

THE BROOKINGS INSTITUTION

GLOBAL ENERGY AGENDA FOR THE 21ST CENTURY

Washington, D.C.  
Tuesday, March 15, 2011

**PARTICIPANTS:**

**Introduction:**

MARTIN INDYK  
Vice President and Director, Foreign Policy  
The Brookings Institution

**Moderator:**

FIONA HILL  
Senior Fellow and Director, Center on the  
United States and Europe  
The Brookings Institution

**Featured Speaker:**

HIS EXCELLENCY LARS LØKKE RASMUSSEN  
Prime Minister  
Kingdom of Denmark

**Discussant:**

CHARLIE EBINGER  
Director, Energy Security Initiative  
The Brookings Institution

\* \* \* \* \*

ANDERSON COURT REPORTING  
706 Duke Street, Suite 100  
Alexandria, VA 22314  
Phone (703) 519-7180 Fax (703) 519-7190

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

MR. INDYK: Ladies and gentlemen, welcome to Brookings. I'm Martin Indyk, the vice president and director of the Foreign Policy Program at Brookings. We are honored and delighted to have the opportunity to host the Prime Minister of Denmark, Las Løkke Rasmussen, who is here on an official visit to Washington. He met with President Obama yesterday, and has joined us this morning to talk in particular about the new energy policy which he has decided on with his government and he will explain that to us this morning.

Having had a chance to review it, it is ambitious and highly appreciated in terms of what it is that Denmark is trying to do in this area that I think the United States could learn a lot from.

Prime Minister Rasmussen has a distinguished political career. He began in the 1980s, where he rose to be the National Chairman of the Young Liberals. Then he became the county mayor of Frederiksborg County. In the early 2000s, he became the Minister for Interior and Health, then rose to the position of Minister of Finance in 2007; in 2009 he became chairman of the Liberal Party and thence Prime Minister of Denmark.

Denmark, of course, is an ally of the United States, is actively involved with its forces in Afghanistan, and has a history of close relationship and friendship with the United States. So, it's in that context that I'm very glad to welcome him here today.

Fiona Hill, the director of our Center on the U.S. and Europe will moderate the conversation with the Prime Minister after he makes his opening remarks. And we've also invited Charlie Hill -- Charlie Ebinger -- that was a Freudian slip -- Charlie Ebinger, the director of our Energy Security Initiative, to join the conversation because of

the Prime Minister's focus on energy in his presentation today.

So, Prime Minister Rasmussen, welcome to Brookings and we look forward to hearing your remarks. (Applause)

PRIME MINISTER RASMUSSEN: Thank you so much, Mr. Indyk, for your introductory remarks. Thank you for organizing this event and for hosting this event today.

As you know, Denmark and Brookings have enjoyed excellent cooperation over the years in many areas of foreign and security policy, especially related to cooperation between Europe and the United States.

The topic today, as you mentioned, is the global energy agenda for the 21st century and it fits extremely well in this regard. I believe that energy security and the transition to a green economy will be one of the key strategic issues on our common transatlantic agenda in the coming years.

Denmark is tackling the clean energy challenge head on. Just a few weeks ago, as you pointed out, the Danish government put forward a new energy strategy where we set the goal that we should be independent from fossil fuels by the year 2050.

In both Europe and the United States, we are confronted with a very similar set of challenges. First, we need to reduce our dependency on energy supply from volatile regions and unpredictable suppliers. The current increase in oil price due to the instability and fundamental change in the Middle East and Northern Africa has once again reminded us on our vulnerability and if you look to the recent events taking place in Japan, problems with the nuclear reactors after the earthquake, it's just another example

of this.

So, the price increases hurt our economies and risk becoming a break on our efforts to achieve growth after the crisis. And many countries, once again, find that their options in terms of supply from other sources are limited. By maintaining a high demand for fossil fueled energy, we end up transferring massive amounts to societies and regimes that may not share our values. So, that's one reason.

Second, we are faced with the reality that the global demand for resources will increase significantly over the coming years. By 2050, the world's population will have gone up by approximately 50 percent. Energy demand is projected to increase by more than 30 percent in the coming 25 years. Ninety percent of that growth will come from non-OECD countries with China accounting for 75 percent alone.

So, this will lead to intensified competition for scarce resources and further pressure on the price of fossil fuels.

And third, we need to reduce emissions to combat global warming, and fourth, clean energy solutions and green technology present a massive commercial opportunity that our businesses must be prepared to seize. This requires a strong focus on innovation, research, and development.

In my view, these four chances together make a compelling case for action. Status quo is not sustainable. We need to undertake fundamental transformation of our economies, freeing our self from the much too high dependency on fossil fuels.

Yet, as we all know, change will not come by itself. The transition to a green economy will require a determined, long-term effort, and difficult political decisions. Our starting points are vastly different, but I believe that Denmark and the United States

are natural partners in this effort.

Denmark brings to the table considerable experience from our progressive national energy policy over the past decades. We have shown that our economy can grow without increasing total energy consumption. And now we are taking energy policy to the next level. We will show that economic growth can be achieved together with the phasing out of fossil fuels, and with less energy than today.

Danish companies have cutting edge expertise in everything from wind power to energy efficient buildings to vast solutions that will be important in the transition in the United States. And American companies are looking to invest in Denmark, and for that reason I see great potential in expanding our commercial cooperation on clean energy.

Realizing the goal of a fossil free economy is a daunting task. We are fully aware of that, but we believe that freeing our self from oil, coal, and gas can be done. Our new strategy, "Energy Strategy 2050," outlines how Denmark can turn this ambitious agenda into concrete action. I believe it is one of the first national roadmaps towards a fossil free economy.

The strategy clearly states that our goal is independence from coal, oil, and gas by 2050. This will help to maintain energy security, contribute to curbing global warming, and take advantage of the opportunities for green growth and new green jobs. This could sound like an impossible task, but I would like to emphasize that inaction also contains risks.

We have to be clear that becoming independent of fossil fuels will entail economic costs for households and businesses in the short- and medium-term.

Renewable energy is not yet fully competitive with technologies based on fossil fuels, and furthermore, public revenue from taxes on fossil fuels, high in Denmark, will fall. If we do not reduce our dependency, however, there is a reason to believe that businesses, households, and society as a whole, will experience higher cost and more uncertainty in the longer term.

The strategy presents a range of concrete and detailed proposals for how to substitute what you could call "black energy" with green energy, expand renewable energy, and decrease energy consumption, and let me just highlight a few of those proposals.

Wind turbines are already a cornerstone in Danish energy policy. Wind power will be further expanded in the coming years, especially in off shore wind farms. Today, wind energy accounts for approximately 20 percent of our electricity, and the good thing about wind is that it is plentiful and it's cheap, but then on the other hand, it is highly unreliable. On a calm day electricity produced by wind power will be low. On a stormy day, production will be high. Needless to say, modern societies cannot base their energy supply on weather forecasts. We need to ensure that high degree of energy security no matter the source.

So, as we expand the role of wind power, we must make sure that energy security is not challenged. In the future, we have to find stable and cost-efficient ways to store electricity. In short, we have to make electricity a smarter energy source than it is today.

One solution is smart grids, which will improve energy management significantly. Smart grids will enhance communication between households and power

plants. As an integrated part of a smart grid, electrical cars, for example, can be put to use as a decentralized storage facility. Our washing machines can be set to turn on at night when power is plentiful, and in all, this will enable us to balance the changing production levels of electricity by wind turbines.

If we combine smarter infrastructure with more wind power capacity, we expect energy to double -- wind energy to double over the next 10 years in Denmark, covering more than 40 percent of our electricity in 2020.

We will also initiate a large scale shift from coal to biomass at our combined heat and power plants turning our heating system green. Ten years from now in 2020, more than half of our district heating will be produced from biomass compared to around one-third today. Expansion of the district heating network in Denmark has made it possible to utilize excess heat from power plants. The share of district heating produced by combined heat and power plants is about 80 percent. The share of electricity from coal production is about 55 percent. And just to compare, in the United States, about 7 percent of electricity is co-produced with heat.

The expansion of combined heat and power has led to vast improvements of energy efficiency and is the most important explanation why energy consumption in Denmark has been almost stable for the last 30 years. In the same time, we have witnessed a growth in GDP, about 80 percent, so we have managed to unlink economic growth from increased energy consumption.

We will also explore the technical and economic potential for further use of biogas from farming sectors, turning manure into green energy. One of the really difficult challenges in reducing is reducing fossils in transportation, but we are starting

with an increase in the use of biofuels in our transport systems, making 10 percent biofuels mandatory by 2020 and electrical cars are exempt from taxation until 2015. This may sound like as small measure, but in a Danish context, I can assure you, this is actually a considerable subsidy considering our very high automobile taxes.

We will take measures to increase energy savings even further. Already a house built in 2008 only uses half the energy compared to a house built in 1977. New energy standards for building, both old and new buildings, will take us further down this road. By the year 2020, energy consumption in new buildings must be 75 percent lower than today.

And at the same time, we will continue to invest in research and development. During the last three years we doubled our investments in energy R&D and we will continue to invest substantially over the coming years.

And then you could ask: where do these measures take us? Well, in 10 years from now, in 2020, 33 percent of total energy consumption in Denmark will be covered by renewables and today the figure is approximately 20 percent. In short, we expect to increase the share of green energy in our economy by more than 50 percent in less than 10 years. At the same time, we aim to reduce our energy consumption by 6 percent, and this will be a significant step towards a fossil-free economy and lay down the tracks for a new green economy in Denmark.

As I have mentioned, green technology is not competitive compared to fossil fuels. Subsidies are necessary and will continue to be so over the years. Going green will come with quite a price tag, hopefully just in the short run. In the long run, however, I believe that the broader economic and political benefits of a new green



economy will outweigh these costs.

You could argue that this is a necessary investment for the future. To succeed beyond 2020, however, we are faced with some important technical milestones along the way. I see five such milestones.

First, cost of large-scale renewable technologies must be lowered. The unit cost of wind power, solar, and other technologies must be reduced compared to today. Second, the potential of biomass must be fully utilized, and thirdly we have to find cost-efficient alternatives to fossil fuels in transportation, and my fourth point is that transmitting and managing electricity must be improved if we are to make electricity the future cornerstone of our energy system. And my last point, fossil technology must be improved, for example, by making coal a cleaner technology than today, for example, through carbon capture storage.

And as we progress down this path, we must be ready to capitalize on the significant business opportunities that the green transition presents. We believe that turning Denmark into a green energy zone will have a significant positive impact on our green businesses. Our new strategy will contribute to making Denmark an even more attractive large-scale test facility for green technology. We aim to be a leading test location for both Danish and international businesses, for example in electrical cars, second in raising biofuels, wind turbines, and smart grids.

Today I am proud to say that Denmark is already the number one exporter of green tech within the European Union. Over the past 10 years, Danish exports of green tech has increased much faster than exports on ordinary goods. This underlines the importance of the green tech sector as an engine for growth and job

creation in Denmark.

An important part of our approach is our use of energy taxation schemes. Energy taxes have indeed changed the behavior of Danish businesses and households and raised awareness of saving energy.

In Denmark, taxes on energy, including on CO2 make up about 2 percent of GDP. You could argue that taxes and subsidies are not the obvious tool to use, particularly in a period of modest growth and job creation, but in Denmark, it is part of the explanation for why we are among the leading countries in terms of energy efficiency. And let me illustrate this through an every day example. A gallon of gasoline currently costs around, I guess, \$4 at the local gas station here in Washington. I know many of you think this is expensive. But in Copenhagen, a Danish consumer will pay more than \$8 for the same gallon.

It is important that energy taxes are used in an intelligent way to promoting societal and public goals and not jeopardizing the competitiveness of our businesses. This is a real challenge as global competition intensifies.

Finding the right balance in terms of taxation is extremely difficult in all countries and I'm not arguing that Denmark has found the perfect model, but broadly speaking, we see energy taxes as a cost-effective way of increasing efficiency and stimulating the development of new technologies.

Our current approach in Denmark is heavily influenced by our experience since the energy crisis of the '70s and the late '80s. The oil price shocks taught us the hard way the importance of energy security and the need to save energy and increase our efficiency. Since then, we have been successful in combining economic growth with

saving energy. From the late '70s and until 2008, Denmark's economy grew by almost 80 percent while energy consumption was held almost stable.

As the Danish government put forward its ambitious strategy for 2050, we are doing so in the context of a popular mindset, build on these experiences. We have a more or less stable consensus, both societal and political, that energy savings and green energy are important for Denmark's future.

One of the more curious steps that were taken in the '70s, was the introduction of car-free Sundays. I remember it very well. I was 10 years at the time, in the period from '73 to '74, during the oil crisis, driving your cars was actually prohibited on Sundays except for emergency purposes. So, at that time, Danish roads were simply empty, children were actually playing on the highways. And I guess it is right to say that the net savings were probably modest, but the Sundays played an important role in generating awareness in Denmark of energy as a scarce and costly asset, and this actually helped create an understanding of the need for energy savings and efficiency.

As we seek to address today's challenges of growth, energy dependency, and climate change, it is clear that our national efforts cannot stand alone. We need more international collaboration. The UN has to be the global framework for progress on the green agenda. With the successful outcome of COP16, which builds on the basic agreement from Copenhagen, we have created a foundation for further action, including at COP17 in South Africa later this year, and the Rio+20 summit next year.

It is said that the private sector will have to deliver 80 percent of total investments needed to reach global climate goals. We need stronger engagement from businesses and investors in the green growth agenda. And to facilitate this, the Danish

government has taken the initiative to create a public/private partnership called the Global Green Growth Forum. The Forum will bring together key politicians, business leaders, major investors, and experts, to find economically viable and practical solutions.

Bringing on board these stakeholders might be the key challenge in our global energy agenda for the 21st century.

So, ladies and gentlemen, Denmark is doing its part by leading by example and showing that growth and fossil fuel independence can be combined, and by promoting practical international cooperation and working with friends such as the United States.

Thank you very much for your attention. Thank you. (Applause)

MS. HILL: Thank you very much, Prime Minister Rasmussen. As you are taking your seat and putting your microphone on, I might turn to our colleague Charlie Ebinger. I know who you are, Charlie, don't worry. Martin may have made that slip.

Anyway, it's a great presentation that the Prime Minister has made about Denmark's strategy. I guess the question is where you left it, Prime Minister, at the end about the international cooperation and about whether this is really feasible for others to really take the initiative that Denmark has taken. I mean, something that immediately comes to mind, I'm sure, for many in the audience, particularly with your reference to car-free Sundays. In a very large country like the United States, it's a little difficult to have a car-free Sunday in many areas. In fact, there's a tradition of Sunday driving, certainly, in the United States where people go out on road trips, and I certainly wouldn't want my four-year-old to be playing on the Beltway on a Sunday or any day, in fact. I mean, it's a wonderful image, and certainly might be something that might be possible to affect in a

smaller, compact area, certainly on a local level in the United States. I mean, there's lots of examples of local initiative, but for a larger country, even for a larger European country, the kind of ambitious program that Denmark is embarking on seems really quite difficult given the balance. I mean, there certainly seems to be a certain set of unique conditions that Denmark has. Your reference to your ability to build upon wind energy, also to tap into biomass, I mean, these are things that are not always available on a national scale in other countries.

So, Charlie, what do you think some of the difficulties would be for others trying to approach the same kind of plan that the Prime Minister has outlined?

MR. EBINGER: Thank you, Fiona. I would like to ask the Prime Minister, obviously, you are to be applauded for a very dynamic, vigorous program. I would particularly champion your \$8 a gallon gasoline. I have been a longstanding advocate of a high gasoline tax, but it's not very popular here, as you know.

Coming to the broader question of Europe's energy future, which you are, of course, a leader in various areas you highlighted, what do you think are the prospects with the EU about to come out with their 2050 strategy for convincing the rest of Europe that the question of nuclear power, for example, in France, Belgium, and elsewhere, particularly in light of the Japanese tragedy, Germany, of course, has announced they're reviewing their nuclear strategy and yet at the same time they import nuclear-generated electricity from France, which seems a bit of a duality there, the whole question of natural gas, which of course with shale gas being so prolific in the United States and we now not needing LNG and LNG, at a relatively cheap import price, coming into Europe? I was just at the Cambridge Energy Research Associates annual CERA

week in Houston and Algeria was now talking about shale gas reserves that were off the roadmap, 25,000 TCF, if only 20 percent, is potentially available, that would probably come into Europe, you know, relatively cheaply, and certainly more cheaply than the current price of renewables, although you're right to point out that the costs are coming down quite dramatically.

So, I just was -- the broad question is: where do you see Europe kind of being convinced to follow the dynamic lead that Denmark has shown the path for?

PRIME MINISTER RASMUSSEN: Well, I mean, what we are doing in Denmark is actually a part of the European strategy. I guess it would be right to say that we are moving a bit faster than the European countries in average, but still, it's a part of European ambition.

About the nuclear power plants, as an energy resource, in the European context, nuclear power is defined as clean energy when it comes to CO2 emissions, but having said that, I'm absolutely convinced that what we have witnessed in Japan right now will have some kind of impact on the national planning and the national strategies, and you mentioned yourself that Angela Merkel, the German chancellor, most recently, I guess it was yesterday -- I'm a bit confused, you know, jet lag and things like that -- but I guess it was yesterday, announced that she will look into this with open eyes because having said many positive things about nuclear energy, the Japanese example truly shows that there is, to some extent, a security problem.

MS. HILL: In terms of the question that Charlie raised about natural gas, obviously that's been chosen at the EU level as the transition fuel, and also at the national level of places like Germany, it's been the fuel of choice, and it really seems to

put back many of the goals that you were outlining, perhaps even further than the 2050 horizon.

Europe had set the 2020 goals of various reductions by 2020, but gas seems to be filling in as the fuel of choice across the board in most countries. How are you, in Denmark, addressing this issue? I mean, you may be moving so much faster ahead than most of your neighbors, although many of your neighbors in Scandinavia, the Swedes and Fins and others, don't use a lot of natural gas, also. But that's certainly not the case in your neighbors to the south.

PRIME MINISTER RASMUSSEN: In Denmark we use a lot of natural gas because the North Sea is a source, but realize that in a longer term perspective, we have to be independent, also, from natural gas. And, I mean, this is not something we can change overnight. We have to define a vision. And even though I am arguing that we will be fossil free -- or not fossil free, we will be independent from fossil fuels, and that's a slightly different thing, in 2050, natural gas and oil and coal will still be a part of our energy consumption as we are moving forward. And that's why we have defined this strategy, which is full-fledged -- I mean, it is not only working hard to become independent of fossil fuels. It's also, at the same time, very important to increase our energy efficiency, so we will be dependent on natural gas, oil, coal, for many years, but we must use this energy source with greater efficiency.

MS. HILL: Charlie, any perspectives on this from the U.S.? Certainly that's been a goal of the Obama Administration, that's really been with our Secretary of Energy Chu, a very famous scientist who looked at these issues (inaudible) being one of our central goals. I mean, the ways in which the United States could pick up on some of

the ideas that Denmark has put forward?

MR. EBINGER: Well, clearly, I think the Danish plan fits very nicely with President Obama's vision of the world too, from going back to his pre-election times, you know, he's been a strong supporter of renewables and energy efficiency. He's probably been the greatest champion we've had in moving away from the internal combustion engine with electric cars. But I think one has to keep in mind the scale in the United States that makes these things so difficult.

I mean, just one quick example. The President set a goal of a million electric vehicles by 2015, most of which people think is overly ambitious, but nonetheless a good goal. But, you know, we have 260 million cars on the road today. So when the President cites, you know, electric vehicles as the way to deal with our energy security, and some of the Congress, who seem less informed, talk about it as a way for energy independence, you know, we're talking about 30, 40 years before we're going to have enough electric cars on the road to truly make a difference and get off our petroleum import dependence in that particular sector.

I also think, there is a danger, I think, of believing the fossil fuel prices are on an inexorable rise. I mean, I just think back a few years ago when, you know, we were abandoning plans for natural gas because gas was up at \$12, \$13, \$14 an MCF, and now with shale gas, we are pretty certain we will not have prices go above \$6 for the next 25 or 30 years in this country, and for those of you that aren't energy experts, you know, that's equivalent to about \$45 a barrel oil. Looks rather attractive. We even have people talking about bringing the petrochemical industry and the chemical industry back from overseas when they all fled the United States because they're going to have a



cheap feedstock.

So, I just -- I get worried when we kind of accept trend lines. I mean, in addition to the shale gas revolution, how many of us thought that something like the Macondo oil spill might make people around the world rethink deep offshore oil drilling? Now, you know, that has momentous implications if we were to decide to have a long-term moratorium on that because most of the oil refining in the world today is from offshore. It's not from on land anymore. And, you know, how many -- I mean, of course nuclear energy has been a sensitive topic for many years, and particularly in Europe more than the United States, but now how many people thought that something like we're seeing in Japan, which of course is one of the cornerstones of nuclear energy development may make people rethink that.

My only concern is as we start foreclosing this or that option, and sometimes for very good reasons perhaps, we need to think about, what does that do in terms of putting more onus on the remaining fuel options, and I just don't think there's any foreseeable situation in the United States where you're going to get renewables up to, say, more than 20 percent within a 15 or 20 year time horizon.

MS. HILL: I mean, this raises the question, you said in your opening remarks that there was a real consensus in Denmark now at the political and societal level about the importance of going green. How much could that consensus be affected in the future by larger international trends? I mean, obviously, there's a great deal of focus now on China and China breaking into green technology. Obviously that will increase some of the competition for Danish green goods in a major way. But, you know, in the United States there's still a big debate about -- as Charlie's outlining here, because

of all of the other changes in gas and energy markets -- about whether there is a real future in many of these green technologies.

For Denmark, I mean, do you really think this consensus will be able to hold in the face of some of these differences of attitude?

PRIME MINISTER RASUMSSEN: Yes. I'm actually totally convinced and I will tell you why in a few seconds. First of all, I would like to say that you need some kind of consensus in order to define a vision, and without a political vision, you will not be able to reach these goals because what is of crucial importance is stable prices.

You just mentioned that the fluctuation in natural gas prices could, you know, create some shift in minds for a period of time giving the crisis, people (inaudible) this about renewables, and then the market price changed and we forget all about it. And that is not sustainable.

You need to create a framework also for investors and in order to do so, you must be sure from an investor's point of view, that you can actually rely on prices. So, without taxation schemes, without subsidies, you will never reach this goal, and in order to define these taxation schemes and subsidies, of course you need some kind of political consensus.

In a domestic political debate in Denmark, people will argue that the opposition and the government disagree on this, but in an international perspective, we don't, so there is a broad consensus. For the reason I mentioned, I mean, it's a part of our mindset, and I think it is also linked to the fact that we are a small, open economy, and if you look into this, you will find many, many good reasons for going green.

Two years ago, everybody was discussing climate change, and to some

extent, perhaps, people thought that it was almost a religious movement, and some people reacted against this. But even though you don't believe in this, I'm a believer, but even if you don't believe in this, from a small country's perspective, there are additional good reasons. Why should we get dependent on regimes, which stands for values that are totally against ours? Why should we transfer huge amounts of money from our own society to those kinds of societies, just to mention a reason?

If you look to a world map showing the fossil fuel resources and combine that world map with a map of freedom, I guess, that's being a liberal. I mean, that's a very good argument for going green.

MS. HILL: This is probably a good segue into the audience. We'll have a question -- he will take a couple of questions together. Sir, and then the gentleman at the back.

MR. GARAMELLA: Prime Minister, thank you very much for your wonderful presentation. I am Suresh Garamella from the International Energy Office of the State Department. I have looked at your Climate Commission Report, studied it, I have presented it at State. I think it's a wonderful plan you have. The one piece which is a critical requirement by the 2050, which I would like a comment on, is storage and what you mentioned, this intermittence invariability.

Denmark has the hydropower backup in Norway and Sweden and so on, so you have that luxury, but do you foresee a lot of additional research and additional kinds of storage besides in your district heating and electric vehicles and so on? And perhaps even beyond, there are other countries, which don't have the luxury of the hydro backup and such, and also the good connections to the neighbors. Perhaps, I was

wondering if you could extrapolate and comment on how other countries might address this challenge. Thank you very much.

MS. HILL: That's good. Let's take one more question. This is a question on storage, and this gentleman here on the aisle.

MR. POMERANCE: Mr. Prime Minister, thank you very much for your visionary statement. I think it should be --

MS. HILL: Is the microphone one? Just one second. And if you could just introduce yourself, please.

MR. POMERANCE: Sure, my name is Ralph Pomerance. I'm with an organization called Clean Air/Cool Planet. And I would like to thank the Prime Minister for his quite visionary statement about the future we need and his reference, in particular, for the need for innovation, research and development, to bring prices down on substitute technology so that we can get there on a reasonable timetable.

I wanted to suggest sort of a bit of special role for Denmark in its geography, because I think it might hold the key to helping us get to a consensus here in the U.S., and that is Greenland. And I say that because there's a foreign minister -- the Arctic Council is meeting there in May at the foreign minister level. Most people don't know that Greenland in some ways is -- I mean, it's Danish territory, if that's the right term, but it's shrinking. The mass of Greenland is shrinking. Danish scientists have played a big role in this. And the implication of that is that global sea level rise is now accelerating and most estimates by glaciologists, because of what's going on in Greenland and Antarctic now, suggest that we're looking at a meter by the end of the century, at least in -- maybe 6, 10 inches by -- in the next 40 years.

This will transform the coast of the United States, threatens a great deal of real estate in this country and perhaps may turn the climate change issue into the sea level rise issue in some ways.

Now, my question is, this summit or ministerial in Nuuk provides an opportunity to educate and also to support the UN process, and the Arctic Council has a taskforce which includes work on methane, ozone, and black carbon, major components to the greenhouse effect, and I'm wondering if you -- we've got two months left before that ---- if you intend to sort of push things forward there? There is a debate about how much can be done there, particularly on methane which I think is part of your strategy, and the capture of waste. Methane is a major contributor to warming, potential energy source.

So, I'm wondering what you might have in mind for Nuuk. Thank you.

MS. HILL: Thank you very much. Those are two quite different questions of course. The first one on the sort of technological aspects of storage and some of the ideas that you might have of taking things further and what other countries might learn. And then one, you know, obviously, which also has some sensitive political implications because, of course, Greenland is in the process of increasing its autonomy, potentially even independence from Denmark -- at some point in the future, not that I'm advocating on behalf of the Greenland people, but certainly we know that this is a big debate now in Denmark.

And you've moved a long way, in fact, in reaching a consensus with Greenland on the path forward, so there's also obviously an indigenous Greenland voice in the Arctic Council that you have promoted on the part of Denmark. So, this is also, I

guess, a big political issue for you, sensitive issue, but also a very important one in terms of the educational role that you could play on these issues.

PRIME MINISTER RASUMSSEN: Well, it's actually not a very sensitive question. I mean, Greenland is a part of the Danish kingdom and it's very independent and we have agreed on this between Greenland -- the Parliament in Greenland and the Danish Parliament, but that's not the question. I mean, Greenland is a living example of the need to change in order to combat global heating, and for that reason, the summit in Nuuk is an extraordinary platform for arguing this case. But being a very pragmatic person I would say that if we stick to the global heating as the one and only reason for going green, I honestly don't think we will succeed, because this comes down to personal behavior and of course some people are idealistic enough to, you know, buy an electric vehicle instead of an ordinary car for political or idealistic reasons, but people in general, they behave in their daily life due to what kind of incentives we have provided through political decisions.

So, if you want to change it -- I mean, I totally agree that combating climate change is a very good reason for going green, but we must use this argument to take political decisions so that people in their ordinary life, make the right decisions.

I would at least argue that.

The other question about storage facilities, Denmark, to some extent, to be dependent on hydro power from Norway, and you could add nuclear power from Sweden that is a very important question.

I mean, the Scandinavian society could actually be a model to follow in this discussion. We have established a Nordic single electricity market, and that is a

market, which actually enables us to increase our dependency on wind energy. Without access to Norwegian energy or Swedish energy we couldn't invest as much as we do in wind power. So, market access, smart grids, not only on a national scale, but also internationally, is a part of the solution. And in the European 2020 strategy for growth and job creation in Europe, we have actually emphasized that we must invest heavily in a European energy market, for security reasons, but also for making it possible for some countries to invest if the circumstances are right in wind energy, other countries in hydro energy, and so forth.

MS. HILL: Thank you. I have a couple of questions here. I'll take the two together, please.

MR. MASSY: Yes, Mr. Prime Minister. Thank you for your comments. My name is Kevin Massy with the energy program here at Brookings and I'd just like to pick up on the last comment that you made regarding growth and job creation. It's probably no coincidence that Denmark's 2050 energy vision came out just as the EU is discussing its own 2050 vision and it is obvious that Denmark is an advocate of more ambitious EU emissions targets. I'd like to know your views on the comments by the EU Energy Commissioner, Günther Oettinger, who said that more ambitious EU emissions targets would accelerate the deindustrialization of Europe, and just get your views on the competitiveness implications of the EU implementing aggressive emissions reductions targets as Denmark is advocating?

MS. HILL: Thank you. And there was a question from the lady just behind you. Thank you.

MS. CARRUTH: Thank you. Thank you, Prime Minister, for your

presentation. My name is Riva Carruth, and I'll be teaching a class as an adjunct professor at Georgetown University on the issue of transatlantic and UN policy cooperation in the area of environment and global climate change.

My question to you is: how is the Arctic region playing into this larger plan that you have for 2050? It's my understanding that potentially one-fourth of all new gas and oil reserves in the world could potentially be under the Arctic, but it's also the case that the great powers are now rushing to stake a claim there, so from the transatlantic relationship point of view, where do you see the U.S.-EU Energy Council going with this in terms of trying to find a way to cooperate in a way that meets the needs of the transatlantic region to achieve these goals?

And then the other issue is, even though Denmark has done a very good job, I feel, with integrating the indigenous populations into the broader framework of government and society and values in Denmark, there is still a growing movement of indigenous peoples that is going to have an implication on the ownership of these rights to these resources. So, perhaps you can talk a little bit about that, about how you see that manifesting in the Arctic region as well as part of this plan. Thank you very much.

MS. HILL: Thank you. Prime Minister?

PRIME MINISTER RASUMSSEN: Yes. Well --

MS. HILL: Two different questions.

PRIME MINISTER RASUMSSEN: Yes, well, very shortly -- very briefly about Greenland. It's actually a part of the decision we have taken between Denmark and Greenland that exploring access to fossil fuel resources in Greenland is in the ownership of Greenland, so this is totally regulated by the parliament in Greenland,



research, et cetera.

The first question about competitiveness, that's actually a tough one because I think it goes without saying that being a first mover creates a lot of advantages, but as I mentioned in my opening remarks, it comes with a price tag. And you have to strike -- being pragmatic about this you have to strike a balance between being a first mover and not too much in front of the cabal, otherwise you could risk -- otherwise you could create a situation where you lose your competitiveness, and that's the very good reason why we have to do this together.

I am a strong believer in international cooperation and we should reach more ambitious international agreements in this field because it will enable the developed world to move faster without losing competitiveness in the short term.

Well, I guess that would be the answer to the first question.

You also asked me whether Europe as a whole should step forward and increase our ambitions. This is something we are discussing quite heavily in Europe right now and honestly speaking, the positions are divided. If you take the economic crisis into account, you could say that we should be more ambitious just in order to be as ambitious as we decided to be five years ago because the economic crisis, in itself, have made possible for reaching the goals in a much easier way. So I am advocating that Europe should increase her targets from a 20 2020 target to a 30 target in 2020.

MS. HILL: We had two questions, the gentleman here and these will be the last two questions. There was someone else, yes, at the very back. So, we'll take these two questions together and then (inaudible) the Prime Minister to wrap up. Thank you.

MR. WAZEIDEMAN: Thank you very much. My name is Peter Wazeideman from the German embassy. Prime Minister, I am citizen of the country in the South of Denmark where we hold the Danish in very high esteem for their progressive politics, and I would just like to make a comment on the two of you who had doubts about the scale. And I just want to make the point that Germany being a bigger country with a strong industry and heavy manufacture basis, has about the same political goals that Denmark has. The conservative German government has presented an energy concept, which is about the same, it's very similar to this one, with the same goals, so just to make the point that you actually can also in a bigger country have the same goals and not be driven by the idea that this will ruin your economy. Thank you.

MS. HILL: That's a great point. We're very pleased to hear it. There's a more hopeful sign for the last comment that you made about the EU because certainly the perception from the outside is that Germany will be one of the key drivers of a larger EU effort in this regard, so it's very good to hear this from our German colleague.

We had one -- just a question here from this gentleman, and thank you. Please introduce yourself.

MR. DAVIS: Yes, Jerry Davis, Federal Aviation Administration, part of the Department of Transportation. Are you --?

MS. HILL: Could you speak up just a little?

MR. DAVIS: Yes, Jerry Davis, Federal Aviation Administration, part of the Department of Transportation.

You talked a little bit about fossil fuels in the transportation area, mainly on the cars. Aviation, of course, is very fossil fuel dependent and it's also a very, I guess,

difficult sector to kind of wean off fossil fuels just because the flights, they take very long, you have a lot of passengers, a lot of payload, and the question really is how we can wean the aviation sector off fossil fuels.

MS. HILL: Thank you very much. Well, that's sort of a difficult question, I think, for Denmark itself certainly to resolve, that's one where you'd need a larger perspective.

PRIME MINISTER RASUMSSEN: I think you need a larger perspective and some kind of international cooperation and we are not, being a very small country, as dependent on that particular transportation as other countries could be, so perhaps it could be interesting for you to add something to that question.

I think it will be one of the difficult questions to solve. And why should we start by solving the most difficult questions? I mean, I will argue that we should start picking the low-hanging fruit and it is a fact that if we use technology already invented in a larger scale, we could indeed make a huge difference. It's simply a question about energy efficiency, it's about regulating housing standards, it's about introducing transportation on the ground, which is more efficient. There are so many things we can do. It's about building bridges between political decisions and market incentives.

As I mentioned just a few seconds ago about this vision of a European energy market, there are so many things we can do, so even though there must be -- there most likely will be questions which are difficult to solve, I think that should not be an argument for not going green.

And at least from a Danish perspective, I am quite convinced that we can combine this with growth and job creation. The past has shown that we are able to do

so. And if you look into the figures, just to give you one figure before we close, it is a fact that 13 percent of Danish export earnings to the United States last year came from selling (inaudible) equipments and technology.

So, even without international solutions, even without not reaching a global, legal, binding regulation of all this, I am absolutely convinced that in the future, for many good reasons, there will be a huge business case in this field. Thank you so much.

MS. HILL: Thank you and we'll leave the tough questions on the aviation to Charlie.

PRIME MINISTER RASUMSSEN: Yeah, please solve that.

MS. HILL: And for the energy security initiative to resolve in the next several years. Brookings likes to take on the tough questions, the long-term questions. It's a job opportunity for us as well.

We are really delighted to have had you here today, Prime Minister. Thank you very much for taking the time. I think this has really been an inspiration for everyone here in the audience. It was especially good to hear from our colleague from Germany too that there is a broader consensus emerging on these issues. And obviously here in the United States, given some of our own difficulties, we'll be watching with a close interest, how you move along and hopefully there will be some of the ideas that you have promoted that Charlie and some of our other colleagues -- Kevin and others who are here in the audience -- will be able to pick up and take on as some of our discussions about how we can turn things around here in the United States as well.

So, thank you very much for your time and good luck with the rest of your visit.

PRIME MINISTER RASUMSSEN: Thank you. (Applause)

\* \* \* \* \*

ANDERSON COURT REPORTING  
706 Duke Street, Suite 100  
Alexandria, VA 22314  
Phone (703) 519-7180 Fax (703) 519-7190

## CERTIFICATE OF NOTARY PUBLIC

I, Carleton J. Anderson, III do hereby certify that the forgoing electronic file when originally transmitted was reduced to text at my direction; that said transcript is a true record of the proceedings therein referenced; that I am neither counsel for, related to, nor employed by any of the parties to the action in which these proceedings were taken; and, furthermore, that I am neither a relative or employee of any attorney or counsel employed by the parties hereto, nor financially or otherwise interested in the outcome of this action.

/s/Carleton J. Anderson, III

Notary Public in and for the Commonwealth of Virginia

Commission No. 351998

Expires: November 30, 2012

ANDERSON COURT REPORTING  
706 Duke Street, Suite 100  
Alexandria, VA 22314  
Phone (703) 519-7180 Fax (703) 519-7190