. We see that there are two major areas of European consideration to receive gas. One is U.S. LNG. Another one is resources from East Med, resources from—which David mentioned about it—resources from the Caspian, and other places. And in that respect, I will also touch base on the few words on the Southern Gas Corridor. I wish we had a map here to show it, how long—

Ms. STARKS. We have some in the handout.

Mr. NIFTI. It's a long chain of projects for components it has, taking gas from the Shah Deniz field of Azerbaijan and delivering all the way to Italy. The project is one of the common interest projects of the European Union. And I say, the U.S. have been supporting the project since the beginning. And although none of the gas reached the U.S., but U.S. has been instrumental facilitating the progress. Forty billion dollars have—is expected to be invested in this project. And around seven countries are taking part, actually, all the way from Azerbaijan, Georgia, Turkey, Albania, Greece, Italy, and Bulgaria, in that respect.

As I said, this is the fourth energy corridor for Europe. And I would say all the—among all the potential perspective supplies, Southern Gas Corridor is the one that is the most solid one that is actually being materialized by next year. And we already have seen the gas being delivered to Turkey at this stage. What pipelines do we have in this project? We have Southern Caucasus pipeline. We have Trans-Anatolian pipeline and Trans Adriatic pipeline. It's interesting to see that in a very short period of time this all seven countries managed to bring this happen. That was a key concern in the beginning, I would say. And we will expect next year 10 bcm of gas to deliver to Europe through Trans Adriatic pipeline.

So what is the current stage? I personally attended the TANAP groundbreaking ceremony by in 2015 in Turkey. And during my travels, we had a chance to travel to 20 provinces that TANAP goes through in Turkey. And it was a very challenging project. And TANAP project actually estimated to be completed with \$12 billion investment. Actual numbers that we heard last month is around only \$7 billion, which shows that how successful the parties were in implementing the project. Turkey's already receiving gas, as I say, through this project. And we can see that incoming months we should see gas being delivered to Europe as well. Obviously this is not a big burden, I would say. This is—the capacity of the pipelines is around 31 bcm. And with additional resources from other places, it can be a bigger capacity.

In that respect, I would like to mention a few of the potential additional resources into that. Obviously, the additional fields in Azerbaijan, like Shafag gas, Asiman, and others that can be utilized for the Southern Gas Corridor. But on the other hand, I think we've been discussing Turkmen gas a long time now, but it hasn't realized so far. I think the Caspian Convention that was signed last year on August 12 is paving the way for that kind of project. But the key question here is to see how much of gas can be transported, and also can the parties—Azerbaijan and Turkmenistan—agree on the project.

And also, I would say that there are also deposits in Uzbekistan and Kazakhstan can also be—on the eastern side of the Caspian, that can be brought to the western side. And also it doesn't also have to be a full pipeline—fully capacity pipeline. Instead, we can think about interconnector in the Caspian, as we talked about interconnectors in Eastern Europe, that can bring gas from the region.

Obviously, Israeli and East Med resources are also a potential. As I say, as David mentioned, those are more far perspectives. But at this stage I want to highlight one thing—that this gas will be specifically important for the Balkans, Eastern European region, and Italy, from the Caspian resources. I identified a couple of markets, but I'm not going to touch onto them much.

I will stop here and thank you.

Ms. STARKS. Gentlemen, thank you very much. You've given a lot of food for thought.

I want to start back on what Ed mentioned, the issue of the bankability of these projects, and the viability of these projects, and the fact that in the long term, commercial companies are only going to do projects that are commercially viable. Sort of a multipronged question: One, is it possible that—we'll start with Nord Stream 2 and TurkStream, and then we'll move onto other things, but we'll start with the hot topic.

Is it possible that these projects are commercially viable and bankable, and are also politically problematic? And if that's the case, if they are—and that's an if, that's a question—if they are both commercially viable, then part of the question then goes to Colin in terms of then how do you deal with the political situation when you have market economics pushing in one direction? And we can talk a little bit more about that, Colin, too. You mentioned, you know, looking at nuclear energy. There was actually an article in the press the other day about Rosatom and the potential that they could basically effectively also end up with a pseudo-monopoly as well. So when you have—let's assume that there's commercial viability. How do you then open that and almost move against that, when the winds of economics are pointing to a certain direction?

So, Ed, would you like to maybe start in terms of are they viable? And then also specifically, Efgan and David, if you could also mention, given the—I think it was David

mentioned that TurkStream is more possibly dangerous for the Southern Gas Corridor, could you go into that a little bit more as well?

Mr. CHOW. Thank you. Could they also be politically motivated? Well, of course. Why did Bill Clinton show up at the signing of the Baku-Tbilisi-Ceyhan pipeline in Istanbul? Because it supported our political aims at the same time, as it needed to be economically viable.

In other words, the oil companies have to make it work financially. And BP and other companies did do that. But can it also be politically tinged? Yes.

The point that I was trying to bring up is that if it's mostly politically motivated, but economically shaky, let's say—then governments have to decide what subsidy they're willing to give these projects. And I'm really glad David mentioned Chris Murphy's bill that would put a billion dollars into the fund that would support the Three Seas Initiative. Otherwise, the U.S. Government is just talking. It's not committing any resources behind the project. And in Washington, you ask whether a project is real—you ask whether a program is real or not by what's the budget number, right? Otherwise, what's your policy? The policy is talk up things that someone else will have to pay for, right? So it really is quite important. Projects all need political support. Projects that cross borders particularly need political support, otherwise they don't happen.

David mentioned something very important, is that from the standpoint of U.S. policy TurkStream is much more important than Nord Stream 2. Why? Two reasons. One is, Southeastern Europe is almost completely dependent on Russian gas imports. Northwest Europe, by definition, is diversified already in terms of import sources, because they can import gas from Norway, they can import LNG. Even Germany can import LNG from Rotterdam, or Antwerp, or wherever. So the Gazprom's monopoly power, as such, is much more concentrated in Southeastern Europe than it is Northwestern Europe.

So why didn't we make more of a fuss about TurkStream? Well, I would suggest that we had other priorities maybe with Turkey at the time. But also maybe we took our eye off the ball a little bit, as we apparently have with this S400 controversy as well.

Why—the other reason is that TurkStream, which takes gas from west Siberia, is much more of a Ukraine bypass pipeline than Nord Stream. Nord Stream takes gas also from the Yamal Peninsula. So if you are producing gas in northern Russia, which Gazprom is doing, the much more direct route to the prime market in Germany is under the Baltic than it is via Ukraine, which is sourced primarily by west Siberia and gas fields whose production are declining because they've been producing since the 1970s–1980s. So in that respect the question is, Is there political significance to these major megaprojects, the answer is absolutely yes. Do we want a policy? The answer is yes. There's no reason why, of course, the United States should at all support Nord Stream 2. But what resources are we willing to devote—real resources, rather than talking about things—to block Nord Stream 2 or to help Europe diversify its pipelines? Otherwise, we just sound like we know more about European energy security than Europeans do.

It would be a little bit like if Europeans said to us: Well, you shouldn't import oil from Saudi Arabia because they have really bad human rights record. Or, you shouldn't import oil sands from Canada, because that's got a terrible carbon footprint. Those facts are true. But is it really Europe's decision not make what American policy is? Or is it America's decision? So I think we need to think about how—what's the priority of blocking projects that we may not like in the overall foreign policy context?

Ms. STARKS. Before other panelists go, I wanted to let people know that in your packets there are few maps in terms of the pipelines, for those of you who aren't as familiar. I know this can be a daunting conversation.

And, Colin, wanted to hear from you. And as part of that—Ed brought up a point of, you know, do we—who is deciding, you know, what is best for European energy security or not? As part of the answer if you could address, you know, you mentioned specifically that we—there are actually European partners that are in lockstep with the U.S. on this. Are they aware, those that are not in lockstep? Are they just making a conscious choice that the commercial viability, the price, for example, of Russian gas, is just—it's just something that they can't work against? You know, we're assuming that they understand the potential consequences of having a monopoly. So what would it take to get them on board?

Mr. CLEARY. Thanks. Yes, I just would underline that point that you made, that the European Commission and the European Parliament—these are representative, broad-based institutions of Europe, have both declared that the Nord Stream, in particular, is fundamentally a political project, and not fundamentally economic. Of course, there are commercial aspects of it. It's the opposite of—you know, I wouldn't say that there's no commercial dimension to it by any means. But those broadly based, representative European institutions have declared that fundamentally it's political.

So we will—it is hardly the United States telling the Europeans what to do. And, again, if you look in the Baltic region, Poland's a Baltic country. They're strongly opposed. Denmark is giving the whole thing a very serious look. The other Baltic—the three Baltic states, very concerned. So it's not as if it's the United States is at odds with Europe on this question.

And I'd just say, again, just getting back to the political-commercial dimension—I mean, this is really fundamentally a political situation. You have a country that—Russia—that has annexed territory of the transit country. So this is not a normal commercial situation. And you have a country that has—is fomenting a war in the eastern part of the transit country. So this is hardly a purely normal commercial discussion. So the question is not, Does Gazprom want to divert—or, Russia, the Kremlin, want to divert supplies out of—away from Ukraine. It's why should Europe allow that to happen? That's our—that's what we're trying to say. Ukraine has been very adequately supplying—excuse me—Europe with 90 bcm of—per annum—of gas. Without problems. The problems come when Russia cuts off, when Russia does political imposition of cutoffs, as they did in 2006, as they did in 2009. I also was living in Ukraine at that time, in 2009, so I remember it very well.

So the issue is really the inherent political nature of this, not that it makes sense for Gazprom, which is obviously—has commercial dimensions, clearly, but is also an army—it is not an unrepresentative arm of—it has representation in the Kremlin and is part of the overall power structure. Ukraine has—just to be—just to conclude—excess capacity, if were invested in. They're doing 90 bcm per annum. They could do more. So there's no need to divert out of that route and render it essentially, you know, obsolete. So that's what our point is.

Thanks.

Mr. KORANYI. On Nord Stream 2, two quick points. So, one, we are now about 40 percent dependent on Russian gas. Yet, I am less concerned about European dependence

on Russian gas overall than I was 5 years ago when that number was lower. And the reason for that has been discussed already, that the markets are more competitive, more efficient, more transparent for a significant part of Europe.

But that's not the case for parts of Central Europe yet. So the reason why it is so important to pay attention to TurkStream is that the timing is very sensitive. So if you look at, for example, Hungary, we have a long-term natural gas treaty that expired already in 2016, but it was extended essentially up until the end of this year, or the next year.

But we have to renegotiate it with the Russians. And the government was hoping, for better for worse, to be in a situation that we have alternatives as we sit down with the Russians to negotiate. But that didn't manifest. And I don't want to go into the details of why that's not the case, but the Black Sea and LNGs through the terminal in Croatia are critically important from that perspective. But if TurkStream gets there first, then we will be in a locked-in situation. It will be much harder to justify the investment into these infrastructures. So that's why it's important to rush ahead.

Another interesting aspect, which is a little bit further down the line, but I find it fascinating—Nord Stream 2. So the EU in April adopted an amendment to the gas directive, which essentially says that third party—or, the third energy package and third-party access is also applicable for the offshore section of Nord Stream 2. And it's complicated, because there might be exceptions and abrogations, but further down the line I could imagine a scenario where this particular piece of legislation is being used to put pressure on the Russians to liberalize their own gas export market.

Right now it's only Gazprom who's allowed to export via pipeline. The LNG export market is liberalized, but the gas pipeline export is not. So because you have this legal piece in place that could compel the Russians to be able to say that it's not only Gazprom who feeds gas into that pipeline. There are many, like, legal intricacies around this. It's not going to happen any time soon. But I see a very interesting opportunity down the line there to put some pressure on the Russians to liberalize themselves.

Mr. NIFTI. If I may, on this. First, on the commercial viability, I'm not going to touch much on the Nord Stream or the TurkStream but more on the Southern Gas Corridor, I would say. It is both commercial and also strategic project that, you know, we have seen all the seven countries working together to facilitate a speedy delivery of the gas in that respect. And also, you have 13 companies actually taking part in this. If it wasn't commercial, you can't force any company to be part of this multibillion-dollar project.

On the other hand, I think opposing the pipelines or the projects is one thing, and also creating new opportunities for the market is the key question here as well. In that respect, I would say that existing deliveries, now expected to be maybe around 10 bcm. But I think our efforts should be both getting more opportunities for the Europeans to get more gas. I would say for any given country it is still—pipe gas is the most reliable and credible source for many countries still. And LNG is something, a phenomenon that is coming on the market in recent decades. In that respect, I would say that it's understandable for some countries to pursue, again, pipe gas, which some of them still consider as more reliable and credible.

But I think it shouldn't prevent our efforts—U.S. efforts—to create more opportunities, both on the LNG side, and also both on the pipe gas side, which I mean we see efforts in the East Med, but also on the Caspian gas as well. In that respect, we success-

fully worked delivering initial volumes from the Caspian. But I think our time has come to build on that success so that the—that volume can be expanded.

Ms. STARKS. You mentioned, Efgan, that there's some work going on with Turkmenistan. So a bit of a side question: Are we ever going to get a trans-Caspian pipeline with gas from Turkmenistan? I see Ed and David smirking. [Laughs.]

Mr. NIFTI. I wouldn't say that everything is rosy or something is coming anytime, or imminent. But I can tell that maybe instead of 31 bcm of Turkmen gas to be delivered to the West, it's a very ambitious goal and we don't know if it can even be realized in that respect. But we already know that in certain Caspian fields, 5 bcm of gas annually is being flared. And any interconnectivity through already existing infrastructure in the Caspian, can actually take gas and pipe that into the existing infrastructure that have been achieved by SGC.

Ms. STARKS. And I don't want to take up all the time from audience questions, but I do have one or two more burning.

Ed, you mentioned did we sort of miss out of TurkStream as, you know, a threat, and David also brought that up. What about Turkey, and the political situation there, and the future of what things are looking like with Turkey? Is that something that is a threat to the current work that's being going on in the Southern Gas Corridor in terms of its potential to be a long-term transit partner? Is that something that, for example, Azerbaijan is concerned about? David, Colin, is that something that the U.S. is at all concerned about in terms of the future of the Southern Gas Corridor?

Mr. CHOW. I think diversification is good. And too much concentration in any particular route or any particular source is not helpful. So if you can afford to diversify, it's better to diversify. The politics is really beyond my competence, but I would reflect on the time when David was 10 and I was working on the Caspian pipelines. At that time, Turkish policy under President Demirel and President Özal even before then, was completely aligned with American objectives. And you see Turkey today, there is not complete alignment, shall I say, diplomatically, between U.S. policy and Turkish policy, including Turkey's relationship with Russia right now. So it is a place to watch closely. If you are interested in diversification and routes concentrating too many pipelines through Turkey may not be the thing that you should be looking for right now.

Mr. CLEARY. Very briefly, no, it's not been—we aren't really expressing particularly concern about Turkey as a route. But there is—you mentioned—there's the potential for the Southern Gas Corridor to have, you mentioned, 10 bcm, and we understand that maybe that volume could be increased. So it offers additional opportunities, looking ahead.

Mr. KORANYI. So on the trans-Caspian pipeline, I think it was Ambassador Richard Morningstar once said that if that pipeline gets build in his lifetime, he will be dancing on the streets of Baku, which is quite the promise. [Laughter.]

So I think—I share his skepticism for a number of reasons. On the Southern Gas Corridor and additional gas, I have been the most optimistic when it comes to Iraqi-Kurdish gas, because I see the political problems probably—I mean, they also have political problems, but it's probably the most prospective, provided that Iraq as a whole internally figures some things out.

Ms. STARKS. And then, last question—you know, we talked about carrots versus sticks, looking more at the carrots in terms of what can the U.S. do in a positive sense looking in this subject area? Colin, you mentioned the importance of U.S. LNG. Given the

gas market in Europe, to what extent do the panelists believe that U.S. LNG can actually be a game breaker in terms of changing the commercial viability terms for these projects?

And then, David, you also mentioned a lot of what's needed in terms of the inter-connectors, working with Three Seas and other initiatives—what other things?

And, Efgan as well, and Ed—what other things could the U.S. be doing to support some of these other initiatives that might be actually much more helpful in getting the long-term ends that we want?

Mr. CHOW. I mean, certainly the advent of U.S. LNG exports is good for gas buyers all over the world. So you have another source of gas into a market. That source of gas is not at all linked to oil prices, which is the way gas had been—LNG, in particular, has been traded regionally around the world—has been oil-linked pricing. U.S. gas is not linked to oil prices at all. It puts a cap on how much previous dominant players and pipeline gas can charge their customers. So it is undoubtedly a good thing. More liquidity in the trading markets that would lead gas to be traded much more like oil 5, 10 years from now than it is today. There's no question in my mind that the U.S. LNG exports is 100 percent positive.

The problem is that people exaggerate the case. People start saying, as if they believe that U.S. LNG can substitute for Russian gas somehow. But that's not possible. I mean, I hate to say this in Congress, to lay out some simple energy facts. Wholesale gas prices in Europe are selling about 550 per million Btu right now. U.S. wholesale prices are about 230 per million Btu right now. It's seasonally low because it's the middle of summer. It'll get closer to \$3.00 when winter comes. So U.S. LNG is in the money, so to speak, going to Europe, because it costs you another \$3–5 per million Btu to liquify, transport, and re-gasify the gas on the other end. So you're just about there.

The problem is that when gas prices recover in Northeastern Asia—it's been depressed because Asia had a very warm winter last year—that gas, since the U.S. Government doesn't control the flow of gas, thank God—that gas will flow to the highest value market, wherever that is. Traditionally, that tends to be Northeastern Europe.

The other problem is that Gazprom gas costs are very low. It's about a dollar per million Btu. And so it can supply gas to Europe, and it has in the past, for as low as \$2 per million Btu, or \$2–3 per million Btu. So at that point, if Gazprom wants to protect its market share, all it has to do is lower the price of gas that they sell in order to push LNG out of the market.

The fact that the European gas market has changed fundamentally, a point that others have made, is really very important. Sometimes I feel like we're fighting the battles of 10 years earlier rather than battles of today. Why has the European gas market changed? Part of it is the gas directive that David mentioned. Part of it is the competition case against Gazprom. So many of the discriminatory pricing policies that Colin mentioned are no longer possible in Europe. Once gas hits the European market, it can flow freely as long as connectors are there to move it. So more connectors are needed, for sure.

You can't charge Poland more than Germany, because that gas from Germany will flow back into Poland—if the Polish market were only open, which it is not, right, because it's controlled by a state company instead. So is there more work to be done in further liberalization, further connecting of the markets so that Europe will finally have a 500-million-person gas and power market? Absolutely. And U.S. LNG is definitely beneficial to Europe, and Asia, and all other LNG buyers. But let's not exaggerate its impact.

Mr. CLEARY. Just very briefly, two things. I think the Lithuania case that I mentioned earlier does show that introducing the competition of the LNG can result in lower pricing. So, for all the reasons Ed just said, it is a very good thing. We are just at the incipient stages. Three, four years ago there was no U.S. exports of LNG. So we've gone from almost zero to—I guess we began 17th in the world and now we're at No. 3. And so it'll—the export volumes are going to be increasing very dramatically in the next few years.

So we'll see how this—what impacts this has. It's a global market. It's absolutely based on price. And what happens in Asia affects what happens in Europe. So it's hard to predict. That's the difference between LNG and the pipelines. You have that dynamism and the ability to respond to changing circumstances.

But just—I just want to make the one point of—another point. Just I said it before, but the fundamental thing here is not to replace Russian gas to Europe, of course. It's to—if we get to the Nord Stream or the TurkStream, it's to stop the diversion of gas out of Ukraine. For all the harm Ukraine as a country—under siege, under attack—and the purpose here of these pipelines, in our view, fundamentally is to divert the gas around Ukraine. It's not to end—we're just seeking to keep that—work with that transit system, make it viable, and not turn our back on a country that's already under attack. So it's not about to eliminate Russian gas. It's to prevent them, by engaging in essentially warfare through economic means, against Ukraine.

Mr. KORANYI. Couple points. So U.S. Energy to Europe—actually, in the first quarter of this year Europe was already the top destination for American LNG. It's happening. In terms of what the transatlantic allies could and should do together to put these interconnectors in place—a couple of them I mentioned already. Access—what Colin, you were just talking about—like, access to LNG markets in general, and U.S. LNG in particular, is critically important. If you look at the map of Europe overall, then there is no shortage of LNG regasification capacity. It's just some of it is in the wrong place. Iberian Peninsula, too much LNG capacity. Stands idle most of the time. But then it's Central and Eastern Europe. So in Central and Eastern Europe you have some capacity still missing.

So from that perspective, this triangle of Swinoujscie, or the expansion of Swinoujscie, the Polish terminal up in the north, Krk I mentioned already in Croatia, and the Revithoussa Greek LNG terminal expansion are the critical pieces of the puzzle. So I think Swinoujscie is on the right track already. There was additional EU funding. The Croatian LNG terminal is sort of on the right track. I think Revithoussa could still use some support. And then there are these, like, little nitty-gritty interconnectors that are not sexy at all in the grand scheme of things, but yet critically important to have access to the LNG markets. One that was regularly floated but it didn't progress is a small 2 bcm interconnector between Hungary, Slovenia, and Italy that would give access to Central Europe to the mostly idle, or to some extent spare capacity of Italian terminals. So that's critical.

And then just on Ukraine, again, a critical piece of the puzzle is the implementation of the energy package in Ukraine. And Ukraine, unfortunately, has been slow in putting that in place, among other things. So that's a significant obstacle in preserving Ukraine as a viable transit country. So the sooner they can put that legislation in place and implement it—and the U.S. has been extremely helpful along with the European Union to help them—but it needs political will and it needs a speedy implementation to put that in place.

Mr. NIFTI. My two cents on this. I think so much had been said about it. I think we should continue our active energy diplomacy in the region. I'm specifically talking about the Caspian region, actually. And also, U.S. efforts on U.S. LNG and I think the Caspian resources are not—are complementary to the European energy security combined. I think we also need to—there are some small players in the region that are willing partners in that respect. I think we should continue work and encourage those willing partners, in respect, to achieve overall goals of diversification in Europe. Obviously the gas market is not as good as the oil market. It's really hard to reroute your supplies or change your supply structure on the natural gas side. But I think in that respect careful planning and work, as I say, with the local partners, smaller countries in the region, in Eastern Europe and also in the Caspian will help that effort.

Ms. STARKS. Great. Well, thank you to our panelists. That was a wonderful discussion. I'd like to open it up for questions from the audience. We don't have a roving mic, so anybody on that side there is a mic on the press table, you can press the button. And for those who are on this side, you can use mine. And I will move it over here if need be.

Are there any questions? When you ask a question, please indicate your name, your affiliation, and please ask a question.

QUESTIONER. Should I just speak here?

Ms. STARKS. I can repeat it.

QUESTIONER. Okay. So my name is Nick. I work for Congresswoman Marci Kaptur.

And one of the security issues, besides dependence on Russian energy in general, is I think the rise in corruption we're seeing in certain areas—for example, Firtash using corruption in Ukraine to stymie progress, or the potential security threat of the Russian Paks-2 nuclear plant in Hungary, or, you know, Szijjártó working for Gazprom. So I guess, what can the U.S. Government do, what can the Congress do, to push back against this trend? Is it technical assistance? Is it stronger, you know, work with our legal attachés?

Thank you.

Ms. STARKS. So did everybody hear the question? Okay. So the next couple people that have questions might want to go ahead and line up at that mic. But the question is, what can the U.S. Government and Congress do to push back against some of the corruption and corrupt practices that are also hampering the energy sector? Particularly you mentioned Hungary, Ukraine.

Mr. CLEARY. Start very briefly by saying that a key aspect of the U.S. assistance program, that the Energy Bureau that I'm a part of is instituting is on the governance question in the energy sector. So we've been working very closely with NAFTAGAS to try and have practices that are typical of Europe, the United States, and other open economies that will minimize the corruption in the energy sector. As far as Firtash, there is a public—there are avenues in Ukraine, and Ed would speak much more authoritatively on this than I, that differential pricing domestically, where you—you know, subsidize prices, and the ability to manipulate those—and Mr. Firtash is associated with those practices, as you know.

So that is something that has to be looked at. The new government is reformist. They just had elections over the weekend. There is hope that the reformist agenda will also include energy sector, and that some of these issues that you're mentioning can be

addressed now. But they're definitely real. They're definitely important. We have been engaged on them. But it's not a battle that is over. It's something that we have to keep fighting.

Mr. CHOW. Just on Ukraine—and David can talk about Hungary, Colin and I are both very fond of Ukraine. We first met in Ukraine, and I'm leaving for Ukraine on Saturday. So I mean, part of the problem of Ukraine, as your office and the Congresswoman knows very well, is that energy franchises have been something that political interests in Ukraine have fought over ever since independence. It is often a subject of coalition building even in Ukraine. We haven't had unity of purpose in the last Ukrainian Government, I would say, in the last 5 years. There's been inside the government fighting on control of energy franchises.

For the first time after independence, Ukraine will have a government—a majority party government in place that is committed to fighting corruption. And when you talk about corruption to Ukrainians, they think about energy about No. 1. So hopefully they will attack that problem directly. And the United States should definitely support it. Ukraine needs a lot of tough love in this area. Wherever the corruption touches U.S. jurisdiction, as Firtash does—did, in the extradition case that's going on right now—we should certainly prosecute it to the maximum extent.

Ms. STARKS. My colleague, Paul Massaro, who is the second-dimension economic officer at the commission.

QUESTIONER. So thank you very much, Danica. And thank you to Nick, who took the words right out of my mouth. So I'll ask a different question.

And that is, sort of out of curiosity, what is the future of the Norwegian piece of this whole puzzle, as a major energy exporter. And then, if you have time on the second one, Europe, and especially Germany, has invested a lot in renewable energy and sort of other sorts of styles of energy beyond the pipelines to try to become independent of pipeline politics. What's going on there? Has there been success there or not?

Thank you.

Mr. CHOW. Well, I think Norway's very bullish about its gas future. So even though forecasters have said that gas production will plateau at some point, if you look at Norwegian plans—both from the government and company level—they continue to see increases, particularly in the far north area of gas production. So Norway's a very, very important—as most of you know, Norway's not part of the EU. But nevertheless, it's a very important major supplier. Norway some years ago got away from index gas contracts. So it is pricing to the market, which hopefully all other sellers will do as well.

The second question was——?

Ms. STARKS. Renewables and——

Mr. CHOW. So, an untold story is that renewables and gas work very well together, because with renewables your problem is the intermittency of wind and solar. And gas-fired power plants are much more flexible to work with than either nuclear or coal, which tend to be the—so just because you want to expand renewables doesn't mean that you don't want gas. The other issue related to Germany is gas is used for industrial processes as well. It's not only for power generation. So gas—you know, if you're a German chemical manufacturer, for example, gas continues to be a very important input.

Mr. NIFTI. One small comment on the renewables side. Latest quarterly report by the European Energy Union puts 17 percent on the renewables. And I know Germany both

is a huge exporter of renewable technology for energy, and as well as renewable energy-producing technology. And also, on the other hand, it is concept of becoming energy hub, which is aspired by many countries in the continent—Turkey, Germany, Hungary, and everybody else is talking about becoming energy hub. And in that respect, a \$2 trillion economy, Germany obviously has probably that goal as well. And in that respect, receiving more gas doesn't hurt.

Mr. KORANYI. Just very quickly—so on the corruption question I just wanted to say two things. One, of course, radical transparency is critically important. The involvement of the European Commission in negotiating these long-term natural gas supply treaties, as stipulated in the EU Gas Directive, is critically important. If there are commission officials, the chances are much lower that the corruption in these deals will be included. And then I know it's a very controversial political issue, but I see individual sanctions, or sanctions against individuals involved in some of these controversial projects that could be extremely powerful. And I understand that these are—some of these are allied countries, NATO allied countries. But individual sanctions have been deployed before in this context and have been actually quite impactful in terms of behavior. So I would advocate looking into those.

Mr. CLEARY. I'm just going to add very quickly, on Norway I think that's a very interesting case, because mentioned earlier that Russia provides 40 percent of the European gas imports, and Norway is No. 2 with 35 percent. That doesn't freak anybody out. Why? Because Norway doesn't impose any political—they don't have any political motives. They're strictly doing it on a commercial basis. They're not cutting anybody off. They're not imposing political conditions. So I think it's a good example of it's not necessarily the volume. It's the intent of the actor. And clearly the concern of the other actor is the—which is the nature of this panel—is the political aspects of what they put into the gas equation.

So Norway is important, as Ed said. The projections are pretty much for them to keep going through 2040, you know, at the level of supply that they've been doing. I underline again the Baltic Pipe initiative with Poland, a new avenue of diversification that they're doing with the support of the European Commission. So I think Norway is critically important, very significant, but not a problem because they are doing it on a purely commercial basis.

Mr. KORANYI. Just quick on renewables and Germany. So the problem I see there is that renewables have been growing pretty impressively. But because of their switching off of the nuclear fleet and phasing out of the German nuclear fleet up until 2022, if I remember correctly, there is going to be a large piece of the electricity puzzle missing. And so gas will have to step in. And the other piece of that puzzle is coal. And it's unclear what the timeline will be in terms of phasing out coal in a German context. It's a highly politicized issue in the context of Germany. So it's hard to see. But there is certainly pressure from a climate action perspective to phase out coal sooner rather than later. And that's going to have effects—have an effect on gas demand as well. So it's hard to tell. And of course, on renewable demand as well.

Ms. STARKS. Ma'am, you've been so patient. Please.

QUESTIONER. Should I come up?

Ms. STARKS. Yes, you can use mine.

QUESTIONER. Okay. Valera Yegas [ph] from the Voice of America.

So I have two questions. The first one is, do you see Nord Stream 2 and TurkStream economically viable for Russia itself? And second, do you expect any U.S. sanctions to be imposed on Nord Stream 2? And if yes, what kind of impact it could have?

Thank you.

Ms. STARKS. Could you repeat the first question?

QUESTIONER. My first question? My first question is do you see Nord Stream 2 and TurkStream economically viable for Russia itself.

Yes, thank you.

Ms. STARKS. So the first question is, are Nord Stream—you know, we talked about the issue of commercial viability. And I think our discussion was more broadly on Europe writ large. But are Nord Stream 2 and TurkStream commercially viable for Russia itself? And I think this goes to Ed's point about if it isn't, are the governments having to subsidize and make up? So that was the first question, correct?

QUESTIONER. Okay.

Ms. STARKS. And then the second, I'm sorry, was regarding sanctions.

Mr. CHOW. At \$60 oil, those projects are viable. At below \$40 oil, maybe not so much. But at today's price of oil what's likely to be the price of oil in the future—you know, setting motivation aside—I will let Colin address that—that can Gazprom afford to do those projects? The answer is yes. I mean, look at other projects it's doing. I mean, I have to say, that if you look at the numbers, which is what I tend to do, the Power Siberia project is less economically viable than either Nord Stream 2 or TurkStream.

Mr. CLEARY. Just on the viability, I mean, again, I'm focused on the diversionary aspect of these two pipelines. And I think that is politically driven. So that's—the fundamental driver of the decision is political. There are economic aspects and commercial aspects, but one could easily have used the Ukrainian gas transit system, had it updated, renovated, and it would—you know, you could argue a commercial case that that would have made a lot more sense. But the reason for the diversion is a political one.

And, again, from the Kremlin's perspective, they have a clear objective in mind that they're executing. My—our concern, and what we've been expressing is—and expressed by many European partners is, why is Europe permitting this? Why are the end users permitting it? That's really it.

As far as sanctions goes, as you know, 2 years ago the U.S. Congress passed an omnibus sanctions bill called CAATSA, known as CAATSA. And that remains there. It has many different dimensions. And so that tool remains available.

Ms. STARKS. Any other questions from the audience? The gentleman in the back. If you could come up.

QUESTIONER. I'm going to crouch here. So I'm Sam Kanen [ph] from the office of Congresswoman Katie Hill.

So I'm wondering, with the completion of Nord Stream 2, because of Russia's—due to their dependence on energy exports, we all talk about how that would kind of bind Western Europe and the United States to Russia and give them leverage. But in any way would the completion of Nord Stream 2 bind the United States and Western Europe's needs and demands?

Ms. STARKS. So I actually want to add onto this question, if I may. So the question is would the completion of Nord Stream 2 bind Russia basically to demand from Western

Europe and/or the U.S.? But also a bigger question I think that we didn't address earlier is, where is Nord Stream 2 on the grand scale timeline in terms of Russia's expansion into the gas market of Europe? Is Nord Stream in the beginning? Is it in the middle? Is it toward the end? Because I think that also has an impact on how much it binds, right? You know, are they—is this part of the beginning, in the middle, or are we in the home stretch? So if I could I add onto that.

So any takers?

Mr. CHOW. I think you're absolutely right that Russia is terribly dependent on energy exports as a source of income. But I would just remind you that for every dollar that Russia gets from energy exports, 80 cents of that is oil and only 20 cents of that is gas. So if you're looking at what it's more dependent on, it's much more about oil than gas for reasons of physics that I can explain at another time.

But I see the Russia-Europe gas relationship as a codependent relationship, and not just one way. It is true that, as Colin said, that Europe is 40 percent dependent on Russia for its gas imports. But Russia is dependent on Europe for 80 percent of its gas exports. So who's more dependent, right? Is it Europe that's more dependent or Russia that's more dependent on this relationship? Well, they're both very large, so I would say that they are quite codependent relationships.

As to who has more leverage, I think it depends on how you play your cards. So the way Europe has tried to improve its negotiating position is by completing market integration, by making sure that Russia cannot pit one European country against another in terms of how it sells its gas. And the more it liberalizes its gas market, the more it enforces its competition laws. You know, I have to say, some of us were disappointed that the competition commissioner wasn't tougher on Gazprom in terms of fining it for its past malpractices. But the more it does that, then Europe's position improves and Russia's position erodes.

Mr. CLEARY. Just I've heard—you know, some of the energy experts that we talk to consider that these pipeline projects, these grand European pipeline projects, may be the last of their kind in Europe. So we may—to your question about where does this fall, it could be that this is the end of that, and that the more flexible and dynamic LNG model would be what would happen more going forward. And that—all of this has ramifications, but the ramification in the nearest term, I think you've asked a question Danica, is who loses?

And I'll just say one more time, it's Ukraine. They're going to lose in the very near term if these things are built. And they lose billions of dollars. They lose the value of their gas transit system as an export vehicle, et cetera. So there are immediate costs to—and they're very concentrated. There are the other regional costs for TurkStream and other dependency aspects regionally. But the Nord Stream has a volume of 55 bcm. The TurkStream 2 is 16 bcm. So the magnitude of the Nord Stream is just larger in terms of the size. And that's one of the reasons why it gets more attention.

Mr. NIFTI. Maybe last—just a few comments on this. We always think about all the resources flowing to the West from the Caspian, especially. Right now almost 80 percent of Turkmen gas is committed to China. There's another emerging market—emerging player in the region that we—maybe it's a discussion of another panel in that respect, but I would say that—I just want to say that we shouldn't take for granted all the resources flowing toward the West in that respect. And there is an emerging player in

the—especially in the Central Asian region, which is putting together a lot of connectivity projects in the region. And I think when we talk about pipeline politics this is an issue that we'll have to explore in the future.

Ms. STARKS. So, Efgan, you actually just opened up a Pandora's box by mentioning China. If I could step in, to what extent is China involved in financing or sponsoring energy infrastructure in Europe thus far? Is it—are they making—is this a major play as part of One Belt, One Road, or other projects?

Mr. KORANYI. In theory, yes. In practice, I don't really see it that much, more in the transportation sector, in other sectors. So far, OBOR, the One Belt, One Road Initiative, from an energy perspective tends to focus more on Asia and Africa, to a large extent, and more on hydro, renewables in Africa in particular. I don't really see—there was a lot of Chinese interest in the Three Seas Initiative, but I haven't really seen that manifest itself on the energy side that much so far, in concrete projects in any shape or form.

Ms. STARKS. Any other questions from the audience? Want to make sure.

So one last question. We only talked a little bit, but, David, you brought up the eastern Mediterranean. Efgan also talked about this as well. And, David, you were sort of cautioning about what we could actually expect in terms of that as another source of diversification. Could you talk a little bit more about some of the concerns there?

Mr. KORANYI. First of all, the quantities are small. And we are talking about deep offshore. So it's fairly expensive gas. Second, the regional equation is such that it will be very hard to evacuate that gas from where it is right now. I'm optimistic about Egypt, actually. Egypt in a short period of time became a—it was an exporter before, 5 years ago. Became an importer. And now because of domestic energy reforms and finds in the Nile Delta it's becoming an exporter again. There are plans to use the idle Egyptian energy terminals to export Cypriot gas. That might still proceed. But we are talking about very small quantities. So Aphrodite and Calypso are the two fields that have been discovered so far offshore Cyprus. It's not—it's not big. So in a European context, I forget the exact number, but it's actually quite negligible. So it's not going to be a major source of diversification.

Israeli gas, it will be very hard to bring it to Europe. The East Med pipeline from Israel to Cyprus, and then onwards to Crete and Greece—I always considered that a pipe dream. It's complicated from an engineering perspective. It's extremely expensive. If somebody's willing to put \$8 billion on the table, maybe. But I don't really see it as a commercially viable project, not to mention some of the political difficulties and the exclusive economic zone problems. So I see East Med gas relevant in a regional context, in a local context. Like East Med gas or Cypriot gas could be very helpful for the Cypriot economy, but not beyond the region for the foreseeable future.

One last point—there was a lot of hope pinned on Cypriot gas making it to Turkey, and I think to the diversification of the Turkish energy mix, not just for the political problems but also because Turkey has been focusing more on coal—indigenous coal resources and have been diversifying gas imports from other sources. So I don't really see a place for Cypriot gas or East Med gas in general—Israeli or Cypriot gas—in the Turkish energy mix anytime soon.

Mr. NIFTI. I will say too much politics involved over there. Plus, heavily militarized now. A lot of navies in the Eastern Mediterranean right now. And looking into perspective, I will say that the best market is the close market, which is, I think, Egypt and Tur-

key are the potential markets for that gas. And I would agree with David on one thing, that it's taking a pipeline or anything to Greece and then delivering to Europe is a kind of a dream. I would say it can play a positive role in the future in terms of settling some of the problems in the region, but at this stage I don't see immediate results of that.

Ms. STARKS. Just open up one last time to any questions, and also if any panelists have any final statements they would like to make.

Seeing none, we'd like to thank everybody for coming out. I know we're getting into lunchtime and I hear stomachs growling from the back of the room. Thank you very much. There will be an official transcript posted and the video will be available on our website.

Thank you so much.

[Whereupon, at 12:24 p.m., the briefing ended.]





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