



1111 19TH STREET, NW  
SUITE 406  
WASHINGTON, DC 20036  
TEL: 202-461-2360

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## America's Energy Challenge: From Crisis to Opportunity

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TRANSCRIPT

### **Participants:**

**Admiral Michelle J. Howard**, USN (Ret.), former Commander, U.S. Naval Forces Europe and U.S. Naval Forces Africa

**Congressman Jason Crow**, D-CO

**Bob McNally**, President, Rapidan Energy Group

**Robbie Diamond**, Founder & CEO, SAFE

**Dr. Jeb Nadaner**, Executive Vice President of Government & Public Affairs at SAFE,  
Executive Director of SAFE's Commanding Heights Initiative

See SAFE Event Page for Video: <https://secorenergy.org/americas-energy-challenge-from-crisis-to-opportunity/>

**Jeb Nadaner:**

Good afternoon, everyone. Welcome to today's SAFE event, America's Energy Challenge: From Crisis to Opportunity. I'm Jeb Nadaner, Executive Director of SAFE Commanding Heights. At SAFE, we're working to advance transformative transportation energy technologies and critical supply chains to enhance our national security.

And today, the intersection between economics and national security has never been greater for the energy supply chain. The ongoing war in Ukraine and the corresponding energy price spikes have reminded us again of the risks of being overly reliant on a single fuel source for transportation—a source whose supply and price can be affected by nations that do not share U.S. interests or U.S. values. We are delighted today to have an esteemed group of panelists to discuss the immediate policy options and longer-term solutions to address the persistent energy challenges we face as a nation. We hope you'll enjoy the event and many thanks to our panel and to our audience members for joining us. And with that, I hand this over to today's moderator, SAFE's founder and CEO, Robbie Diamond.

**Robbie Diamond:**

Thank you very much, Jeb. Thanks for all the work you do and your team's work at our Commanding Heights initiative at SAFE.

For those who join our webinars, we were founded in 2004, for precisely this moment, how to end oil dependence for economic and national security. And sadly, every five years or so, we have the tyrants and dictators of the world just reminding us how, since 1973, in the first oil OPEC embargo, we've really done very little. But thankfully all the technology is now here today to solve this problem.

With that, because we have Congressman Crow with us, who, as with all of our congressional guests, always has votes to get back to, we'll try to move very swiftly.

Let me quickly introduce everyone. We have Bob McNally, who is a 29-year expert in oil markets, government, and market experience. And from 2001 to 2003, he was at the National Security Council, really counting barrels for the US government. I think he likes to call himself the “barrel counter” in Washington. Bob has a great book called *Crude Volatility: The History and the Future of Boom-and-Bust Oil Prices*. I definitely understand his message. As I said, every five years, it makes a lot of sense to read this book.

We also have Admiral Michelle Howard, who joined the US Naval academy in 1978. She was one of just seven African American women in a class of 1,363 students. She is the first of so many things. It's hard to go through them all, but she was the first African American woman to command a ship in 1999—the USS Rushmore, the first African American woman to command a

Navy battle group—the 2009 Expeditionary Strike Group Two, the first to get three stars and then, of course, four stars in 2014. Admiral Howard was the 38th Vice Chief of Naval Operations, Commander of Naval Forces in Europe and Africa. She retired after 35 years of service in 2017. She is currently a member of our Energy Security Leadership Council, a group of four-star admirals, generals, and CEOs who work on our mission to end this oil dependence.

And finally, we have Congressman Jason Crow who's a former army ranger and a lawyer. He represents Colorado's sixth congressional district and he served in Iraq and Afghanistan. He really got involved in politics when he saw the difficulty of getting his own veteran's benefits and began to help others get their veteran's benefits, and ultimately won Denver's pro bono lawyer of the year. So, thank you all for joining us.

We have to go to Congressman Crow, who might have to leave, so let me ask you this question. You served in Iraq and Afghanistan. Clearly, when I started SAFE, we had two hot wars going on. Oil was an approximate cause of both. We had a global war on terror. I just thought: why are we constantly expending blood and treasure for energy? I wonder if, when you were there, were you thinking any of those similar thoughts?

**Rep. Jason Crow:**

Thank you, Robbie, very much for having me and for the great introduction. Thank you to SAFE for putting this on and doing all the work you've been doing for a very long time and being a steadfast voice. And in your introduction of the other distinguished guests, many of whom have far deeper expertise in this area than I do, you mentioned that maybe one of Admiral Howard's greatest distinctions is that she is a fellow Coloradan as well. So, I'm happy to join my fellow Coloradan and veteran on this panel.

I have seen this problem from multiple angles. As a member of Congress, somebody who represents 800,000 constituents in Colorado, I see this problem as my constituents are beholden to the whims of autocrats and dictators around the world who decide when to raise the price of oil and when to squeeze Colorado pockets and Americans pockets out of whim and during a time of great crisis. As a veteran, I saw this issue as well. I saw supply convoys, fuel convoys were attacked and ambushed because our military was reliant on the fossil fuel tether for our operations. And that problem remains as we try to resupply our forces around Europe, and Asia, and Africa, everywhere we are, how vulnerable that makes us.

We have lost good men and women. We have lost American service members because of our overreliance on fuel from an operational standpoint in the military. And of course, I see it from a geopolitical standpoint now as we continue to fight for and support the Ukrainian brothers and sisters who are fighting for their freedom on the front lines of democracy right now. And you see

how the Russian war machine that's committing terrible atrocities and brutalities is fueled literally and figuratively by Russian energy and Russian oil.

It's time that America and America's allies stop sending money to Vladimir Putin into that war machine. We'll have the benefit not only of shutting off that brutality and preventing them from doing what they're doing, but it also will create millions of great paying jobs. And I'll end with this: prior to the pandemic, the economic sector in Colorado that saw double-digit job growth for five consecutive years was the renewable energy sector. We were adding thousands of Colorado jobs in this sector. And our largest public utility provider, Xcel Energy, has stated a goal of 100% renewable energy in the next decade because it's actually cheaper, it's more effective, it's more reliable, and it is better for Colorado paychecks as well, our pocketbook. So, there are just so many reasons why we need to support this and I'm proud to join the effort.

**Robbie Diamond:**

So, you were very early to sponsor the Ban Russian Energy Imports Act. Clearly, as you said, we see this as a sort of blood oil, not just to Russia, but if you look at all the dictators, only four out of the top 10 oil producers are from stable democracies. We are releasing oil from the strategic petroleum reserve. Do you see a role for the Defense Production Act or anything else to sort of refill that? That's something we called on for today.

**Rep. Jason Crow:**

The Defense Production Act, I think, is a unique tool here for the administration. We saw just last week the Biden Administration invoke the Defense Production Act to ramp up the production of critical rare earth minerals to help with our transition to renewable energy, which I support. And I'm proud to be joining and leading the bill with Cori Bush and Senator Sanders. The climate security bill that we're unveiling this week—that's going to ask for additional use of the Defense Production Act to secure our supply chain and ramp up production of critical components and supply chain elements. That way, we can expedite the transition to a renewable energy economy and cut the tether to these autocrats and dictators that are committing terrible atrocities around the world. And it's not just Russia. We shouldn't be buying oil from Iran; we shouldn't be buying it from Venezuela. It is time for America to be independent. And we know, in the long term, the absolute best way of doing that is transitioning to clean renewable energy.

**Robbie Diamond:**

A question just in case you have to go: we did call this, “from the challenge to the opportunity.” So, as you said, we need oil today and we need the transition. And we very much believe the only solution is electrification. Do you believe that we're at a position where we can do both—where we have to produce the energy, the natural gas, the oil today— do the Democrats understand that, and can we then convince Republicans that we need to transition? Can we

somehow bring those two things together, as we're here on the precipice of World War III, which some people believe has already begun?

**Rep. Jason Crow:**

That's a great question. The answer is we have to be doing both right now. We have a short-term problem and we have a long-term problem. Some of my colleagues don't live in the realm of reality and they're calling for things that are not possible or they just want our continued reliance on fossil fuels to continue, but the bottom line is we don't yet have the infrastructure needed for electrification. We need to build that, that's going to take time, and we also need the components and the technology to do it as well. So yes, we do have to increase domestic production in the short-term where we are going to have to rely on some of our allies like Mexico, and Canada, and others to supplement our energy to keep the costs low for consumers because half of my constituents live paycheck to paycheck. If the price of gas doubles, that's a real problem. People can't afford groceries. So, we have to make sure we're addressing that short-term issue. But again, that is the short-term challenge. The long-term opportunity here is create millions of jobs, increase our national security, cut the tether of our reliance on dictators, and actually help the planet as well address the climate crisis. There are not many things in politics where you get a win, win, win, win, but this is one of them and it's time that we take advantage of it.

**Robbie Diamond:**

Yes. You're speaking our playbook since 2004. I said that when I started SAFE, there was a debate, a beer debate. Taste great, less filling. Drill more, use less. And ultimately, we need to be doing some in the short-term in order to get to the “use less” or diversify in the long-term. And I really hope that we can work with you, not only to produce the energy today, but really accelerate this transition to electrification—make sure the minerals are mined, be grown up about the fact that we're going to need to acquire these resources and to process them and the precursors before we can get to the assembly phase in our battery facilities. I just feel like now's the moment we need to work on this and we'd love to continue to work with you.

**Congressman Crow:**

We look forward to that as well. I will continue to work with you, but they are calling the other vote now. So, I will actually leave you in the expert, in far more capable hands of your other panelists who are tremendous folks and I appreciate the opportunity to have this discussion today.

**Robbie Diamond:**

Thank you, Congressman. Thanks for your service.

**Congressman Crow:**

Thank you.

**Robbie Diamond:**

So now that we've actually solved the energy crisis because we have our first vote, I think we can stop the webinar. Now, let me turn to Bob McNally maybe to set the scene for us from an oil market perspective. I think that would be really helpful.

**Bob McNally:**

Thanks so much, Robbie, and Jeb, and Admiral Howard and Congressman Crow. I'm delighted to be invited back by SAFE and to be in the presence of two distinguished veterans and leaders. I really don't think we can understand where we are today and where we're going next week, and next year, and next decade unless we kind of understand the broad trends that got us here. Now, the younger folks out there, say you're in your 20s and your 30s, you may think that it's normal for oil prices to gyrate as wildly as they have in the last 15 years.

You may think it's normal to see oil prices nearly quintuple from \$30 a barrel to almost \$150 from 2003 to 2008. And then everyone thought it was going to be \$100 a barrel forever. OPEC got into a fight with Russia and suddenly it went down to \$26. And then, there was another fight, and in May, it was negative \$37 for a while. But I would say to you, those of us who are the older, the upper echelons of age anyway, this is not normal, this is not usual. Normally, if you go back to the 1970s, oil prices typically—if it was like a Disney ride, it's sort of like “It's a Small World.” There's a little bit of volatility. There's ups and there's downs, but with the exception of the odd war in the Persian Gulf, in which case, yes, we will get spikes, you just don't see the type of volatility that we've seen over the last 15 years. And usually, you need recessions to get oil prices to go lower. But when they collapsed in 2015 and 2016, there was no recession.

I think it's really important to understand why oil prices have become much more volatile in the last 20 years than they have been in the last 50. And the answer is the focus of my book and it's counterintuitive because if there's one thing Americans still agree on, it is that we don't like OPEC. Well, the good news is OPEC has lost control of the oil market for the last 15 years. The bad news is OPEC has lost control over the oil market for the last 15 years, because what we know from history and the properties of oil—how unresponsive it is on the demand and supply side to price—means that if there's not an OPEC or for the four decades before OPEC, the Texas Railroad Commission did this. We were OPEC. OPEC learned its trade from the United States, actually the oil producer in Texas. And we learned that if you don't have a group of producers exercising very careful control, strict control over supply, you get these wild boom and bust price swings. And oil, after all, is the lifeblood of modern civilization. Just about all of transportation depends on it.

It's not like electricity where we have all kinds of options. Renewable, nuclear, coal, gas. In oil, we're going to talk about electrification today. When it comes to cars and mobility, it's an oil

game. And so, when the lifeblood of modern civilization starts to look more like Space Mountain, than It's a Small World, every everybody loses their cool because you can't run a country, you lose stability. You can't figure out which country's going to threaten you or go belly up; you can't plan monetary policy; you can't plan a budget; you can't keep your consumers happy if you have this wild volatility. I think for the near term, I don't think we're going to see a new swing for producers to come in and be effective.

There is OPEC Plus. Saudi Arabia and Russia have gotten together. It's like a Netflix series. Sometimes they're getting along like they are now and things are pretty stable. And then when they don't, all heck breaks loose, as we've seen. But that's my first point. It's that we are on Space Mountain, and it's really hard to run a society. It's hard to bake a cake on Space Mountains. Second point, getting to where we are now—these bust periods. Robbie mentioned five years; that's exactly right. So, these periods of booms and busts tend to last about five to seven years. And just before Mr. Putin thought it would be a good idea to launch the largest land war in Europe since World War II, the oil market was transitioning out of a bust period where prices go low. Consumers like that. Two dollars a gallon, \$1.90 a gallon. Producers don't like that, but the consumers were happy. We didn't think much about gasoline in the last five, seven years. But we were transitioning into a boom phase as a consequence of those many years of lower investment and increase in consumption.

If you look at the cars Americans have been buying since 2014, they are not getting more efficient. I don't care what the EPA rules say on paper, they're not. We have the data on that, but as we get into this multi-phase boom phase, this is going to be a problem for consumers and it'll be a challenge for policy makers as well. I just hope that we'll be able to go back to what we saw a little bit under the Obama Biden Administration, \$100 a barrel where we had an all of the above practical approach to energy policy. But my point final point I'll just leave you with is Mr. Putin then decides to throw a grenade into the oil market as it's transitioning from a multiyear bust phase to a multi-year boom phase by risking the most oil we've seen threatened in decades.

Russia is the largest oil exporter if you consider both crude oil—almost five million barrels a day, and then petroleum products like diesel and heating fuel—heating oil, almost three million barrels a day. And if you look at how much is threatened due to sanctioning and self-sanctioning, and I think we're in the early stages of this crisis, as I was telling our colleagues before we came on. This is more like early 1942 where the Allies were still seeing blows come in and the crisis snowball. This is not 911 where we had an awful February 24th and then we sort of work our way out of it, or even the first Gulf War when Saddam invaded in August of 1990, but then within a few weeks we had stabilized the situation by putting troops in Saudi Arabia. This is where the crisis is still getting worse. So, we have Russia, because of its atrocious actions, threatening the largest oil disruption in some time, next to an emergency reserve, if you will. I'm talking about the strategic petroleum reserve; I'm talking about the oil that Saudi Arabia and

UAE are keeping in spare of only about two and a half million barrels a day. So, eight or even threaten half of that, four, is bigger than two and a half. So that's why oil prices have been rising so strongly. And as oil, crude oil prices go, so go gasoline prices.

The final point I'll make, and it probably comes up in the Q&A: I think one thing we're learning is it doesn't matter if we're self-sufficient in terms of oil. We are. We're a net exporter. It doesn't matter when it comes to whether our consumers are vulnerable to disruptions anywhere in the global oil market because we all pay the same price for oil. Saudi Arabia does, Canada does, the United States does. Whether we net import, whether we net export, people ... different countries impose taxes and subsidies that may adjust the price for consumers. We have fairly low taxes in the United States, but in terms of the gyrations up and down, we're all on the same roller coaster ride. So that's just a little bit of scene setting. I look forward to our conversation about the policy consequences and implications of all this.

**Robbie Diamond:**

Thank you so much, Bob. I would tell our viewers that we released a paper today that you should get called Overcoming the Energy Security Mirage. Because, as Bob laid out, we've been living in a mirage for a long time, and I think we've misdiagnosed the problem and therefore we haven't adequately addressed the solutions. But let me now go to Admiral Howard. What do you think about the national informed policy implications of oil and gas in the context of what's going on now in the Ukraine?

**Admiral Howard:**

Robbie, well, first of all, thank you for inviting me to be part of what's a pretty special panel and a chance to talk about the national security aspect of this. So, my last job was as Naval forces, Europe and Africa, but I was also co-slotted as the four-star operational commander for NATO for the Southern aspect of the NATO countries. My territories went from peacekeeping in the Western Balkans to training in Iraq that NATO members were doing for the Iraqi military. So, pre-Ukraine, let's think about the dynamics within NATO. NATO starts in 1948, 49. And it's all about countering communism and this threat from Stalin that he's basically going to try and take over Europe and make it a "communist is the way". And we, as a country, under Truman said, "Hey, no. We are going to create a security consortium."

These cross-Atlantic ties have held. And then after the Soviet Union fell, there was a little bit of warming up towards the Russian Federation, but in the end, I think most members of NATO understand that Russia is an autocratic nation and a potential adversary, and that's playing out with what they're doing in Ukraine right now and earlier. When you think about the first assaults in Ukraine, the attacks on Georgia and the cyber-attacks in Estonia—these were the challenges during that period where we had a little bit of warming towards Russia. Many of our allies within NATO were happy to take Russian oil. And Bob has got it right. Our economies are beholden to



energy. Everything we do, we can't do without electricity. And so then, as we move forward and we start to back away from Russia again and start to think about them in terms of a potential adversary, the challenge on the political side is that it's hard to get unity and consensus on what to do next, even in a small countering, because so many of the members of NATO are beholden to Russia for their energy source.

So now that we've got this war in Ukraine; it's forced some of them to go, "Okay. We should never have placed ourselves in a position where we are economically vulnerable to Russia." Whether it's the Russian Federation or the Soviet Union, there's a history there of a willingness to use the economy and energy as a tool to get their way. And so now we're watching while some of these members are rethinking this relationship, this oil relationship with Russia, but there's not a lot of alternatives. I think we ought to focus on national security. There is this great Article Two in the NATO charter, which talks about not just being together as a security agency, but as a security consortium and then being willing to fight together if one nation is attacked. There's economic opportunity within Article Two as well.

If you look at the Eastern Med, there are NATO allies who have untapped energy reserves in the Eastern Med. And so literally, when you look at the capacity of some of the NATO members, whether it's Germany's engineering capacity and development capacity within NATO, this crisis should get us to rethink those relationships and look at helping some of the member nations develop their energy sources.

You think about the Black Sea. When I was a commander and I was visiting Bulgaria and Romania who are stalwart members of NATO, those folks were telling me they were already being pressured. This is the 2014, 2015, 2016 timeframe. They were already being pressured by Russia, almost coerced, to give away their energy reserves and let the Russian Federation develop it for them. And one of those classic, almost Chinese relationships, "Hey, we'll come in and develop your oil for you. We develop it, we sell it, and it's like making a business deal with the mafia if you're dealing with Russia. So, the pressures are there on these countries to work with Russia. Within NATO, we have an opportunity to use this crisis, focus on getting us out of dependence of Russia, and then strengthening the Alliance by strengthening the co-dependencies within the Alliance.

**Robbie Diamond:**

Thank you so much, Admiral Howard, for the tour to force on the security implications. First of all, I want to remind people they can submit questions in the chat. You can start submitting them and I'll get to them in a little bit.

We have to think broader than Russia. The truth is we're dependent on oil. In Europe, it's also on natural gas. If you look at, as I said before, the top six producers, you're talking about Russia, Saudi Arabia, Iraq, Iran, Nigeria, Venezuela. Really there's something called the oil curse. And

we've been cursed on one side and cursed on the other side. And with OPEC, as you said, Bob, it would be one thing if they were good at managing the market, but sadly they've proven themselves not willing to manage the market. When push comes to shove, I guess the Saudis have told us to shove. So, to me at this point we really have to find these long-term solutions.

Bob, do you have hope that this is such a shocking event that actually people will be more motivated to find solutions? So first of all, you've diagnosed the problem, which we agree is volatility. You can't drill your way out of it. Yes, you need resources, but ultimately you need to find a way to have a different lifeblood. Do you think we will first begin to diagnose the problem well, and then that we can find unanimity between even Democrats and Republicans to find the short-term and the long-term solutions needed, or is this just Deja vu all over again?

**Bob McNally:**

Well, thank you, Robbie. I think it's going to be perhaps another Netflix series. It's going to be very dramatic and tumultuous. Just setting aside energy, I think you don't have to be a Washington insider or political scientist to observe our country has become extremely polarized in the last couple decades. And the trend lines are towards more polarization about ... just about everything from the sports we watch, the movies, and everything else. So, I have to say from one perspective, you can be quite pessimistic. We can't agree on anything much less how to balance our need to have affordable secure energy today and respond to aggression like Putin's now and then achieve our longer-term goals. However, you've got to be optimistic about human ingenuity and the human's ability and our country's ability to rise to the occasion, especially after a crisis. Crises—they're teachers. They force reconsideration, they force pragmatism and so forth.

We've got young folks coming up who have been living now with a lot of volatility. I think crises of this sort require us to get a little smarter and a little more pragmatic about the scale of the problems we face. We hear a lot about resource curse, and oil curse, and so forth. I think what folks are realizing now this winter, even before Putin's invasion and the move above \$100 of oil, but even what was happening with oil and gas before that, was reminding us about what a blessing oil is. Now, let's just face it. If you go from Moses to Harriet Tubman, so five millennia, the fastest a human being who wanted to travel on land could go was the speed of a healthy horse, or maybe a camel, or something else that was domesticated. Five millennia.

We transitioned to much faster mobility and all the other blessings that oil unlocked. Agriculture, food, medicine, clothing—standards of living, lifespans doubled, fewer births ... deaths at birth, everything. We've catapulted out of millennia of squalor because the United States and the UK had capitalistic systems that rewarded people to figure out technological innovations to solve human cravings. And actually, we were trying to solve illumination. We weren't even trying to go for transportation. And so, let's stop and remember, because Americans are realizing now what a blessing affordable energy of all kinds is, especially oil and transportation. This is so

important. And so, we're getting knocked and mugged by reality now. Certainly, the Biden administration is, certainly our public is, and the Congress and so forth.

So, I'm confident that reasonable, logical people may be ready for change—maybe not on the extremes of our parties and so forth, or people who just want to score political points, etc. There's plenty of opportunity for both sides to do that, but I'm reasonably confident that after getting mugged by reality, we will see an impact ... and this is not over. This is not going to go away soon. I think you'll see people grow and come to a deeper understanding of the scale of our energy systems—what's really involved in terms of energy transitions and how long they take. What a blessing, but also a challenge, dependence on oil and gas and other fossil fuels is. After getting knocked around a little bit, Americans are going to come together, and I think get through it and come up with policy to get through it.

I think the way to get through it is through technological innovation, because remember after that period of Moses to Harriet Tubman, oil, alcohol, and electricity were all in strong competition for the transportation fuel. There were more electric cars initially than oil cars. Oil went out for lots of reasons. It is not only because of trying for electric cars or for alcohol and ethanol for that matter. In a way we've been grappling with this for 120 years. And so it may be that we're at the precipice where the battery costs are going to come down low enough and the cost of these cars and the infrastructure build-out will come such that we're going to finally see a transition from oil to, let's hope, clean electricity maybe, but let's be mindful of the scale of that challenge.

Again, that challenge 120 years ago didn't come because a government decided on peak horse policy or anything like that. The government had absolutely nothing to do with it. It was innovators, brilliant people inventing new technologies enabling us to unlock energy resources and then the prime movers, the equipment that use them. I think there's probably someone in their 20 or 30s who's going to figure it out. It may be electricity, it may be fusion, it may be a safe way to extract methane hydrates. I'm not smart enough to know what it is, but I've got to be optimistic that after getting mugged by reality over and over here, we're going to figure it out.

**Robbie Diamond:**

Thank you. Admiral Howard, you're a member of our Energy Security Leadership Council. Electrification—you've heard about electric vehicles from Bob. It has been top-of-an agenda item for us. Why do you see or why are you willing to support electrification and other forms of fuel? What is that makes it an important national security tool?

**Admiral Howard:**

Robbie, we're vulnerable if we're dependent on a single energy source. There is no reason we need to give sticks to potential adversaries. We just need to get out of that and be as self-sufficient as we can be, whether it's rare earth minerals, or if it's fossil fuel, or if it's natural gas.

We are a stronger nation if we're not relying on anybody else, but there's this other aspect. And although Bob says, "Hey, really it wasn't our governments that got us to where we are today with energy and electricity." We've got to remember it's the government that gave that opportunity to every citizen. Where I live in a small town of 44 people, we are still using the co-op that was established under FDR. We need to understand that this distribution of this opportunity, whether it's oil or electricity, that happens through the government. And that's important. If we say, "Hey, we want to be self-reliant." Well, we want to be self-reliant. We don't want to end up in a world where the tractors that get us our food are still fossil fuel dependent. We need to distribute this opportunity of electrification throughout all aspects of America. That's probably only going to happen through the government and through this infrastructure bill. And it's the logistics and something as small as this.

When we were running out of truck drivers in America, I was not getting mail delivered to my mailbox because the only fossil fuel gas station could not get fuel delivered from the big cities. The only gas station is within 50 miles of our house, which meant the local post office couldn't fuel their trucks. And so, I'm not the only one who wasn't getting mail because of a logistics shortage. And then think about it. If the post office had an electric fleet and we had electric hookups out here across the nation, we still would've gotten mail. And it's everything else that runs on energy that is vulnerable. There's less likely to be disruptions if we can get away from a single energy source in transportation, in all of the different logistics. It's just better for America. It increases our reliability and makes us a stronger nation.

**Robbie Diamond:**

Yes. As I like to say, electrification is great because electricity is domestic, diverse, and very stable in price, and doesn't have the volatility, as Bob pointed out initially. And that volatility is actually core to this dependence. I guess, Bob, would you say that at this moment because we're already suffering some of these impacts, and as you say, it's going to get worse, that we need to think about this as sort of like pulling off a Band-Aid? It's going to be really painful, but we've got to pull the Band-Aid off once and for all, and this is our moment.

**Bob McNally:**

Well, I don't get invited to parties much. I'm not Mr. Optimistic all the time. I served two and a half years in the White House and then two and a half years in Senegal, West Africa, but for most of my 32 years (it's not 29—I've got to update you there, Robbie, I'm getting older), it has just been a barrel counter in trying to predict and analyze things. And the way I see the oil market, again, before Mr. Putin decided to launch this war, we were transitioning into a multi-year boom phase that would take us well into \$100 a barrel. And that's just the laws of supply and demand. And no Congress, no government is powerful enough to suspend the laws of supply and demand. And so, I fear that we were entering into a boom phase, but you'll look back ...

Again, we had \$100 barrel oil from 2010 to 2014. That was a shocker. That was the first big boom phase.

You had President Obama with a pretty balanced policy. He, in what was perhaps the last great bipartisan energy policy achievement, got rid of archaic bans on crude oil exports and liberalized natural gas exports so we could help our allies. That administration understood what a strategic priority this issue is. Admiral mentioned the resources in the Med—this is absolutely correct, but also our ability. We're now the largest LNG exporter and sending every boat we can to Europe, thank God. Lithuania just got off of all Russian oil because they have an FSIU taking in LNG cargo. And President Obama, to his credit, looked at developing the offshore, looked at nuclear power. It was a balance, along with climate change and other renewables and so forth. So, we could do both, but unfortunately, at least so far anyway, we enter this new crisis era more polarized. And I'm just hoping that as this crisis endures unfortunately, the silver lining might be we come to our senses, get smarter about energy, understand the scale and scope of things, and how long and how costly transitions are and maybe come back to a more balanced pragmatic approach.

We can do climate policy; we can do smart innovation and decarbonization policy at the same time if we stop making mistakes and do the right thing in terms of our energy security. And I would put on the list banning Keystone. You all saw the Wall Street Journal article today; President Biden is now hoping to increase imports from Canada, but not willing to support Keystone XL. I have nothing else to add to that. Draining the strategic petroleum reserve.

When we left the Bush Administration, it was well over 700 million barrels at its then maximum capacity. In a case of bipartisan folly, both parties are equally responsible. Congress has been selling that off for non-emergency expenses thinking: "We're independent; we don't need it. We have shale. We don't need it. Prices are low, we don't need it." But when the Iranians attacked Abqaiq, the largest and most important oil facility in the world, President Trump didn't promise to unleash shale, he promised to unleash the SPR. And we've seen president Biden use the SPR three times. Once late last year and twice this year. And on the course of where we're going, we're at about 568 million barrels; the President is going to sell another 160 and we've already mandated through Congress another 250, some odd million barrels —we'll be at the lowest we've been ever, well, around 140 million barrels, stripping away our protection against supply interruption. And I think of lot of bipartisan folks, energy experts, kind of see a lot of things similarly. And I'm just hopeful that as we get deeper into this crisis, people are going to reconsider and come back to more sensible policies.

**Robbie Diamond:**

Admiral Howard, earlier I used the Band-Aid analogy, and Bob said it's going to get much worse. Maybe we don't even have a choice what we're going to do, but do you believe we should

have more aggressive sanctions, that we should really push the Europeans despite their energy dependence to sort of cut the core now, really starve the beast and really just get on with this, or do you think we have to be more measured in that approach?

**Admiral Howard:**

Oh, tomorrow is now. Eleanor Roosevelt said, "Tomorrow is now." And if we don't start now in this crisis, eventually the crisis will be over and we'll go back to old habits. That's just human nature. There's some other aspects. One of the things that we kind of forget in all of this particularly, is that these are private commercial companies grabbing this energy, selling it. There's this business model aspect for them. So then when we are talking about volatile fuel per prices and Saudi Arabia drops the price to punish Russia, or did they drop the price to drive shale out of business and fracking out of business? Because all of a sudden, the business model doesn't work anymore. The price of oil is so low you can't make a profit. So, if this is all commercial, then the longer we're dependent and the prices go up and down, the result is our inability to move forward and allow the company to stay in business and continue to develop. And so, we're oddly saying, "Hey, whether it's us or these other countries, yes." We've got to pressure Russia. And we've got to use this to take the opportunity to start developing our internal resources, the infrastructure, and the distribution. Even then there's this long-term piece to it. It's very easy for us to go, "Oh, we're good for 100 years."

And I've read so many different studies. How long is fossil fuel going to last? Well, that depends, because it depends on what the consumption is. We develop new techniques. All I can say is the deeper we drill and the more techniques we develop, that just adds to the cost, but someday, not for us or our grandchildren or great, great, great grandchildren, do we want to say, "Okay." At some point when maybe we have exhausted the fossil fuel path, do we want to be in a position where we don't care. We've got renewable energy; we've got other energy sources; we've set the country up for continued strength in the future.

**Robbie Diamond:**

Great. Thank you so much for that. I know that you have a passion for cybersecurity. I guess I'd ask you, are you surprised that we haven't seen any retaliation? And do you believe that could be coming, or is this maybe something we over-gave too much credit to what Russia can do?

**Admiral Howard:**

No. I don't think we gave too much credit to what Russia can do. Solar Winds should have been a wakeup call for a lot of people if it wasn't. Clearly the cyber securities said, "Hey, we need to bat down the digital hatches" as Russia was going into Ukraine. And certainly expect, particularly as private companies are taking actions, Russia to push back. How much does Russia want and in how many different domains does Russia want to take on the rest of the world? Clearly the military has to stay focused on Ukraine. And that's from every aspect, whether it's

sea, land, or cyber. President Putin is a man who's got a long memory and is keen on carrying a grudge. So, when we're through this, maybe that's when we need to bat down the digital hatches.

**Robbie Diamond:**

Yes. I've been slowly taking money out of the bank just in case that ever happens. I remind people about questions, but we have a question from George Hopley. Basically, the question is, "Will there be a Biden goes to Riyadh moment?" Let me turn to you, Bob.

**Bob McNally:**

I don't know that the president himself will go to Riyadh, but I think the administration is ... Boy, they're trying to find a way to, let's call it, warm up the frozen relations between the White House and Riyadh. And it's a difficult problem for them because of the differences. The killing of Jamal Khashoggi and the war in Yemen are controversial issues, and it's difficult for the president, especially a democratic president, to do that. But again, President Biden has been mugged by reality this winter. And he has learned, if he didn't know it before, just how important Saudi Arabia is in the short-term anyway, in terms of its control of something that normally doesn't exist—readily producible oil, roughly two million barrels a day or so. I think there's a concern about peeling away Saudi Arabia and the UAE from a closer orbit with Russia and for that matter China.

So, I think they're going to find, try and find, ways to come closer. I'm not sure the Air Force One lands in Riyadh necessarily. But I think when you look at the war in Yemen, Iran, Saudi concerns about the missile attacks from Houthis on their oil facilities, and other things, and of course, isolating Putin and inflicting damage on him, as well as doing more to stabilize the global oil market, I think the administration has a real incentive there. And yes, I think folks in the White House as well. I think there's folks primarily concerned with national security and energy security. And even before the invasion of Russia's invasion of Putin, we're urging the president to sort of come closer to Riyadh. After all, before Putin launched this war, the president talked with him, and Putin has launched chemical weapons attacks on NATO ally's soil to kill dissidents.

We talked to Xi Jinping. He runs concentration camps. President Trump talked to Kim Jong-un who blows up people with anti-aircraft weapons. So, we deal with all the different kinds of folks because our vital national interests are at stake, whether or not we approve of everything they do at home and whether or not they share our democratic values and human rights. Again, this winter has been a wakeup call. And I don't know about Air Force One in Riyadh, but I think the administration is trying to find ways to repair relations. It's more than just oil, but it's to put the US-Saudi relations on more sure footing.

**Robbie Diamond:**

I've got another question, which is, what do you think the chances are of actually having an issue in that region with Iran, Saudi Arabia, Israel, and everyone else, which just adds to the overall problems we have now? I guess I could go to Admiral Howard first and Bob might have some thoughts as well.

**Admiral Howard:**

So, Robbie, during my time, it's being quietly done. We're certainly seeing outreach and more normalization of political relationships between Israel and all of those countries that were mentioned. More quietly done is that Israel is working with Greece on development of energy reserves; more quietly done Israel is looking with Egypt to develop energy reserves off their common areas off their shores. I think because all of that has stayed a lot underneath the radar, right now when I look at where I left off and even where they are right now, I just don't see any desire on the part of those Middle Eastern countries to try and say, "Oh, well. This was a great opportunity to get after Israel."

**Robbie Diamond:**

Or how about those countries going after Iran?

**Admiral Howard:**

Yes. I think right now, because of Russia's relationship and mischief in that part of the world, I'm not sure that anybody would think that's the outcome you're trying to achieve. And do you think you're going to get it just because Russia has started this war in Ukraine and is distracted? I don't think anybody would think that's necessarily a great opportunity to get to an outcome you want.

**Robbie Diamond:**

Bob, do you have any thoughts on how you see the risk profile of the Iranian deal and reaction to it?

**Bob McNally:**

Yes. I think it's bigger than the Iranian deal. Whether there will be one or not, Iran is going to remain very close to a breakout capability. But again, if we step back, we are in a snowballing military test with Iran. And by that, I mean Iran against its Gulf Sunni neighbors and Israel. Iran used precision guided weapons to attack what I think is literally the most valuable piece of real estate on planet earth, the Abqaiq stabilization plant in September, 2019. They decided to inflict light and reversible damage. So, they left a calling card and made their point. It was sort of shots across the bow, but they could do that again. And the Houthis have been trying to attack, and in some cases succeeding these oil facilities. Meanwhile, Israel, we assume with a help of other countries, is launching attacks against Iranian forces in Syria and Iran proper.



We all read about the assassinations and the cyber-attacks—thank God, of the successful cyber-attacks. At least for a while successful on the Iranian Nuclear Program, Olympic games, et cetera. So, I think everyone sort-of focuses on the day that Israel sends the jets after Natanz. We can talk about that in a second, but if we just look, we're seeing a steady increase in conflict and confrontation both ways between Iran and its neighbors. And I don't see that going away anytime soon, as long as Iran has this type of regime in place. Now, with regard to Israel, doing sort of an overt conventional attack on Iranian nuclear facilities—and perhaps it would always be easier to do that if you had at least the tacit, if not overt cooperation of local Sunni countries—that's lot easier to do it. If you're going to do that kind of operation, then Admiral Howard would know much more about this than I.

I would think Israel would have to have pretty good evidence that it not only was detecting a breakout showing that Iran was actually trying to weaponize, but that it had the ability to set it back with the means that are available. And I'm not a military expert. I think in some cases, our best opportunities to set the Iranian Nuclear Program have come and gone and we're in a very difficult situation. I tell folks the only thing worse than a preemptive attack on Iran's nuclear facilities is no preemptive attack on Iran's nuclear facilities and a nuclear-armed Iran. And if we think about mutually assured destruction, everybody is starting to get into what we do in a sort of MAD. You declare your red lines; you demonstrate your forces; everyone starts testing in that region with those short flight times. I almost think that's going to be much more difficult. So, it's a grave situation I'm afraid.

**Robbie Diamond:**

So, we have a few minutes left. We have a question from Michael Moore. And it could be the celebrity— it might not be the celebrity, but we'll ask the question anyway because anyone named Michael Moore deserves to ask that. In one word or one number, Bob, what is the price of demand destruction where people stop ... where we start seeing oil demand go down due to the high price?

**Bob McNally:**

The one word, one number is annual average \$150 Brent. That is what rapid energy groups team has modeled, but I have to say, “but, but, but”. That is an estimate in an economic model that is describing otherwise sunny macroeconomic and geopolitical conditions. That's a sort of steady state going along—the price just goes that high. That's when oil expenditures get to about 5% of GDP. So that's what we say there. I would just caution that we are in anything but sunny weather right now. Emerging from COVID, Central Banks raising rates, largest land war since World War II, all kinds of risk and inflationary pressure. So, I wouldn't bet the farm on \$150 a barrel per se, but that is our number.

**Robbie Diamond:**

The second question from Michael Moore, the movie maker, is, "Admiral Howard, do you believe that this war will expand beyond the borders of Ukraine?"

**Admiral Howard:**

Right now, no. When you look at it from Putin's perspective, even though NATO has not necessarily called out the lines, if we're looking at, where could he go? He's not going to deliberately cross that Article five line right now. He just does not want to do that. And so then could it possibly? Could he suck Belarus and everybody? He could, but I think those folks are going to be hesitant because they're going to be worried that they're on the losing side and this may not turn out well, but right now, no. We're watching. He's going to have to retrench and rethink. I don't think he's given up. These are guys who were in Chechnya for years, they were in Afghanistan for decades. They might retrench, but they're not going to stop, but no, they're not going to expand either.

**Robbie Diamond:**

So let me ask the last question and then I will summarize. I'm going to take a moment to talk about our new paper. The question is, do you believe that Europe will ultimately ban energy coming from Russia, both oil and gas? How long will that take for them to do this? Or do you believe that Russian in some ways will cut them off causing that type of hardship? Of course, on both sides of that equation, you have the money they won't get and the energy that Europe won't have. Bob, why don't we start with you?

**Bob McNally:**

All right. Tough predictions. On the net natural gas side, it would appear that Putin may be serious about demanding ruble payments for gas. That's another way of just embargoing because the customers can't do that. Even if they wanted to buy the ruble and give it to them, you'd be violating sanctions by doing that. So, I think there's a good chance that we'll see at least a temporary disruption in Russian gas exports. Again, this situation is snowballing and the atrocities we're seeing in Ukraine right now are just going to add to it. And the European union is going to come in with sanctions. I think when it comes to coal, it looks like the EU is going to phase out Russian coal imports. Almost half of Europe's coal comes from Russia. So that's quite a bit.

On oil, I think it's going to be more gradual. The countries that are on the end of the Druzhba pipe (the big pipeline built in the Soviet times to connect then-Soviet Union to its then-satellite countries) —the GDR Germany, East Germany, Czechoslovakia—they really can't afford to just ban it because they don't really have any other way to replace it. And so, I think you'll probably see over time phased in reductions and so forth with those countries. Hungary is almost siding with Russia. I hate to say it, but it is almost not even being that helpful here as a NATO ally. And their president was just overwhelmingly reelected. So, I don't think one country in Europe can

block sanctions. I don't think you'll see a wholesale ban like you saw in the United States, which only imported a tiny amount of oil from Russia. So no, but I think you will see sporadic, temporary outages; Russia, banning gas for a while I think is unfortunately somewhat likely. And then phased in reductions and banning, and self-sanctioning of oil is also likely, but it'll be a gradual process.

The final thing I'll say is you saw this with Iran and Venezuela sanctions and Libya sanctions. Even if the governments don't directly sanction the oil or the exports, ancillary sanctions on banks and shipping firms, even if they try to have an exemption for energy—and the Biden Administration tried to do this in the beginning and they said, "We don't want to sanction energy" —nevertheless, these companies that do this trading are very risk averse and they will call self-sanction and step back." So, one way or the other, we estimate some three million barrels a day of Russia's eight million barrels a day is going to get shut in Russia due to sanctioning.

**Robbie Diamond:**

Admiral Howard, very quickly, do you think it'll be a sanction of choice by us or by Putin?

**Admiral Howard:**

Oh, gosh. I think Putin realizes he's got to sell that oil to someone. So, the question is can he get another customer—China? And then if he can get another customer who can absorb that amount of oil, then he'll be great. "I don't need to sell to Europe. I've got my one good pal and customer." That's why I think in all of this, and Bob alluded to this, we've got to be looking at some of the other global players, particularly China, because China can give Russia the out in terms of economy that would allow them to keep going with the war.

**Robbie Diamond:**

So let me finish the conversation today by just once again noting that we put out a paper called Overcoming the Energy Security Mirage. Please look at our website [secureenergy.org](http://secureenergy.org). And really, we lay out a case, as Bob did in the beginning, of why we've always misunderstood our oil dependence, why the ultimate solution is to get off oil as a single fuel source through electrification, and that we need to accelerate that transition. But in the meantime, we call for other things to happen as well.

One is, the President meeting with the National Petroleum Council, which would be extraordinary, but really important to bring all the players together. Two is to, yes, use oil from our strategic petroleum reserve, but just as quickly refill it using tools like the Defense Production Act to accelerate the oil that many oil companies might be sitting on or can't get equipment to bring out of the ground and the government can help get that equipment. Three, to continue to work with our European allies, both the supply and the demand side, with natural

gas, and then finally, to work on these supply chain issues broadly when it comes to electrification, so as not to become dependent on China. But just look at some of the resources we do get from Russia. Whether it be neon, which 48 plus percent comes from Mariopol, which is used to make semiconductors or aluminum or palladium for our catalytic converters, and then nickel that we'll need in our batteries. And we need to set up a policy in the United States to get all these resources now, and we shouldn't wait.

We think that these six steps are a way of thinking about the short-term, but ultimately focusing on this long-term to get away from oil as a single fuel source. Really, we had in World War II an arsenal of democracy, working with our European allies, a transatlantic partnership to end World War II. And in this situation, we need an arsenal of energy—bringing all the energy and technology at our disposal. And right now, we have that. We have all this technology. Whether it be the batteries of today, or some of the production and techniques that we can use. So, we can do this now. It's really a matter of will. Thinking about the short-term and long-term. We'll end with what Representative Crow said, this is a win, win, win. We can have our energy security, we can have our economic security and jobs, and finally, we can do this in a clean way that works towards a less emitting world, but we just have to get serious about it. Hopefully you'll go to our website and join our cause as we continue to promote these types of policies. So, thank you, Admiral Howard, thank you, Bob McNally, and thank you, Representative Crow, for being with us today. I look forward to working with you on these issues.