

THE BROOKINGS INSTITUTION

WEBINAR

SCOTLAND AND THE FUTURE OF
EUROPEAN ENERGY SECURITY

A CONVERSATION WITH
NICOLA STURGEON

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Welcoming Remarks:

JOHN R. ALLEN
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The Brookings Institution

Keynote and Discussion:

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First Minister of Scotland

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P R O C E E D I N G S

GENERAL ALLEN: Ladies and gentlemen, good afternoon, and thank you for joining us today. My name is John Allen, I'm the president of the Brookings Institution. And before we get started, I wanted to beg the indulgence of the first minister for a moment where I could mention that I wanted to express my heartfelt condolences to the families and the friends and the loved ones of the victims of the despicable shootings over the weekend across our country in Buffalo, New York, and Laguna Woods in Orange County, California and in Houston. A number of those shot and wounded remain in the hospital. We wish them a full and speedy recovery, but our thoughts and prayers are with the families and the loved ones who lost precious family members.

And while all these shootings remain under active investigation, the horrific shooting in Buffalo is the work of a white supremacist acting out an ideology of hatred, espoused by these domestic terrorists. And this shooter, whose name I will not mention, was intent on killing as many of our precious Black citizens as possible. We are very fortunate however that law enforcement, first responders, were on the scene within a very short time, within minutes, where the police dealt with the threat, and the medical personnel who were able to be there very quickly to preserve the lives of those wounded victims. In all three of these outcomes and in all three of these locations, had the first responders not been there quickly this could have been much worse.

And so today the Brookings Institution offers its sincere condolences to those family members suffering after this awful weekend.

So with that let me, if I may, move to our presentation for today. It is my honor to welcome to us for an enlightening discussion, the first minister of Scotland, Nicola Sturgeon, to help us to consider Europe's energy security and clean energy investments.

Russia's unprovoked and brutal invasion of Ukraine has created a humanitarian catastrophe and it has upended many assumptions about 21st century European security. It has also profoundly transformed the geopolitical and geo-economic

landscape and notably spurred policymakers to reassess the security of our energy supply and look for alternatives to replace Russian oil and gas.

Although dependence on Russian oil and gas varies widely across Europe, reliance on Russian energy imports exposes countries to geopolitical pressures by Russian President Vladimir Putin and provides him with coercive power over European economies.

Beyond addressing the immediate challenges of safeguarding European energy, transiting away from European oil and gas also has the potential to drive investment in energy efficiency and to propel Europe's green energy transition. As Europe diversifies their energy and moves away from Russian energy imports, they must balance. Meeting capacity needs today with meeting climate change pledges to decarbonize energy systems globally.

And even if the war in Ukraine catalyzes Europe's move away from fossil fuels, it could have other implications for clean energy transitions that we so desperately need and desire in other areas of the world. With enormous stakes not just for Europe but for the entire planet, this discussion comes at a critical time. And today's conversation will focus on Scotland's not-insignificant role in tackling the global climate crisis. The justification and the benefits of transitioning to a greener economy and what's needed, especially in the wake of Russia's destabilization of fossil fuel energy supplies to boost Scottish and European energy security and self-reliance.

Before our conversation gets under way, I'd like to provide a brief introduction of First Minister Nicola Sturgeon. Nicola Sturgeon is Scotland's first female first minister and the first woman to lead any of the devolved UK administrations. She served as a cabinet secretary for health and wellbeing, cabinet secretary for infrastructure investment and cities, as well as the deputy first minister of Scotland. And she was sworn in as the first minister on November 20th, 2014. So, ladies and gentlemen, we'll get started with today's event. And I'll turn the floor over in just a moment to First Minister Sturgeon, who will be joined on the stage eventually by Samantha Gross, the director of our Energy Security and

Climate Initiative at Brookings.

Briefly, a final reminder that we're very much on the record today and we're streaming live. So please send your questions via email to Events@brookings.edu, that's Events@brookings.edu, or on Twitter using #Energysecurity.

So with that, First Minister Sturgeon, we are so deeply honored that you could join us today. The floor is yours, ma'am.

MINISTER STURGEON: Thank you very much indeed, John. Can I begin by associating myself with your opening remarks about the horrific shootings in California, Houston, and New York over the weekend? The shootings in particular in Buffalo, New York, as you rightly say, remind all of us of the need to stand united and in solidarity against those who perpetrate hate and division in our societies. But my thoughts are very much today with the bereaved and injured.

I thank you for your very kind introduction and very grateful thank you from me to the Brookings Institution for hosting me at this event today, and for all of you for joining us for this discussion. Due to COVID, this is actually my first time in the United States in three years. If you'd told me that back on my last visit in 2019, I would have struggled to believe it would be three years before I would come here to the United States, so it's wonderful to be back here in Washington, D.C.

And I'm particularly pleased to be speaking here at Brookings today. It's no exaggeration to say that your expertise on international affairs is more crucial now than perhaps it has been at any time over the past century.

When President Biden spoke at the United Nations last September, he said then that the world was facing an inflection point. And of course back then he was referring to three issues in particular. We were and are still coping with the impacts of the worst pandemic the world has experienced in more than a century. We face, and we must address, an urgent and accelerating climate emergency, and we are seeing the rules-based international order come under severe and increasing strain.

However, since the president made that speech, those strains have become even more severe with Russia's brutal, illegal, and entirely unprovoked invasion of Ukraine. I want to be very clear today to you here in the United States that Scotland stands with the United Kingdom, the European Union, and countries around the world, including of course the United States, in our condemnation of Putin's actions. We support the severity of economy sanctions on Russia and also the supply of military assistance to Ukraine.

We are also in Scotland seeking to play a full part in offering humanitarian aid and supporting as many as possible of those displaced from Ukraine to find refuge, sanctuary, and support in Scotland. There is no doubt whatsoever that the first and the most urgent duty of every country across the democratic world right now is to offer tangible support and solidarity to Ukraine as it fights for its democracy, independence, and territorial integrity.

However, that said, a war of this scale in Europe, not seen before in the 21st century has also forced European nations to ask really fundamental questions of ourselves. As a result many of us are now reassessing long-established defense and security positions and priorities. The pleas of Eastern European nations put a much greater focus on the continent's border with Russia, having heard more clearly than ever and are now being rightly responded to. Germany has reversed its long-standing position of not supplying arms to conflict zones, and it has set us plans to significantly increase its own defense spending.

And very significantly and very topically here today, two of Scotland's northern neighbors, Sweden and Finland, which for decades have remained outside NATO, now seem firmly on track to join the alliance and with a level of public support in their own countries that would have been unthinkable at just a few months ago.

That is highly relevant to Scotland. The party I lead, the Scottish National Party, had determined back in 2012 at that time a reversal of a long-standing position. But we decided back in 2012 that should Scotland become independent it should seek

membership of NATO. There's no doubt that the events of the last three months have strengthened my conviction that this position is absolutely the right and essential one. I'm even more firm in my view today, coupled with a strong relationship, with the United Kingdom membership of the European Union and membership of NATO, will be cornerstones of an independent Scotland's security policy.

The Scottish government is acutely aware of Scotland's strategic position on the northern edge of Europe close to the Arctic. Russian military aircraft regularly approach the UK's area of interest. And in recent years there has been an increase in Russian submarine patrols within the North Atlantic. And so we are clearer than ever that membership of NATO would not only be vital to Scotland's security, although it would most certainly be that, it would also be the principle way in which an independent Scotland in an interdependent world would contribute to the collective security of our neighbors and allies.

Current debates about security in Europe however, are not just about military capabilities and strategic alliances. The invasion of Ukraine is forcing us to rethink many long-held assumptions. And that of course includes assumptions about energy policy and energy security. And just a couple weeks ago for example, the president of the EU Commission, Ursula von der Leyen, set out plans for the latest round of sanctions against the Kremlin and proposed the phasing-out of Russian oil imports into the European Union. And moves to reduce Europe's dependence on Russian gas are also being rapidly accelerated.

Energy policy in Germany is shifting dramatically under the new German government, as is shown of course by the cancellation of the Nord Stream gas pipeline. While Poland announced in March that it would become independent of Russian gas by the end of this year.

Now there is understandable impatience from Ukraine about the timelines being adopted by many EU states for this transition. EU depends on Russia for around 25 percent of its oil supplies, around 40 percent of its gas. In some countries the extent of that

dependence is even greater. Around 50 percent of Germany's gas came from Russia at the start of the invasion. And for countries like Estonia, Latvia and Finland, it is over 80 percent.

Now in Scotland and the UK by contrast, there is no significance dependence on Russian oil and gas at all, so it's perhaps not for me to lecture others on the pace at which they should turn away from Russian supplies. However, it is clear, I think very clear for all of us that this transition is increasingly fundamental to national and energy security.

It is also clear that to reduce its dependence on Russia, Europe in the short term does need to secure alternative supplies of fossil fuels to keep economies running. So Poland, for example, intends to import liquefied natural gas from the United States.

The debate in Europe – and this is the fundamental point I want to make to you today – the debate in Europe cannot be, and thankfully it is not, just about finding new sources of fossil fuels. It is, and must also be, about how Europe, including the UK and Scotland, rapidly accelerate its transition to a new, lower-carbon economy and does so in a way that is just and fair. That task is even more urgent now than ever.

Like many in governments across the world I spent the first half of November last year at the COP26 summit which was hosted in my home city of Glasgow. As an aside, it is worth, I think, noting the positive, the very positive difference made at that summit by the United States, once again showing leadership and playing a constructive role in climate negotiations. The personal influence of John Kerry in securing the Glasgow Climate Pact was significant, and I saw that with my own eyes.

And partly because of that, the summit in Glasgow achieved some very real progress. With, for example, welcome new commitments on financing, reversing forest loss, and cutting methane emissions. And the reference in the final agreement to reducing fossil fuel use was important as a first step, although it was significantly weaker than many had hoped for.

But we all knew back in November, even as the gavel dropped on COP26,

that the Glasgow Climate Pact did not go far enough. As things stand, the world is on course to exceed not just the threshold of limiting global warming to 1.5 degrees, but the 2-degree threshold as well.

There is an overwhelming scientific consensus that this will be catastrophic. In the words of the UN secretary general, a 2-degree rise will create a hellscape on earth. Equally clear is the consensus that to avoid this hellscape and limit global warming to 1.5 degrees, global emissions must be halved by the end of this decade. So it's not an exaggeration to say that the 2020s will be the most important decade in human history.

Our decisions and our actions over what is now a very, very short period of time, will determine how habitable our planet is in decades and for generations to come. The availability of natural resources and the impact of major climate events will also be, as has been the case in the past, a huge factor in global and national security.

And so as countries now consider alternative supplies of energy, we must ensure collectively that we do not simply replace one source of oil and gas with another. Countries must prioritize as far as we can an approach to energy security that focuses on sustainability with measures to promote energy efficiency and to accelerate the development of renewable and low-carbon energy.

In many countries these options are already the most secure and sustainable ways of meeting our needs and increasingly a point we must be very mindful of as rising gas prices, fuel, inflation, and a cost-of-living crisis that is already causing misery in many countries, including the United Kingdom. These low carbon and renewable sources of energy are becoming the most affordable options as well.

And to illustrate that point, wind already provides the cheapest power in Scotland's energy mix. So in my remarks today I want to talk about Scotland's work to decarbonize our economy and about the role we hope to play in enhancing energy security across Europe and stabilizing energy markets in the North Atlantic, and also highlight the importance, the fundamental importance of a just transition, the importance of that to the

well-being of our societies and also to the strength of our democracies.

First some context, Scotland has benefitted, and it's important to recognize this point, that we have benefitted significantly and from a very early stage from the extraction and the burning of fossil fuels. In the late 19th and early 20th century, Scotland was one of the leading industrial centers in the world. On the eve of the first World War, shortly before this institution was first established, one-fifth of the world's shipping was being built on the banks of the River Clyde in Glasgow, exactly where COP26 was held just last year.

So having led the world into the industrial age, we now have an obligation, and it's one we should take very seriously, to play our full part in helping the world move into the next new age.

We also believe that partly due to our geography we are well placed to do that. While we are a relatively small country, we have very significant reserves of wind, wave, hydro, and tidal power. As a result, and I know this is an issue and also hotly debated in the United States, Scotland, like the UK as a whole, has almost entirely removed coal from our energy mix. As recently as 2012 coal produced 40 percent of the UK's electricity. In 2020 that was below 2 percent, and by 2025 it will be zero.

Renewable energy currently accounts for almost 100 percent of Scotland's gross electricity consumption, which is around a third of our overall energy demand. And we recently completed an offshore wind licensing round which could create twice as much capacity again. Indeed we have plans to very significantly expand offshore wind generation. And as I will go on to explain, we have huge potential to create and export hydrogen energy from renewable sources.

Partly because of the growth of our renewable energy sector in recent years, Scotland has already more than halved our greenhouse gas emissions from the 1990 baseline that is used. Indeed we have cut emissions more quickly than any other country in the G20.

So we are now focused through statutory targets on halving emissions again by 2030, and then on reaching net zero by 2045 in line with both the Paris Agreement and the Glasgow Climate Pact. And those targets include, very unusually among countries of the world, binding annual targets so that we are held to account along the way.

Achieving these further emissions reduction targets will involve some genuinely difficult decisions for Scotland and for all countries. And it will involve significant behavior change. For example we're aiming to rapidly increase the use of electric vehicles at the same time as cutting overall car use. And we need to also rapidly accelerate our programs for decarbonizing the heating of buildings.

And also, and again, this is an important point economically. As a country with a significant oil and gas industry we are conducting detailed work on the pace and the scale of change that will be required in that sector to meet our international commitment but in a way that is fair to those who work in the oil and gas industry and to the communities that currently depend on it.

In addition, as COP26 helped, I hope to show we are positioning ourselves as a test bed for green technologies. And Scotland is already home to the world's largest floating windfarm. We are an established center for the development and testing of new wave and tidal technologies, we have developed plans to trial carbon capture and storage, and we're working to position ourselves as a hydrogen center of excellence.

Our hope, first and foremost of course, is that all of this innovation and development will create jobs and opportunities at home in Scotland and help ensure that no one and no parts of Scotland is left behind in our transition away from fossil fuel.

However, we also hope that this innovation will benefit other countries as well. And a good example of that combination of innovation and opportunity is that focus on hydrogen that I referred to a couple of times already. Hydrogen will be an essential part of the move away from fossil fuels, and even the U.S. last year published its own strategy on pathways to net zero. It highlighted the role hydrogen could play in decarbonizing transport.

The Germany government, too, has set up plans to invest 8 billion euros in hydrogen projects, which will be matched by 33 billion euros of private investments.

But an obvious but vital point is that since the occasion of hydrogen uses energy, large scale hydrogen is only a sustainable solution if it's produced with renewable power. And so Scotland's significant renewable resources give us the opportunity, we firmly believe, to become the most reliable and lowest cost green hydrogen producers in Europe.

We aim to have the capacity by 2030 to create five gigawatts of hydrogen. For context, that's just over one-seventh of Scotland's current total energy demand. Even at that level of production as well as using it within Scotland, we expect to be in a position to export to other countries.

However our plan is that by 2045 we will have the capacity to produce 25 gigawatts of hydrogen, and much of that will be exported.

Scotland's potential is already being recognized by other countries. In the past year alone we have signed memorandums of understanding with Denmark and with Hamburg and North Rhine-Westphalia in Germany.

Europe's interest in and need for exportable sources of hydrogen has increased further and has become much more urgent as a result of the Ukraine war and the focus on energy security that it has necessitated.

Now hydrogen power is, of course, still a relatively young technology and I realize it's not always easy for people to see now the full potential that it offers us. But as we all know, renewable technologies can and do grow very rapidly.

Scotland's first offshore wind farm, just as an example to illustrate that point, didn't become operational until 2010, but today, less than a decade later, offshore wind is a key essential and increasing part of our energy landscape.

So my hope is that Scottish hydrogen production can make a significant contribution not just to Scotland's own energy needs but to energy security in Europe and beyond.

Hydrogen also has the potential – and this is another key issue which will lead into my next point – it has the potential to become a significant industry in Scotland. If we realize the ambitions that I have just briefly set out, hydrogen won't simply be an important source of energy, it will also be a source of secure skilled employment. The same is true of offshore wind. As part of the recent Scottish offshore wind licensing auction, significant guarantees were secured for supply chain investment.

And that is important, really important. Many developed countries obviously went through a process of deindustrialization in the 1970s and the 1980s, and that deindustrialization process was far too often very poorly managed. At the part of Scotland where I grew up, not far from John, where parts of John's family hails, it was deeply, deeply scarred by the impact of industrial policies that resulted in the closure of coal mines and heavy industry with no thought or effort given to securing alternative jobs and investment. And some of those scars, all these years later, are still visible today.

And that expedience of the impact and the harm of the deindustrialization weighs very heavily on me today as a first minister seeking to lead my country into and through the process of de-carbonization.

And Scotland, as I alluded to earlier, still has a very large oil and gas sector. Many jobs depend on it directly and indirectly. The people working in that sector now and in decades past have contributed hugely to our country's prosperity. So as we make the transition to alternative energy sources, we must ensure that job opportunities and wealth are created in a way that doesn't leave entire communities and those who live in those communities behind.

That's why for example in Scotland we have a very sharp focus on how the northeast of our country, the area centered on the city of Aberdeen, currently known as the oil and gas capital of Europe, can become a global green energy capital. That's why we are conducting the detailed work I referred to earlier, on the future of the oil and gas sector. And that's why we place a very strong emphasis on training and skills. We need to ensure that

people of all ages are equipped for the jobs of the future.

This is an issue of course we work closely with other countries on. And currently the European co-chair of the Under2 Alliance, a coalition of more than 260 cities, states, and involved governments committing to keeping global warming well below that 2-degrees threshold. California, Virginia, and New York State are some of the U.S. members of that alliance.

Tracing a just transition to net zero in which no people and no communities are left behind definitely makes economic sense. But it is also just the right thing for governments to do. And it is, in terms of energy and security, important, I think, for the strength and the health of our societies and for the strength and the resilience of our democratic institutions.

The Brookings Institution published a piece about this just last week. It highlighted the former heartland industrial powerhouses represent the most fertile ground for authoritarian strongmen. And yesterday I had the opportunity to meet with your senior fellow, Fiona Hill, who grew up in the north of England and whose background and early life experiences are striking similar to my own. In her recent excellent book Fiona, of course, draws parallels between the challenges faced in the north of England and U.S. industrial heartlands during the 1980s, the lasting scars and loss of opportunity that resulted, and the subsequent rise in support for Brexit in the United Kingdom and for Donald Trump here in the United States. Similar forces of course, she argues are clear in the rise and dominance of Putin in Russia.

Certainly one of the reasons for the wave of populism we see in many countries in the developed world, including the UK and the United States, is that sense that people have been left behind, that they've been ignored and disregarded by their governments. And that sense has its roots in the economic changes of the 1980s and was undoubtedly compounded by the impacts of the 2008 financial crash.

And so if the move to net zero turns out to be yet another economic

upheaval that is done to people and communities rather than done with and for them, if people don't have the chance to influence the changes they see in their lives and if they cannot see and feel any benefit from those changes, then there is a real danger that communities will feel abandoned again, that faith in politics will be further undermined and that more countries will become susceptible to the populism of strongmen leaders. That would be disastrous for our environment, detrimental for our, in some places already-fragile democracies, and deeply dangerous for our national and international security.

And so my final point today is that ensuring a just transition to net zero isn't just important within each individual nation, although I argue that it is of fundamental importance for all of us individually, but it is also vital internationally and for the very same reasons.

We know that developing countries have done least to cause this climate crisis that we face, that more often than not these are the countries that are worse affected by the impacts of climate change.

There is a gender dimension here too: women are often disproportionately affected by the consequences of climate change. Developed countries must take account of these injustices. That's why in my view it's so crucial that the global north not only finds the \$100 billion of adaptation finance, first promised back in 2009, but that it also fully invests with countries in the global south in the adaptation, mitigation, and loss and damage programs that they so badly need, recognizing the basic but deep injustice at the heart of the climate crisis is the right thing to do. But it also in the interest of Europe, the United States, and the rest of the global north.

Resource shortages and uninhabitable conditions will lead to more conflict, to increase migration and the mass movement of populations. A continued unjust climate crisis will make our world less secure, which is why our energy futures are so intrinsically linked to our future security.

I mentioned at the outset of my remarks that our world is still emerging from

the pandemic. We are, all of us, still dealing with the reality of that pandemic. But for all the trauma created by COVID – and there has been a great deal of deep trauma created by it – we should never ever forget that it also demonstrated the incredible ingenuity of humankind. Mass-testing infrastructures were established almost from scratch, vaccines were developed at incredible pace, and governments embarked on expenditure programs that would have seemed inconceivable when I was last in the United States in 2019.

One of the difficulties, though, of the climate crisis is that despite the mounting evidence all around us, too many governments are still refusing to accept the urgency and respond accordingly. That is, as of now, a failure of will, but it is also a failure of imagination. If we could fully imagine the horror of a world which is more than 2 degrees hotter, if we in the developed world imagined ourselves in the shoes of those in the global south who are being brutally affected by climate change right now, then surely the world would already be much more on track to keep global warming to 1.5 degrees.

So now when we have seen what was possible in response to COVID, and when the west has already shown a resolve and commitment in responding to Russia's aggression that would have been hard to believe just a few months ago, we surely must, to go back to President Biden's words, use this inflection point to respond with much greater urgency and ingenuity to the gravity of the climate crisis. We must move at greater pace to develop clean energy sources and we must act in a way that shows solidarity with communities in our countries who might otherwise get left behind and of course with the global south.

For all of these reasons, Europe's debates on energy security really do matter to the wider safety and security of the entire world. And Scotland, where we can, wants to be a constructive partner in these discussions and a contributor to the solutions. We will, I hope, lead by example in our own actions and we will contribute to international energy security in doing so. And we will work with allies across the globe as we strive together to build a fairer, more secure, and more sustainable world. That has never been

more important than it is now.

Thank you all very much indeed.

MS. GROSS: Thank you so much, Minister Sturgeon, for your optimistic and your wide-ranging and really topical comments. I have to say it's just such a joy to see an audience here and to be talking to a real person.

So I want to thank you all for joining us today. And also let you know if you'd like to send up questions, I have a few to begin with but there are cards on your chairs. We have people who will be wandering around collecting them and bringing them up.

Also as a reminder for those who are watching us online, Events@brookings.edu or you can tweet us at #EnergySecurity if you'd like to throw your questions into the mix.

But I think I'll use my bit of time to talk a little bit about how the United States and Scotland are somewhat similar in our positions at this challenging geopolitical and energy security moment.

Neither of our countries is particularly reliant on Russian oil and gas but you still see us just roiled by market conditions, by high prices for liquid fuels and natural gas. How do you balance your own political challenge, which is one shared by our President Biden, in that you have on the one hand the "drill, baby, drill," "please produce more of the North Sea" versus also your commitments towards the climate. How are you handling this political situation?

MINISTER STURGEON: Thank you. And especially thank you to you, Samantha, for chairing this session today.

I can answer that in two ways. One immediate and one longer term. But you're absolutely right, neither the UK nor Scotland within the UK or the United States have that dependence on Russian energy that many countries across Europe do.

But neither are we immune from the rapid rise in energy prices that we are

experiencing, which of course were under way before Russia's invasion of Ukraine, but nevertheless are being hugely exacerbated by that. And that is leading, certainly in the United Kingdom, to the most severe inflationary cost-of-living crisis that any of us have experienced in our lifetimes.

And therefore there is a need in the short term for governments, and I include my own government in this, to step up and intervene in a way that reduces that pressure on people. And that is really important, I think, in order to allow people to eat and feed their children and heat their homes and cope with life. But also, I think, important to maintain that sense of solidarity as we face up to the challenges we face to build energy security, but also that solidarity in support of Ukraine.

The second point is longer-term, although it starts now. But as we make the transition from fossil fuels to renewables and low-carbon sources of energy, we must do it in a fair and just way. We know that the world needs to move away from fossil fuels, that the future of the planet depends on it, so we cannot simply go on extracting more and more fossil fuels. But nor can those of us, as countries that have had and still economically depend on oil and gas, abandon those industries and the people who work in those industries. So we have to plan this transition.

I mean I refer to growing up in the west of Scotland in the 1980s when there was no planning around the deindustrialization. People were just left to fend for themselves and that often meant unemployment, poverty, and we're still living with the legacy of that. So we have to plan this.

We're investing heavily in just transitioning initiatives around the northeast of Scotland. And the positive in this is that we won't make this transition effectively unless we harness the skills, the expertise, and in many respects the infrastructure of the oil and gas sector. So we must, in the short term, help people with the impacts they are experiencing right now and in the longer term plan this in a way that doesn't leave communities behind in the way it happened in previous years.

MS. GROSS: Following up on that and following up on the points at the end of your address, how do you help people understand that this time it's different? This isn't the 1970s or the 1980s in the previous deindustrialization? You see disillusionment, you see turns toward authoritarianism, populism in our politics. It's clear that we're moving towards something better, and I think you and I understand that, but how do you communicate that to the public?

MINISTER STURGEON: So I think it's about how you do it. And it comes back, and many my answers here will come back to the justice of the transition -- and that's not a given, it's not inevitable. It will only happen in a just way if we plan and make it happen.

On the upside I think, certainly I can't speak for the situation here in the United States, but at home in Scotland often in terms of the need to tackle the climate crisis, the population is ahead of the politicians. There is a much greater understanding and appreciation of the urgency of this. And, you know, we are facing our own, you know, severe weather at times that is bringing this out of the abstract for people and much more into the reality of everyday lives.

Now that doesn't automatically translate into an acceptance of the really tough things that have to be done to meet it, and that is where we need to work with communities and populations to manage this change. It is inescapable if we want the planet to be somewhere the future generations can live sustainably; it's inescapable. But we must manage it in a way that doesn't leave people behind.

And I think the rise of populism, the rise of strongmen leaders -- I'm never sure whether strongman is the right way to refer to Trump, but you know what I mean. I hate to give him slightly too much kudos. But it's not inevitable. But it will continue to happen if communities and parts of countries feel that they've been ignored and left behind and paying the price of these economic transitions.

So as leaders we've got choices. And actually some of us, and I would say Scotland is an example of this, can demonstrate that it doesn't have to be that way. We can

continue to have a strong, vibrant democracy but still make the changes that need to be made.

MS. GROSS: I certainly hope so. And I think in our country also you see the fact that the populace is a bit ahead of the politicians.

MINISTER STURGEON: Yeah.

MS. GROSS: Of that, the politicians. You bring up bringing people along and people understanding the depth of the change that's needed, and you've seen tremendous growth in renewables in Scotland. One of the challenges we face here in the United States is siting the renewables that we need in order to make our system less carbon-emitting.

You see challenges particularly with wind, which is really dominant in Scotland. Have you found the secret sauce to helping the population understand that those are needed, and balancing, you know, view sheds and public opinion on your beautiful country versus getting renewables in place that we all need?

MINISTER STURGEON: I won't claim that we found the secret sauce to that or to anything. But we continue on a quest to find it.

But I think, if you take onshore wind, which is already a big part of Scotland's energy mix, I'm not claiming that there hasn't been, as wind developments have been proposed and going through all of the planning and consenting processes, that there haven't been on occasion very significant campaigns of opposition against them, because there have been.

But interestingly, we've not seen that in the same scale as even just south of Scotland's border in England, where the opposition has seemed at times much more uniform and has led actually in recent years to the stunting of the development of onshore wind in England.

So we've seen reasonable public support and I think an understanding of the necessity. We've also done things over the years that have built into the development of

wind projects community benefits, so companies, developers, have had to give back to communities in ways that show communities that there is actually benefit to them out of these developments.

We're not getting it all right and there's still work to do. We've got, particularly as we develop our vast potential in offshore wind, we've got to make sure that our planning processes, the consenting processes, get quicker and more effective and efficient without compromising the need to ensure that we're not damaging our wider living environments.

So these are all with difficult balances. But by and large, without over-generalizing, there is strong support for renewables in Scotland. And actually the big challenge we've got, which we've not always done as well as we should have done around, is to make sure that the harnessing of the energy potential is matched by the economic benefits that come through the jobs and the supply chain advantages. And that's the bit that we've got to get better at in the years ahead than we've perhaps achieved in the past.

MS. GROSS: Hopefully we can learn a bit from that experience as we get our own offshore wind industry going here in the United States.

Scotland produces a tremendous amount of renewable energy. You mentioned that you've reached 100 percent of Scotland's gross consumption. But how do you then take the next step towards de-carbonization and get to the point where you can actually provide 24/7 zero carbon electricity? How do you do that both in grid improvements, but also in the policy, in the business background you need to make that happen?

MINISTER STURGEON: That's a big question. I'll try to be as brief as possible. There's lots that we need to do there.

So you rightly say we produce around about 100 percent of our gross electricity consumption. But of course that does not mean that all of the electricity in Scotland comes from renewable sources because we export some of that, and we import, so we need to continue to increase the capacity of that so that we are in a position where all of

our electricity is from renewable sources.

Grid connections and grid capacity is one of the big constraints potentially and challenges that we need to overcome. But as we look ahead to the next part of our journey to net zero, it is about decarbonizing transport, it's about decarbonizing how we heat homes and buildings and harnessing private finance to help with that. How we decarbonize agriculture, a big part of the Scottish economy as in parts of the United States.

So these are the next challenges that we confront, and we're focused now on making sure that we can take the same ingenuity that has been shown to get to where we are with electricity and apply that to these future challenges.

MS. GROSS: I'd like to spread out for a minute, I'm getting some interesting questions.

MINISTER STURGEON: I bet you are.

MS. GROSS: Oh, I am indeed. I'm getting some interesting questions about the wider energy security situation in Europe. So I think I'll answer some of those since I've been focused mostly on Scotland up to now.

Is there an opportunity for Scotland to ramp up its own oil and gas production to fill some of the gaps that Europe has? And is there a way to do that without harming the longer-term climate goal?

MINISTER STURGEON: There's two parts to the answer to that. Quickly ramping up oil and gas production is not as easy as some people make it sound. So there's no, you know, in terms of existing oil fields, there's not a massive amount of latent unused production there that could quickly be ramped up. And in terms of future new oilfields, they take a lot of time, but also I think increasingly we have to ask the questions there, is the short-term imperative really significantly undermining the long-term challenge.

Because the route to energy security, what has happened with Russia and Ukraine undoubtedly will mean that fossil fuels have to be replaced. The Russian supplies have to be piece-mealed in the short term. But long-term, if we're going to sustainably

achieve energy security and do that in a way that is affordable and cost-effective for people, the route to that is renewables and low carbon.

So we have to judge. If we're looking at investments for the future, is it better to make that transition to renewable energy? You know, the wind, offshore wind potential we have, the hydrogen that comes from that is vast. And that I think is where we need to put the significant part of our efforts.

MS. GROSS: We have a timing problem either way.

MINISTER STURGEON: Absolutely.

MS. GROSS: Both renewables and the investments in oil and gas take time to come to fruition.

A related question from the audience: What policies can the United States adopt to better assist European energy security? What can we do to help you all out?

MINISTER STURGEON: Don't re-elect Trump at any point.

That's too light-hearted an answer that question. I think, I mean I'm not just saying this because of the audience I'm speaking to. Obviously because of where COP took place, I was there every day of that summit last November. And it was visible and tangible, the difference that constructive American leadership made to getting the outcome that we achieved in Glasgow. It wasn't everything everybody wanted to see, but it was positive. And the U.S. government, John Kerry in particular, played a vital role in that.

So continue to be that leader in these global conversations that we really need the United States to be, would be my first plea. And then, you know, be part of the discussions, as the United States is, about how we make these transitions. I think there is a lot to learn in both directions from how we don't repeat the mistakes of the past and other economic upheavals and transitions.

So there's lots we can learn from each other. But keeping the United States in that position of constructive leadership I think is one of the key things that I would certainly like to see.

MS. GROSS: And a related question. The United States has certainly taken a larger role in global energy security given our increasing production. Do you see a chance for the European Union and Europe writ large, greater Europe, to play a greater role in international energy security? And what substance might that take?

MINISTER STURGEON: So I think we're already seeing Europe step up and do this to a much greater degree. If we all cast our minds back to, you know, the very start of this year, now none of us would have wanted the invasion of Ukraine to happen to spark with, but some of the shifts we're seeing already, the cancellation of Nord Stream, the acceptance, albeit that are still very difficult discussions about the pace of this change, but the acceptance that the reliance and dependence on Russian fossil fuels has to stop. And the partnerships that I think are being created now between some European countries and the United States. I mentioned Poland and the U.S. earlier on. The work Scotland is doing with parts of Germany right now looking ahead to hydrogen.

So we all need to do this. And the more we can work together and use each other's strengths and help compensate for each other's weaknesses in this, the more we will contribute to that overall energy security. And if Europe does that then clearly that is going to benefit the world as well. And we need to do that. And I keep coming back to this, in a coordinated way that delivers the justice that is necessary in that transition.

MS. GROSS: And so how does Scotland's potential for hydrogen play into that greater question of energy security? I've spent a lot of time working in Germany for instance, and they're very focused on green hydrogen as part of their own energy strategy but don't have the capacity to make all of it themselves.

MINISTER STURGEON: They'll get it from Scotland basically, is what we hope, over the next while.

MS. GROSS: How do you see yourself fitting into that greater energy security architecture going forward?

MINISTER STURGEON: Well I mean these discussions are already very

real and very live, but I think I mentioned in my remarks that we've already reached memorandums of understanding with some of the Germany lander about hydrogen potential because they are looking for sources of hydrogen for the future.

Now hydrogen, as we all know, is an early-stage technology, there's a lot of work to do. But Scotland and Europe, I mean is not an exaggeration to say that if we do things right here, we will become Europe's potentially biggest source of green affordable hydrogen. And that is a huge contribution that we could make to European energy security.

But the economic benefits for Scotland of that and helping to achieve, what I keep coming back to, is the replacement of the oil and gas, jobs and economic activity, with renewable and low-carbon, hydrogen will be part of enabling us to do that.

So the targets that I mentioned in my remarks in terms of what we hope to reach in hydrogen production, will allow us to export most of what we're producing, and that is going to be an enormous benefit to our economy as well as European energy security.

MS. GROSS: And will some of that take place in the current oil and gas areas and infrastructure? I'm thinking, for instance, of Aberdeen?

MINISTER STURGEON: Absolutely. So we, for obvious reasons, yeah, Scotland is a country of around 5 million people. And the oil and gas sector currently supports, directly and indirectly, about 100,000 jobs in Scotland, concentrated largely on Aberdeen and the surrounding northeast of the country. So our focus must be on ensuring that the jobs that come from offshore winds, hydrogen, that they help to replace those jobs. And the infrastructure: the North Sea is a very mature basin, so the potential there for carbon capture and storage using the infrastructure of the North Sea. So that's part of the challenge, but also opportunity. Rather than see oil and gas as, well that's the old, and we need to move away from that, we need to use that power – pardon the pun -- power the development of the alternative technologies.

I'm making it sound much easier than it is. We all know this is not easy to achieve, but we can see all of the pieces there and we just need to make sure that get them

coming together in a way that achieves everything, because it's so essential to our energy security, our economy, and I think our broader democratic and international security as well.

MS. GROSS: There are certainly some skills from old energy that are useful in new energy as well.

MINISTER STURGEON: Absolutely. And those skills are very transferrable. Most of the big major oil and gas players, you know, we all know who they are, they're the ones in Scotland, global players are already, you know, heavily invested in developing renewable technology in Scotland and elsewhere.

MS. GROSS: This question came in from the audience. It may be a little self-serving but I think I might ask it anyway. You recently helped to launch the Scottish Council on Global Affairs. Do you see potential linkages with Brookings on energy and trade and foreign policy?

MINISTER STURGEON: Absolutely.

MS. GROSS: I think we'd like to work with you more.

MINISTER STURGEON: Well I think the Scottish -- John is indicating assent there, which is good. I mean just for a moment, it's an independent of government think tank. It's been founded initially by a few of universities, Aberdeen, Edinburgh, Glasgow, and St. Andrews. Scotland doesn't have, or didn't have until we launched this global council, a foreign affairs think tank, and that is quite incredible. So this is going to be nonpartisan, independent, but there is huge potential for it to inform debate in Scotland but contribute to wider debates on foreign affairs. And I know, because I know that the people involved in establishing it, there will be a very, very strong appetite to develop links with Brookings. And I will take that message back home with me.

MS. GROSS: We would appreciate it. Call us maybe.

So I think I want to close the questions, moderator's prerogative, with one of mine. And that is, as the host of the last conference of the parties, the annual COP meetings of the parties to the Paris Agreement, what did you view as the most important

goals for this year's summit in Egypt? And do you have any words of wisdom to share with the Egyptian summit leaders as they plan their own COP coming up?

MINISTER STURGEON: So I suppose one general comment and then a couple of specifics. Firstly is we must keep the momentum going. The world's been turned upside down in the last few months, but the climate emergency has not gone away, and it hasn't slowed down because of Russia's awful conduct. So we must keep focused.

The Glasgow Climate Pact made a lot of progress, but it didn't go far enough to get the world on the track to 1.5 degrees. So, you know, Egypt has a big job to do to corral the world into making the next steps forward. And I think part of the challenge for those in leadership positions is to keep very focused.

It's exactly six months since COP in Glasgow concluded. Alok Sharma, the UK COP president is in Glasgow today making exactly the same points. We come from very different political traditions, but it is welcome that we are making those points.

In terms of the specifics, we need to see COP27 make more progress around the transition from fossil fuels. Glasgow had good markers in the final agreement. But the second thing, which I tried to champion with the Scottish government at COP26, that we need to see greater progress on is what's called loss and damage. Recognizing that many countries, particularly in the global south, have already suffered the loss and damage of climate change and we have a moral duty and obligation to help them compensate for that.

So these are the things I would like to see. My advice to Egypt, as leader of the Scottish government, it was a UK hosted conference obviously, but we try to play a big part in it. It's massive, it's a massive undertaking but it's so important that use to best and fullest advantage you possibly can.

MS. GROSS: And this new emphasis on energy security. Energy security never left, we just became suddenly more aware of it on February 24th of this year. How does this renew the emphasis on the energy security impact, and how is this COP going to

be different than the one that came before it?

MINISTER STURGEON: So I think there is a danger, but we need to turn it into an opportunity. So what happened on February 24th, the danger that comes from that is that we think continuing the progress that was made at COP26 is not important. Instead we have to go back to coal, oil, and gas, and almost reverse that progress for the short term.

The opportunity is to develop an even greater global understanding that the route to energy security lies through the renewables and low-carbon sources of energy. And that actually that's the route to affordable energy as well. So keep our eyes on that prize. Yes, there will be short-term volatilities, but the longer-term goal is even more important than it was. So I think the more we can try globally to focus on that, the more hopeful we can be that COP27 builds on the success of COP26, and we don't allow Putin to add to his many, many war crimes, that of having slowed down the world's progress to net zero and therefore accelerated the inevitability of the climate emergency that we're facing.

MS. GROSS: I think that's a very, very good place to end this conversation. I'm sorry that we don't have time for more questions, but I really appreciate your point of view. I appreciate the optimism that we're showing here to close.

And before I thank both you and the audience, I'd like to ask you all to please remain in your seats until First Minister Sturgeon leaves the room.

But with that, thank you very much. I'm so glad you could join us, and this has been a really interesting conversation. Thank you.

MINISTER STURGEON: Thank you.

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