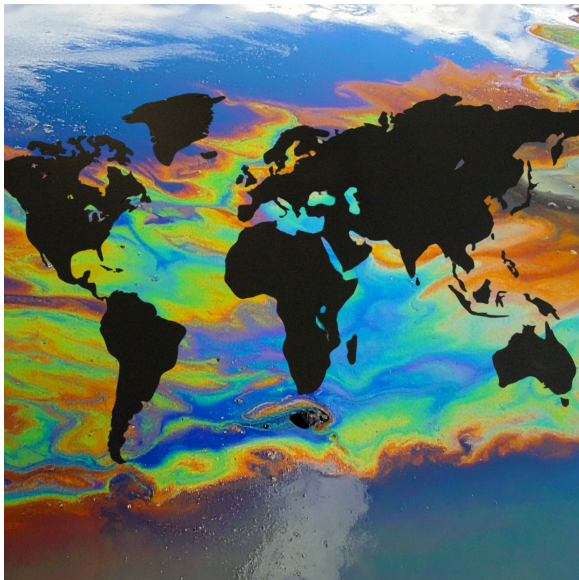


# Crude Behavior: Venezuela and the Global Politics of Oil

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**Victor Blackwell (CNN News):** The breaking news this morning, president Trump says the US carried out large scale strikes on Venezuela overnight. He says its President Nicholas Maduro and his wife Celia Flores had been captured and flown out of the country. Attorney General Pam Bondi says both of them have been indicted and in a social media post says that they will “soon face the full wrath of American justice.”

**Ariana Brocious:** That was the breaking news on January 3rd when American Forces captured the president of Venezuela and his wife. They've since been flown to New York City and charged as narco terrorists,

**Kousha Navidar:** Ariana, that last phrase, the full wrath of American justice. That's a interesting take on the word justice 'cause I don't know if those two words go together in my opinion.

**Ariana Brocious:** Yeah, it was a really striking move, and I think the action itself just stunned a lot of people.

**Kousha Navidar:** stunned and brought up so many questions for me before we did this episode. I knew about Venezuela, but there was just so much that I learned about its presence in the geopolitical landscape when it comes to oil, when it comes to tensions between east and west. I mean, there is so much to unpack here.

**Ariana Brocious:** Yeah, I mean, I studied Latin American studies in college and to me this was so reminiscent of all the times in the past when the United States has intervened forcibly in some cases, or undercover in some cases. But, you know, exerted its influence over the Western hemisphere, and particularly in Latin America. And so I guess just to say this is not, this is not

surprising. On one hand, it's yet another example of something that our country has done for a long time.

**Kousha Navidar:** Yeah, so let's dive into it a little bit for listeners to set up context. Officially, Maduro's Vice President Delcy Rodríguez is now the acting president and the US is exerting pressure to determine what happens with the country's oil.

**Ariana Brocious:** right. And oil has taken up so much of the conversation about what's happening in Venezuela that you know that these narco terrorism charges feel a little bit like a pretense, maybe just an excuse to go after this real prize, which are the country's natural resources.

**Kousha Navidar:** that's the feeling I've had after talking to a lot of the folks that we have on the episode today, uh, and especially when I see reports like from ABC News that oil executives may have been briefed on the military action before Congress was, which is wild to think about. It's

**Ariana Brocious:** striking.

**Kousha Navidar:** Yeah. I mean, it's hard to justify why that would be the case unless it were for specific private interests. In any case, the focus on oil is not a surprise. The resource has shaped the politics of the Latin American country for decades

**Ariana Brocious:** and not just Venezuela. Really, oil has been the prize global powers have fought over for more than a century. So on today's show, we're gonna talk about what the US intervention in Venezuela means for geopolitics, for the oil market, and for the global transition to renewable energy. I'm Arianna Brocious.

**Kousha Navidar:** I'm Kousha Navidar,

**Ariana Brocious:** And this is Climate One.

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**Ariana Brocious:** To set the scene, I think it would be helpful to lay out a brief history lesson: Venezuela was once the richest country in Latin America. An oil boom in the early 1900s made it a regional powerhouse. And its huge reserves are still the largest in the world, even dwarfing those of Saudi Arabia.

**Kousha Navidar:** After decades of dependence on oil, Venezuela's economy struggled. In the 1980s and 1990s, oil prices collapsed, inflation soared, and the government's finances were in bad shape.

**Ariana Brocious:** That set the stage for Hugo Chávez - a military officer and revolutionary - to ascend to the presidency in 1998. In 2007 Chávez compelled foreign oil companies to turn over majority control of their operations to the state oil company, PDVSA [pay-day-vay-sa]. Companies that didn't agree - like ExxonMobil and ConocoPhillips - had their assets seized - or (you'll hear this word a lot) "expropriated." Those companies still have billions of dollars of legal claims against Venezuela.

**Kousha Navidar:** After Chávez's death in 2013, Nicolás Maduro took the helm. And under Maduro, oil production collapsed due to mismanagement, sanctions, and fiscal strain. And with the collapse of oil production came the collapse of the country's economy. Maduro's administration became infamous for the [authoritarian tactics](#) and economic conditions that led to the starving and suffering of Venezuelan people.

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**Ariana Brocious:** Still, it's an extraordinary move of aggression to oust another country's leader. I spoke with Luisa Palacios to get a sense of where things go from here. She's a Senior Research Scholar at the Center on Global Energy Policy, and former Chairwoman of Houston-based Citgo Petroleum Corporation.

**Ariana Brocious:** You grew up in Venezuela, went to the university in Caracas. What was it like as a place to grow up?

**Luisa Palacios:** It was a wealthy country relative to other Latin American countries. It was a stable country. It was a country where public services worked, where you had low unemployment. You had growth. But I also grew up in a country that was already starting to see political and social tensions. So I lived through the period of different economic crisis, oil prices collapsed, and this is a country that because of its dependence on oil, the politics and the social tensions and the economic dynamics are really very dependent on what happens to oil prices, which is not an ideal situation at all.

**Ariana Brocious:** Right, some describe it as the resource curse. Other countries, similar situation, very dependent on extractive resources and that can you know make or break their economies when they're so dependent. And so what has happened to the country's economy since the time that you were in university?

**Luisa Palacios:** When you have a country that depends so much on one commodity, and that commodity is owned by the state, that ended up I do believe determining the fate of the rest of the economy. And what I saw as I grew up was the politics was evolving in a way where the distribution of oil rents became more about who owns the oil rents and less about, how do we create a larger economy, a more beneficial economy for all Venezuelans. And so it created a dynamics that led, I do believe, to the situation that we have right now.

**Ariana Brocious:** Mmhmm. now we're in a position where Venezuela's economy is suffering, that people are not in this high GDP economy that they were years ago. It's really changed and the fact that the country has the world's largest oil reserves is significant, but at this time, Venezuela is only contributing something like 1% to the oil supply, globally. So how much would it cost in terms of money and time to get the country's oil production back to levels, say, pre-Chavez?

**Luisa Palacios:** In my view, it is gonna take a while because you are gonna face very clearly three important constraints you're gonna face talent constraints, human capital, you're gonna face financial constraints, private capital and you're gonna face infrastructure constraints. you can get some old production online from the existing operators currently in the country. Because they're producing right now and they're producing below capacity. So you just with certain amount of spending you can get those oil fields getting back to producing at capacity. And that may be from 1 million to, you can get to maximum 1.5 under that kind of framework. But even before you get there, you do have issues that you need to solve before you can get Venezuela back to the 3 million bars per day it used to produce before Chavez came into power. And that I think means that you need significant improvements in the rule of law, significant improvements in governance, significant political stability, a legitimate government, in order to commit, that amount of capital in order for that talent to come back to the country, in order for those investments and infrastructure to take place so that you can significantly raise capacity again and then maximize the value of the oil that Venezuela has.

**Ariana Brocious:** And. The global oil markets are oversupplied right now. Oil prices are fairly low. So from what you have been hearing, how much commercial interest is there in rebuilding

Venezuela's capacity? Given these constraints and the legal and political risks.

**Luisa Palacios:** One of the things that I've learned just working, in the financial sector and in the energy sector, is that you have all kinds of risk tolerance. And what I would say is that I do think that the oil companies that are currently operating in the country that have been there for 20 years, and have had significant arrears, because of lack of payment from PDVSA and the government, I would imagine that is in their interest to increase oil production. So that's the reason why I do think that some oil production is gonna come in. You might also have some investors that are very risky investors, that wanna take that Venezuela risk, given that there's like zero exploratory risk most of the risks are really above the ground risk. The thing is that is not gonna bring you, tens of billions of dollars that Venezuela needs in order to increase oil production, you are not gonna get the amount of capital that you need until conditions in the ground significantly change.

**Ariana Brocious:** in your mind, is it in the Venezuelan national interest to let these other companies, these foreign companies come in?

**Luisa Palacios:** I do think that is in Venezuela's national interest. I would say for three reasons. The first one is because the government and the national company have severe financial difficulties. They just don't have the capital. The second reason is that there is such a loss of technical capacity that occurred in the country. Venezuela is one of the countries that has the most flaring and venting of its natural gas, of methane, and being a country that produces just 1 million barrels per day with that amount of has the, one of the highest flaring intensity in methane intensity globally compared to whatever country. That is an operational issue that has to do with loss of the ability of this national company to have proper employment practices, operational practices, environmental practices. You almost need international operators, particularly those that are publicly listed that are very conscious about their operational efficiency, the management or their environmental risk. You want that transfer of technology, you have to see this as also a transfer of know-how. Because you are not gonna recover the oil production in the way that should be recovered, in a responsible way, without having that transfer of technology. And the third one is that alongside these international companies, you need human talent, and ability to develop and repair the infrastructure. You need somebody else that is not the national company to come and, and bring the human talent because nobody's gonna wanna work for PDVSA. This is a company that puts people in jail. It's a company that has really very poor employment, practices, human rights, standards. And so no, no person is gonna wanna work for PDVSA. And so those are the reasons why it is in the interest of this country to bring those operators that have those kinds of best practices in the field to reinstitutionalize this industry.

**Ariana Brocious:** I just wanna recap there. You were discussing the methane flaring. As I understand it, this is happening alongside oil production. You get gas out sometimes when you extract oil, and that's just being flared, vented. Some 40% of it, And we know methane is very bad for the climate. It's 80 times more destructive than carbon dioxide over a 20 year period. It's also valuable, obviously we're talking about methane gas, also known as natural gas. It can be sold. You're advocating for that being better handled, right?.

**Luisa Palacios:** Yes. These issues happen because oil production, and natural gas production come hand in hand. And so Venezuela lost the ability because of its loss of operational capacity. It lost its ability to recover the natural gas. In the past, there have been oil service providers in the country that have been expropriated, that had done that for PDVSA, they would've recovered the gas and injected the gas back in the reservoir in order to increase the pressure in the oil. It's a way to just, to recover more of the oil. So it's one of the obvious practices that companies have just recover the natural gas and reuse it, just to improve the economics of the field. when PDVSA not only ex pated, the oil companies, but expropriated the old service providers because it couldn't pay anymore. So he

decided to expropriate them. And that also meant a loss of, these kinds of, practices, And so that's the reason why you are venting it, or why you are flaring it, And in a country that, also has, significant power issues. There are so many co-benefits. It's not only good for the climate, the obvious reason, but for the country, it is good from the point of view of being able to recover. I've made calculations just using heavy oil prices. If Venezuela were to recover a natural gas that vents or flares, it could be \$1 billion in opportunity cost. This is the size of Colombia natural gas consumption in a year. That's how much Venezuela is venting or flaring. And so given that you have issues on the power sector, there are many blackouts. There's a huge, problems with reliability of the system. And so if you could link the recovery of that natural gas and actually use it to improve the reliability of the electricity sector, that could have such important social benefits, not only for climate, it's for the benefit also of the Venezuelan people and the economic recovery of the country.

**Ariana Brocious:** I just wanna underscore that, we're talking about using the resources, oil and gas to better the economic status of the country, of the people who live there. And then if this gas is collected and put into the energy stream as you're saying, just improve the overall reliability and health and welfare of people who need electricity, as all of us do. Given those obvious benefits, what are the climate impacts of increasing oil and gas in Venezuela?

**Luisa Palacios:** This is why I do think that we do need to care, how Venezuela increases oil production. And the responsibility of future governments is to do that in a responsible way. You can actually increase oil production in a way that significantly reduces the carbon intensity and the methane intensity of your oil. And so I do think that, first and foremost, this is a country that needs the oil, because it has been living through humanitarian crisis and it needs to have the cash flow, in order to, be able to pay for the basic services of the Venezuelan people. Otherwise, you are gonna continue to have this country that used to have, one of the wealthiest country now in part with, countries like Haiti. And so from a point of view of just transition, I would say that this is the one country that needs to have the old resources in order to be able to create a better life for its people. But that doesn't mean that you cannot do it better.

**Ariana Brocious:** Luisa Palacios, senior Research Scholar at the Center on Global Energy Policy at Columbia University. Thank you so much for joining us on Climate One.

**Luisa Palacios:** Thank you Ariana, for your time. Wonderful to be here.

Music: In

**Ariana Brocious:** Coming up, beyond the events in Venezuela, how is the quest for energy shaking up the global order?

**Amy Myers Jaffe:** The reality is countries are realizing that renewable energy is a domestic resource that they can control. So we really need to be focused on clean tech.

**Ariana Brocious:** That's up next, when Climate One continues.

**Ariana Brocious:** Help others find our show by leaving us a review or rating. Thanks for your support!

Music: Out

**Kousha Navidar:** This is Climate One. I'm Kousha Navidar.

So far we've talked a lot about Venezuelan oil. Now, we're going to step back to take a bigger, broader view. Because what happens in Venezuela doesn't stay in Venezuela.

[music change]

Our next guest really opened my eyes to how Venezuela is one piece of a larger global power struggle for energy, resources, and geopolitical dominance. It's a complicated dynamic that goes far beyond Latin America and the US.

Amy Myers Jaffe is the director of the Energy, Climate Justice and Sustainability Lab at NYU. She's a leading expert on geopolitics, global energy markets, and the transition from fossil fuels to clean energy.

**Kousha Navidar:** So let's start on January 3rd. Uh, US military forces extracted Venezuelan President Nicholas Maduro from the country, flew him to jail in New York. He is awaiting trial on drug charges. When you heard that news, what was your reaction?

**Amy Myers Jaffe:** I was surprised like everyone else, but probably not as surprised as many people because there'd been this sort of drumbeat on, uh, narcoterrorism on the drug traffic from Latin America to the US. I knew the administration was focused on that, and I knew that they were looking for some kind of solutions and concessions. So the fact that no solution or concession was forthcoming, uh, I guess kind of explained the sequence of events.

**Kousha Navidar:** Well, the reasons the Trump administration gave for the involvement started with charges of drug trafficking, narcoterrorism, even though the vast majority of drugs that kill Americans do not come from Venezuela. But then I found this interesting later on. President Trump himself began giving oil as the reason for the military action. And at a press conference on January 3rd, president Trump said, and this is a quote, "we're going to take back the oil that frankly we should have taken back a long time ago." So Amy, the US is now by far, to my understanding, the world's top oil producer, it's nearly 14 million barrels per day. Does our country really need more oil?

**Amy Myers Jaffe:** No, in the sense that we have a lot of our own oil. We refined a lot of products, a lot of gasoline and diesel fuel and jet fuel that we actually export to other countries, including to Latin America. And you know, I'm sure there'd be some experts that would explain that on the US Gulf Coast, there are certain refineries that benefit and are much more economic if they can refine what's called very heavy oil, so oil that's more like tar and less like a liquid alcohol.

**Kousha Navidar:** And that's the kind of oil that comes from Venezuela,

**Amy Myers Jaffe:** Correct. And we get some of that oil from Canada and there's a few fields in the United States and Texas and offshore in the Gulf of Mexico that produce that kind of oil. But it's not oil that we can fully meet our needs ourselves. So we bring it in from Mexico. We were importing it from Venezuela before the sanctions tightened. We buy that oil and pipe it down from Canada, which was very controversial with environmentalists in the United States.

**Kousha Navidar:** You're saying that there are some folks out there that would say, Hey, these refineries on the coast would benefit from the kind of oil we're getting from Venezuela. Uh, but generally you're saying, it's not a significant demand right now that we have for oil that we would need from Venezuela.

**Amy Myers Jaffe:** It's not like we're back in the 1970s where a vast majority of the oil we're refining is coming from someplace else. You know, we have a lot of domestic production today that can be refined here in the United States.

**Kousha Navidar:** So that's great context because in my mind, I'm trying to figure this out, if the claim from the administration is that it's about drugs, but that's a hard case to make and then if the claim from the president himself is that it's about oil. But what I'm hearing you say is that's also kind of a hard case to make. Then what is this military intervention in your mind really about?

**Amy Myers Jaffe:** Well, it's complicated. But the United States is in a very delicate negotiation with Russia about a peace agreement in Europe. So the geopolitical context is not a small one because Russia had backed Maduro. And, and, and had brought a warship into the hemisphere. I mean, literally a warship into the hemisphere. It's not even about Alaska. Like we had a warship off the coast of Miami. And so I myself figure you have to have a global overview about why any president would want to, at this juncture in time, ensure that Russia is not able to put missiles or military equipment right in the middle of our hemisphere, nearest to the Gulf. And, I mean, I'm not gonna excuse all the Greenland talk, but just again to contextualize that, with Arctic melting, who's gonna control the sea lanes past Greenland? Is that gonna be Norway and NATO and the United States protecting those seas and that commerce from Russian nuclear submarines or whatever else the Russians intend to do with that territory? That was a contested space, and indeed Norway stepped forward and, you know, the United States is not spending the money to build ice breaking ships. Norway is, as part of their commitment, and as the listeners know, Finland joined nato. So this conflict with the Russians is broad and it involves many different locations. And if you consider the alliances that Russia has with North Korea, with Venezuela and with Iran, um, the threat of Maduro goes beyond the drug trade, it's escalated by the fact that there's an ongoing war between Russia and the west.

**Kousha Navidar:** So what changes now economically? What changes now politically?

**Amy Myers Jaffe:** You know, it's, it's very hard to kind of like, think through the consequences we're in just such early days.

**Kousha Navidar:** Sure. Yeah. Very unfair question, but take out your crystal ball, I guess.

**Amy Myers Jaffe:** I mean, it, it. If, if you think about, uh, you know, what is the United States really saying and, you know, going back to the Biden administration that had also done these, you know, air, air Force, flyovers of Guiana. I mean, are we really saying that, you know, Monroe Doctrine stay out of our backyard? Um, and then also like, you know, you're, you know, I remember in the days of pre the invasion of Iraq, there was this, now we'd call it a meme. There was this narrative that people said if they just took out Saddam Hussein, then the more dangerous leaders and, places like North Korea and Iran would settle down because they could know that they could be next. And it, of course had the opposite effect. And so I'm not sure that that works. But you know, it does raise this interesting question, which is that, uh, number one, if you are Cuba, you had this Cuban intelligence and paratroopers that protected, uh, Maduro, uh, and they were ineffective. Does that inspire your population opposition or not? Because it certainly shows a little bit of a paper tigerness about the domination of Cuba in the region. Um, but you know, you never know what, what happens with that. And then, then secondarily. what message do the Russians and the Chinese take from this? I mean, do the Chinese take that everybody is allowed to dominate in their own region? That would be a bad message in Asia for the Chinese to take from this action. I do think the clear message to Russia is that, um, you do not have the option. To use Venezuela as a surrogate the way you might have under past administrations.

**Kousha Navidar:** I wanna put a point on that because there's a lot to unpack in that response. I mean, you started talking about the Monroe Doctrine. Listeners, I'm sure are familiar. 1800s, president James Monroe declared the entire Western Hemisphere to be within the US sphere of influence. And what you're describing now, like

**Amy Myers Jaffe:** Lemme just, lemme just say that going back in time, that was a pro-democracy statement. Like we were saying that colonial powers can't come in here and stifle local population, so it, it's not quite the imperialist hue that people might give it in today's modern world.

**Kousha Navidar:** The context of it is quite important. Right. And, you know, well, I'm happy you brought that up because in, in my mind there's always that quote, like, uh, history always repeats itself. And I, I, I didn't think this up, but I'm sure somebody has said this, but the second half of that should be like, but it's always kind of different.

**Amy Myers Jaffe:** A hundred percent. I think what's interesting here is what are the lessons from history? And then how do we apply them in today's geopolitics with today's technologies and warfare techniques? In today's on the ground conflicts, uh, is different than it's been in the past.

**Kousha Navidar:** Right, because what you were just describing about Trump's intent, he himself has referred to this as the Donroe doctrine, that American dominance in the Western Hemisphere will, will never be questioned again. What kind of context do we need to know about that kind of philosophy in today's geopolitical landscape?

**Amy Myers Jaffe:** Well, I think you have to ask yourself. What's open conflict and what's under the radar type of conflict.

**Kousha Navidar:** like proxy conflict or cold con, uh, cool conflict kind of

**Amy Myers Jaffe:** Correct. So if I am saying, you know, we will take a military response to Russia bringing a warship to Latin America, it's probably a statement you wanna make. Right? In a credible way. If it's saying, Hey, we're not gonna let you destabilize any government in Latin America. I don't know. Can we back that up? Because I'm not even sure we can back that up in Venezuela. 'cause, you know, insurgencies are, are incredibly difficult elective politics on the continent have been very difficult. Uh, you know, swings from right to left and left to right, um, are been, you know, a hallmark of that region over the past, you know, decade or two. so I, I think it's hard to navigate. Exactly how the Monroe or Donroe doctrine will manifest itself, um, over a longer period of time.

**Kousha Navidar:** And, and you know, this is a pretty intellectual conversation we're having right now, like trying to map out geopolitical manifestations. I think for listeners, some people might be thinking, okay, even with all this said, It will take a long time to see any impact from this in the price per gallon of gas, for instance. So just thinking about all those people like driving right now, listening to this, maybe thinking about why, why do I care about this? Why should the average American care about what the US does in Venezuela?

**Amy Myers Jaffe:** Well, I mean, again, let's start with the geopolitical part. If you lived in Miami and you got up in the morning to go to the beach with your 2-year-old and you saw a Russian warship. That's disturbing. So you know, you would wanna send the Russians a signal that they can't do that,

**Kousha Navidar:** Mm-hmm.

**Amy Myers Jaffe:** The oil market is notoriously difficult to influence. The president probably did a better job getting oil prices and gasoline prices to go down by being friendly to some of the big countries that produce oil and export it around the world and winking at them and saying, Hey, uh,

we need a lower oil price for the global economy right now. Inflation is a problem for everyone, and by the way, I really care about that. Which he did, and they were amenable. You know, OPEC in meetings since Trump has taken office, they've put more oil into the market. and that has helped consumers at the pump. Going forward oil's a very fungible commodity. And so if we have a little bit more oil from Venezuela or a little bit less, um, given how much oil's being produced today and given where demand is with tariffs and the global economy, uh, I'm not sure Venezuela's like a really critical part of that equation.

**Kousha Navidar:** Sounds like that. Yeah.

**Amy Myers Jaffe:** And what I would tell people is, uh, when they ask me, you know, I try not to talk a lot about oil 'cause I'm trying to focus on clean tech and, um, other policies right now.

**Kousha Navidar:** But it keeps coming back. It keeps coming back

**Amy Myers Jaffe:** like, a bad meal. Like, I, I just can't get rid of that oil knowledge. Um, what I would say is that it's pretty hard to influence the oil market in a long-term way, except by doing things that eliminate oil use forever, like getting people into electric cars or using AI for energy efficiency in buildings that might still be using oil for heating and cooling.

**Kousha Navidar:** Yeah. You know, we've been talking a lot about oil markets and geopolitics, and it is. A critical piece of the puzzle for all of the geopolitical things, and it's gonna have huge impacts on climate. But I wanna focus on climate again for just a bit, because beyond your expertise in these areas, you are director of the Energy, climate Justice and Sustainability Lab at NYU. Despite how much people are asking you about oil, you have all these other pieces of expertise.

**Amy Myers Jaffe:** I've been working on climate change, you know, for two decades, like, uh, solutions to climate change, so a hundred percent,

**Kousha Navidar:** Which makes you like the perfect person to talk to right now? To bridge, these two pieces together, these two spheres. So let's do that. I'm hoping you can connect the dots for me as we go from geopolitics to climate. So how do you see the reordering of global powers affecting climate going forward?

**Amy Myers Jaffe:** I mean actually it, I know it looks bad because everybody's talking about how much methane is emitted in Venezuela, and you know, we need to solve that. That is like a tiny piece of the puzzle.

**Kousha Navidar:** Hmm.

**Amy Myers Jaffe:** The great thing that's happened, which didn't feel great to those countries where it happened. But from a climate perspective, the fact that Russia did invade Ukraine and we had to reevaluate what it means to the world to be dependent on Russian natural gas supply

**Kousha Navidar:** I see.

**Amy Myers Jaffe:** that hastened the decarbonization of the economies of Europe. The Biden administration worked very hard diplomatically to get extra liquified natural gas to reach Europe. And of course a lot of that came from the United States, but that deprived other countries, India, Pakistan, Sri Lanka and others of natural gas in Asia. And as a result, those countries have gone hard for solar energy just in scale that no one thought possible.

**Kousha Navidar:** And you're saying that invasion was a catalyst for the increase in work towards

losing reliance on natural gas from, from, uh, dangerous players, you're saying?

**Amy Myers Jaffe:** Correct, and it showed you how volatile that commodity was. We already knew that oil was a volatile commodity. China had already made the decision that they didn't wanna be dependent on US controlled sea lanes for the oil for their economy. And so they had already switched hard, very hard to clean tech and in a smart and incredible way where now we, you know, in the West have to think about, well, can we a hundred percent pivot to clean tech? Because we also have to worry about the supply chains being too dependent on China. But, but that pivot made by the Chinese to favor clean tech as a national security imperative. That decision by India, that they could rely on domestic solar and maybe pair it someday, which they're investing in on green hydrogen, uh, countries like Chile, same thing. It forced the energy security equation away from natural gas and to renewable energy.

**Kousha Navidar:** But do you see that happening in the US? 'cause my impression is that development is going the opposite direction right now in the US.

**Amy Myers Jaffe:** Well, listen, the policy is going in the opposite direction in the US but if you are a jurisdiction that needs capacity right away. And I always use Texas as my example because you know, that is the place you think that they're deploying so much natural gas 'cause it's Texas. Uh, guess what? They have deployed a giant amount of batteries to solve their electricity, reliability problems there.

**Kousha Navidar:** Mm.

**Amy Myers Jaffe:** And hopefully we're gonna see more of that in places like the Mid-Atlantic, uh, that you know, in the past has embraced natural gas because the batteries are helping. We're having less flex alerts in California. We're having less outages in Texas because of these batteries. The truth is solar and batteries are faster to install than natural gas, which you have to build the plant and it, you have to buy all the equipment for the plant, and there's a backlog of orders for that to turbines and all the equipment that goes with that too.

**Kousha Navidar:** What I hear you say from your previous point, these actions. On a global scale in terms of climate, may actually be, uh, reinforcing the need to remove jurisdictions from natural gas and investing even more heavily into clean tech

**Amy Myers Jaffe:** I think that when the dust settles, the takeaway is national security. Is pressing. So there might be a country out there for which that means coal is a lingering solution. Uh, but, but we're seeing countries embrace renewables as a solution, and the United States has taken away, uh, a lot of the incentives to switch and that might slow it down here. But ultimately in the end, if China were to sell their very inexpensive, unbelievably sleek, five minute charging EVs to Mexico. And Mexican buyers don't import American cars or buy American cars being produced in Mexico did that help us? Because the Chinese cars are coming. These other cars are coming and as a nation, we should be locking down on advanced battery EV technology, like solid state batteries, which could wipe the Chinese out. If we could crack that puzzle because they're mu gonna be much better and much more effective than the lithium ion batteries that are being used today. Like we need to leapfrog and win. And that takes a national effort. And so, you know, my fear is that we're gonna have an own goal. We're moving in the wrong direction. But the reality is countries are realizing that renewable energy is a domestic resource that they can control. So we really need to be focused on clean tech, not only from the climate point of view, which should be top priority, but also just from an economic competition point of view. I mean, that is where the market's gonna go because that's gonna meet country's needs.

**Kousha Navidar:** Amy Myers Jaffe is Director of the Energy, Climate Justice and Sustainability Lab at New York University. Amy, thanks so much for joining us.

**Amy Myers Jaffe:** Thank you for having me.

Music: in

**Kousha Navidar:** Coming up, climate activist Bill McKibben on how clean energy could change relationships between global powers.

**Bill McKibben:** I sure do not want to depend on a country as erratic and unreliable as the United States in order to supply my energy. I don't want to depend on Russia, if I'm a European country, I'm gonna depend on the sun and the wind.

**Kousha Navidar:** That's up next, when Climate One continues.

Music: out

**Ariana Brocious:** This is Climate One. I'm Ariana Brocious.

Some of the world's bloodiest conflicts have been fueled, both literally and figuratively, by oil and gas. For decades, oil has shaped borders, propped up brutal authoritarian regimes, and drawn powerful countries into wars far from home. But what happens to the incentive to fight for oil now that energy from solar, wind, and batteries is becoming cheaper than energy from fossil fuels?

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To explore that idea, I spoke with climate activist, and founder of Third Act and 350.org, Bill McKibben.

**Bill McKibben:** First thing, let's say is credit where due. Donald Trump made no effort to pretend that he was doing this in Venezuela out of concern for human rights or democracy or anything like it. Uh, he just said they have oil. We want the oil, so now we're in charge and we're taking the oil. He even implied that it was somehow our oil that had mysteriously appeared beneath the soil of Venezuela. This is pretty much what bullies around the world do. They see some kid coming to school. They know that he has lunch money in his pocket, and so they take it away because they can, uh, they don't make an argument about why it's a good idea. They just do it. And given that, uh, this particular bully holds the most powerful military in the world, the chances of anyone effectively standing up to that bully and bloodying his nose and things seems, uh, small. But we do live in a world where that lunch money is becoming less and less and less valuable.

**Ariana Brocious:** And in this analogy, the lunch money is oil.

**Bill McKibben:** Oil has been the currency of the world in many ways for the last century. An extraordinary amount of the violence of, uh, planet Earth for the last a hundred years has been hooked up with one way or another with, uh, controlling access to supply of, uh, petroleum. But all of a sudden that is beginning to fade and it's beginning to fade because we've found something much better than petroleum. Sunlight and wind produce the same product, energy, just cheaper and cleaner. And so around the world, over the last five years, there's been this extraordinary growth in the amount of wind and sun that are being brought to bear, and one result is that oil is becoming less valuable. Its price is not spiking any longer. Indeed it's short and medium term outlook for oil is almost certainly the price is going to keep falling. And that's because 60% of the cars sold in China in December had plugs. They're never going to need oil. And now the same thing is happening in

India. And so why would anyone decide to invest tens of billions of dollars in rehabilitating Venezuela's oil infrastructure to produce a product for which the demand is now falling? it's a little bit as if, I don't know, Teddy Roosevelt had decided to invade wherever the world's best supply of carriage horses was in 1904, just as the automobile was starting to take off. There's something both savage and stupid, but also quite archaic about what Trump is attempting here.

**Ariana Brocious:** Yeah, and the, you know that analogy, I think another guest recently used the analogy that, you know, the stone age didn't end because we ran out of stones. Right? We were at a point of inflection of transition and that is great, but we know we're gonna need oil for still a number of years for still a while. We have, uh, entrenched systems that are very, very dependent on this resource. so help me understand the timeline that you're thinking we have here and the path to the future that you're talking about where there's really no incentive any longer to go after another country's oil.

**Bill McKibben:** Well, look, we've got tons of oil around the world, we're not going to run out. So Venezuela's heavy, dirty crude seems to me very unlikely to be an important factor, uh, going forward. I mean, you can lift oil out of the oil fields of Saudi Arabia at five or six, \$7 a barrel, so the last barrels of oil pumped on planet Earth are gonna come from those cheap, easy places to get them. The question of how much longer we're gonna need. Oil is the key question, especially if you're concerned about how hot the planet's going to get. The Trump administration is doing its best to prolong the period of time for which we will need oil. Um, there have shut down efforts to move America towards EVs. um. They're doing their best to make sure that we don't build the solar farms that would produce the electricity that would allow people to install heat pumps instead of furnaces in their basement, and hence not need oil anymore for that they can slow down America for at least a while in this. But the rest of the world seems to be gathering speed and gathering it more quickly than people had anticipated. The news out of India and China over the last 12 months is far better than we would've guessed even a couple of years ago. The speed with which they're deploying clean energy. So I truthfully, I think that the outlook for, uh, oil and LNG and other forms of hydrocarbons is pretty weak right now. And I think the people who know that best are the oil industry. That's why they worked so hard to get Donald Trump in office. You'll remember him, candidate Trump explaining that if they gave him a billion dollars, he would do anything they wanted. They gave him half a billion and he's doing everything that he can think of, um, including, frankly, some things. I don't think they even really want that much. I think they're ending up a little bit like the, you know, the dog who caught the car. I don't think the oil industry wanted, Venezuela wants to deal with Venezuela and being responsible for bringing it back online. It's an expensive mess for a product that's not worth all that much.

**Ariana Brocious:** Yeah, the world in a way seems to be leaving the US behind a bit in this moment. We'll see if a few years from now there's a place for us to kind of pivot back. Um, another thing that the Trump administration has been discussing and pursuing of late is this idea of taking ownership of Greenland. Right? And Greenland does have a lot of critical minerals could be used as, uh, you know, in the production of electric vehicles, wind turbines. What's your opinion on that prospect and do you feel any differently, going back to this analogy of kind of the bully taking the the oil lunch money, do you feel like it differs if we're talking about things for renewable energy?

**Bill McKibben:** Truthfully, I don't think that the Greenland stuff has anything to do with minerals or anything else. I mean, there's some oil there. but I think what there mostly is, is just Trump has seen a big thing on the map and he'd like to own it. I've been to Greenland. There's people are not going to be doing a lot of mining for critical minerals or anything else in Greenland anytime soon though, we're doing our best to melt its ice sheet. There's still a mile or two of ice on top of everything. You couldn't pick a more impossible place to decide to go do some mining. There's no ports. There's no roads, there's no anything. This is just. This one's just, uh, you know, forget the

lunch money. This is just the bully who likes beating people up.

**Ariana Brocious:** You've been to Greenland and you, I think you've even stood, um, and seen the melting firsthand. How do experiences like that affect what you think about what direction the country's going in terms of climate change and climate action.

**Bill McKibben:** Well, let's just be clear here. Uh. Our country is the only country on earth that has decided that it can exempt itself. From the Paris Climate Talks and from the UN Framework Convention on Climate Change, it's also the country that's put the most carbon into the atmosphere by far of any nation on earth. We are an outlaw. Rogue country right now and we're run by an idiot. who has said specifically that he doesn't believe that climate change is real and that he doesn't believe that renewable energy works. He got up and made these remarks at Davos to a room full of leaders from around the world, every one of whom knew that he was lying. They knew when he stood up and said, there are no wind farms in China that China's producing 40% of the wind power on planet Earth. You and I can pretend to have, uh, a, a rational conversation about what this all means, but all it means is that, you know, we're a. Absurd Nation at this point run by an absurd figure who's behaving incredibly dangerously on every front. Um, and I think it's a mistake probably to try and ascribe too much rationality to any part of this process. The best you can say is that he's been deeply corrupted by the fossil fuel industry and is doing their bidding, but even that, as we said in regard to Venezuela. I mean, even that doesn't really explain, uh, the silliness of what we're engaged in.

**Ariana Brocious:** So I wanna take a couple things, uh, apart in there. So, so first this idea that, the fossil fuel industry has kind of been given everything they want from the Trump administration in terms of rolling back regulations, clean air protections, clean water protections, are we seeing, you know, a substantial uptick in production as a result of that?

**Bill McKibben:** I don't know about production, but US carbon emissions a rose 2.5% last year while they went down in India and China. so hopefully one thing that will finally happen as a result of all this. Is that, uh, right wing commentators will stop saying, there's no reason for America to take climate change and emission seriously, because the Chinese will just build some more coal fired power plants or something. That's not what's happening. The Chinese and now the Indians are building out the renewable energy future.

**Ariana Brocious:** So another thing that I've been thinking about a lot is the other pressures that can be brought in all of these areas, I mean, we've talked about increasing competitiveness, solar's, you know, the cheapest form of energy to produce energy, um, even though it's not being deployed, uh, as it should be, and there's a lot of innovation happening around things like virtual power plants, um, making EVs be, you know, uh, dual energy. You know, you can charge, you can take charge from them. There's a lot of excitement. Yeah. Bidirectional. Thank you. And so, I don't know, I, I mean, I think, um, an optimistic frame might be that we're in kind of the last gasp of the dominance of fossil fuel energy. But I don't know. I don't know. I mean.

**Bill McKibben:** I mean, I, I think we're very much in its last gasp and in much of the rest of the world, we're moving past it. The question is how long that last gasp lasts, and that's only an important question because we're destroying the climate in real time. Look, if climate change was not a pressure, then we could just sit back and relax with the thought that economics was moving us in the right direction in terms of clean energy. And 30 or 40 years from now, we would run the planet on sun and wind, surely on the force of market economics. But if it takes us anything like 30 or 40 years to get there, then the planet we run on clean energy will be a broken planet. We're already obviously seeing extraordinary levels of damage from fire and flood and storm, but now that damage is reaching into core functions of the planet's climate system, the Jet Stream and the Gulf

Stream both seem to be flickering and faltering and wobbling and, uh, uh, as we change the, uh, temperature regime, especially in the Arctic, um, we're seeing extraordinary forces start to play out in the Amazon. There's only so many big ecosystems on planet Earth. If you're destabilizing the Arctic, the Antarctic, the Amazon, and the big currents of the oceans all at once, you are pretty much turning the earth upside down. So we, you know, our best hope of slowing that down, of limiting that damage is to move very, very fast, and we are capable of moving very, very fast now. We have affordable technology that could wean us off fossil fuel in short order if we were willing to make it a political priority. Sadly, we're governed by a corrupt idiot.

**Ariana Brocious:** Yeah, so there's a, there's a real narrow window here that we have left to make substantial change, to sort of halt the worst implications of a warmer world. We know that lots of people might know that though we're not acting as if that's the future we have coming. The US at different times has been more of a leader on climate. Obviously in this moment we're kind of the antithesis. Trump has pulled the US out of basically all the climate negotiations, all the climate talks, um, and their structures. What does that mean for the, for global climate progress? How important is the US?

**Bill McKibben:** First of all, let's say what it means for the US. This is the greatest act of national self-sabotage that I, I, I think we've ever seen. We've taken technologies invented in the US for solar cell 1954, Bell Labs, Edison, New Jersey, first industrial wind turbine, 1943 in the mountains of Vermont, first lithium ion battery. On down the list, all American, we've now seeded that technological and with it economic and with that probably political leadership to our theoretic main adversary, China, and we've done it in the course of a year. That's really remarkable. Now what that means for the rest of the world is unclear to me. I mean, on the one hand, we're clearly trying very hard to slow down this shift to renewable energy. On the other hand, I think that some of the ham-handed ways we're doing it may be actually around the rest of the world, speeding it up. You know, uh, if, if you're the rational ruler of a say, Asian country right now, And the United States is pressuring you hard to buy more LNG in order to avoid tariffs, which is what we've been doing to country after country. You may in the short run cave into that pressure and buy some LNG to get the US off your back, but you're definitely thinking at the same time. I actually, what I really am gonna do is buy a lot of Chinese solar panels and put them up so that I no longer have to depend on anyone except the sun. I sure do not want to depend on a country as erratic and unreliable as the United States in order to supply my energy. Who would? And I don't want to depend on Russia, if I'm a European country, there. Uh, equally unreliable and erratic. so I'm gonna depend on the sun and the wind.

**Ariana Brocious:** Yeah, I was listening to another energy podcast recently, and, uh, not a new point, but just a good reminder. Um, the person speaking said, you know, maybe you buy the solar panels from China, but then that's it. The sun's. The sun's everywhere. You know, you're not, they're not in control of the fuel.

**Bill McKibben:** Exactly right. It's a very different kind of dependency. It's like owning a house instead of renting it. if you got, dependent on, uh, endless supply of LNG from America, then you're have to come up with the money to pay for it year after year after year after year. Year after year after year, you're vulnerable to, you know, the whims of Donald Trump about whether you're gonna get it or not. Whereas once you've bought the Chinese solar panels or what more and more countries are doing, built their own solar panel factories, uh, then you're free and clear.

**Ariana Brocious:** Mm-hmm.

**Bill McKibben:** I mean the, the, the obviousness of this future is one of the things that makes the weird, desperate attempts of the US to hold onto the past so silly, uh, so sad. and so pointlessly

expensive. If Trumpism, you know, retains power for a couple more decades. Uh, the US is gonna be this strange continent sized museum of internal combustion in a world that's long since turned to electricity,

**Ariana Brocious:** Yeah, let's just put the US government aside. knowing that it is an incredibly powerful player, was during the Biden administration. Could be again, but in the moment we're in now. think about what other changes are are happening. I mean, there are subnational actors here, states and cities that are taking their own action. Um, industry, market forces, economics. I mean, when you kind of look at the, the whole picture,

**Bill McKibben:** In the States, the Trump administration has blunted the surge toward renewable energy, but it hasn't stopped it. The economics are too powerful for that. and we can make those. Economics better all the time. So, for instance, at Third Act, which I founded to help organize old people like me on action for climate and democracy, uh, we've got this big, uh, simplify solar campaign underway, and it's basically designed to make sure that state, local governments are making it much, much easier to put up solar power. Americans pay three times as much as Australians or Europeans for rooftop solar, and it's almost all because of regulation and kind of paperwork tax that we can get around. Uh, we've introduced legislation in 22 states since Sun Day, in September. That would legalize balcony solar or plugin solar, something that's absolutely commonplace in Europe. Millions and millions of apartments with small scales, plugin, solar panels, but illegal everywhere in the US except Utah. So, you know, that's a big drive that's underway and I think we'll be successful in place after place in the course of this year. So I think there's a profoundly more interesting world on the other side of all this, and I think there's also potentially a profoundly more peaceful world. Donald Trump invaded Venezuela because he wanted oil. No one is gonna be able to figure out how to fight a war over sunshine.

**Ariana Brocious:** Bill McKibben is founder of Third Act and three fifty.org. Thanks for joining us again on Climate One.

**Bill McKibben:** What a pleasure, Ariana. Many thanks.

**Ariana Brocious:** Hey, it's Ariana and Kousha. We are at the end of our show, and as usual, we like to share one more thing on our minds. Kousha, it is your turn. What's on your mind?

**Kousha Navidar:** All right. Have you ever heard of Staten Island Chuck?

**Ariana Brocious:** No. I, I know where Staten Island is.

**Kousha Navidar:** Okay,

**Ariana Brocious:** Chuck, like beef?

**Kousha Navidar:** No. Chuck like a groundhog. It's New York City's.

Oh my gosh. Own weather forecasting Groundhog, Staten Island. Chuck came out of his hole and what did he see? He saw a shadow. What does that mean? Six more weeks. A winner. I'm sorry, but shout out to, uh, Staten Island. Chuck, full name. Oh man, I learned this. Charles G Hog. I just love this time of year.

**Ariana Brocious:** Charles G Hog.

**Kousha Navidar:** Yeah.

**Ariana Brocious:** Oh, that's excellent. Well, um, I don't know, maybe a little more winter's okay. You guys have been getting a lot of snow.

**Kousha Navidar:** We have, yeah. The, it's hard to actually cross the street right now 'cause it's just like a snowbank, two feet, three feet high, which, you know, I'm, I'm, I'm a big fan of, I like, I like snow personally. I'm not a fan of like, crosswalks being in danger. But, um, it's just, you know, the season of holidays has passed, but tis the season to like lean into winter. And I'm, I'm I for one welcome Chuck and his guesstimation. Uh, there's this stat. Okay. According to the Staten Island Zoo, Chuck has been accurate in his predictions nearly 80% of the time. That's eight zero.

**Ariana Brocious:** That's pretty good. Yeah, that's

**Kousha Navidar:** very good.

**Ariana Brocious:** Well, maybe Chuck could send some precipitation out west. 'cause it has been a dry, dry winter for those of us in the other half of the country and we could really use some moisture.

**Kousha Navidar:** Yeah, you need your own Chuck. You need your own set. We do the Tucson to Can Cherry,

**Ariana Brocious:** We'll see about that. But um, yeah, anyway, that's excellent. Thank you for sharing. That's our show. If you wanna see what our team is, reading stories, including things like that, occasionally sign up@climateone.org.

**Kousha Navidar:** Let's have Chuck as a guest.

Music: In

**Kousha Navidar:** And that's our show. Thanks for listening. Talking about climate can be hard, and exciting and interesting -- AND it's critical to address the transitions we need to make in all parts of society. Please help us get people talking more about climate by giving us a rating or review. You can do it right now on your device. Or consider joining us on Patreon and supporting the show that way.

**Ariana Brocious:** Climate One is a production of the Commonwealth Club. Our team includes Greg Dalton, Brad Marshland, Jenny Park, Austin Colón, Megan Bisciegli, Kousha Navidar and Rachael Lacey. Our theme music is by George Young. I'm Ariana Brocious.

Music: Out