Counterbalance | Ep. 30: The Geopolitics of Energy

TRANSCRIPT

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- Michael Doran, Senior Fellow
- Marshall Kosloff, Media Fellow
- Professor Brenda Shaffer, Research Faculty Member at the U.S. Naval Postgraduate School

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Mike Doran:

Dr. Brenda Shaffer, welcome.

Professor Brenda Shaffer:

Thank you.

Mike Doran:

You know, you just wrote a very, very interesting article in Foreign Policy, which struck me as, I guess, I'd just say common sensical on this energy question. We're polarized on everything today and we've divided ourselves into pro-carbon and anti-carbon. Where do you put yourself in that divide? Are you a carbon fanatic or a green energy fanatic?

Professor Brenda Shaffer:

Actually, you set it up in a very interesting manner because most people assume that climate policy is green policy, or that even renewable policy is green. What's happened in the last decade, maybe even a little longer, is that policymakers in the west have completely forgotten about green, low environmental impact, and everything is about climate and renewable energy even though those things often are very much not green.

For instance, the most common source of renewable energy is hydro-power. Well, anyone who's ever taken a walk in a park, a national park, and suddenly seen a hydro-dam and see what they look like and what they do to an ecosystem, what they do to the waterways, to the people that live in this place, understand that hydro-dams, they might be renewable. They might be cheap, but they're, but they're certainly not green. It's interesting that you said, actually, "Are you climate or green?" I think we need to be both but unfortunately right now U.S. policymakers, Europe, they're only about what they call clean energy, which is what they mean low carbon. Most of the public doesn't understand that this has a very high environmental impact. If you ask them, if you notice all U.S. government publications, they don't mention any more green energy environment. It's only about climate.

Marshall Kosloff:

You know, it's interesting, I want to pick up on Mike's setup because he referred to essentially asking where do you stand on the energy question? And when we're looking at policy makers worldwide, especially industrialized countries, what questions or debates should they and are they thinking about right now, given the dynamics you just outlined?

Professor Brenda Shaffer:

Right. Marshall, that's a great question because unfortunately, just like so many other policy issues that we deal with, whether it's education, poverty, national security, everything's got caught up in these culture wars that we're having, very, very strict divides and trying to see it through an ideological lens. I could say how I see how Europe got is so wrong right now in its energy policies, despite probably Europe, more time, debate, energy, and money, and proper energy and environment and climate
policies than any other country, but even more than the United States in recent years, is that they actually made a hybrid of the worst results of the ideological wars.

First thing, they had pretty good system with gas buying, for instance. Europe lives next to the largest reserves of natural gas in the world, in Russia, the Caspian, Iran, North Africa, they're surrounded by natural gas. They have natural gas also in Europe, not the EU, but Norway, they had it in the Netherlands, not an energy poor region. What did they do instead? Instead of these nice contracts that they had with these long-term suppliers, they said, "Oh, that's not..." The people went to MBAs in the States and came back and said, "No, we have to have markets drive this."

The problem with that is that to produce natural gas costs billions of dollars and takes many years. No one is going to produce natural gas for you in Algeria, Russia, Azerbaijan, anywhere else, if you don't actually say, "We want this gas and we commit to pay for it," They went to this model of these hubs, so as free market as possible, let the gas flow and we'll bring in liquefied natural gas, LNG, from around the world until markets flow.

Well, what they did is they set themselves up to compete for market price with Asia, which they in Europe didn't really have to do that, but by putting themselves into a global market for gas through LNG, they're competing with Europe for supplies. Their producers didn't produce a lot more gas, the only new production that came online in recent years was actually the Southern gas corridor from Azerbaijan, and that is a 25-year contract with committed gas buyers. That gas actually arrives into Europe at a reliable price with reliable supplies.

But everywhere else, they said, "No, just go into the hubs."

I could say, sorry to be immodest here, but I am on the show with Mike Doran so I kind of learned from a genius, but I said this in a congressional testimony in a 2014 Senate hearing on European energy security. By moving gas over to hubs, over to spot trades, you're actually giving more power to Russia because Russia is the swing producer. They can release gas to the market at a rate that gets the price that they... In order to set the price that they want. All these hubs have done is not made it more commercial, they've actually made it more dependent on Russia.

But then on top of this so-called market, they add all these limitations on 20% renewables, low carbon pricing, fixed prices for utilities, so the input, what the gas costs, what the renewables costs, all that, isn't set, but the output, what these utilities can charge consumers is set.

Mike Doran:

Can I butt in here for a second because it's very, very interesting, but I want to make sure that I'm following the main argument. Let me tell you what I think I just heard you say, and then you tell me if I got it right or not. The story I thought you were going to tell was was that Europe, it has just gone completely ideological on climate and they have reorganized everything in order to get green energy. But I think you said something else, which is that they got MBAs in the United States and they actually became believers in the free market. They had this idea of the best way to have their energy supplied was by creating energy hubs by which I guess I understand that to mean, you'll have to explain to us what that is, but I understand that to mean a kind of marketplace where energy can be traded on the spot market and that this would be the right way to supply.
But the problem with that, I hear you saying, is that this is a special kind of commodity, and it's not like buying apples in the marketplace. The marketplace alone can't guarantee the steady supply at reasonable prices that you need for a stable economy and for national security. But then they started with this free market idea, but then they brought in all these green energy ideas, which they laid on top of their market, so they have the worst of both worlds then. They don't have the real benefit of the market and they have burdened the market with all of these status controls. Did I get that right?

**Professor Brenda Shaffer:**

Oh, almost Mike. My natural tendency is to say, "Let the market do it," But energy is the exception. Energy, there's a reason we call energy companies utilities. It's a public good like water and clean air that the public has to have it. It's somewhat of a demand, is not elastic. We can't run modern life as we know it without stable electricity supplies, stable heating, therefore we do need, this is probably the one sector where we certainly do need government, and that's in energy in general, and more specifically electricity. Liquid and solid fuels like oil and oil petroleum and coal, maybe the market does a really good job because those are fungible, they can move around, but gas is so difficult with transportation, you really need government involved.

One, the first part was right. They brought in the free market, maybe for the one thing that doesn't work well with free market. But even that, it has still some advantages, they toppled on that all this ideology and limitations, and so it doesn't even bring the benefits of free market trade. I think, for instance, an example of where free market failed energy, stable energy supplies, is also last year in Texas in 2020. They had this idea that again, kids that do these great MBAs and look at game theory models, how things work in theory. There'll be a pricing, they'll write Texas suddenly needs electricity or needs gas, will be a price signal and Colorado and everyone's going to try to make money and they're going to surge their gas there.

Well, that doesn't happen in real life if it means turning out the lights or the heat to your own people. We saw this in 2010 in Southern Europe too. There was a gas freeze and nobody upheld their obligations to transmit gas onward to the next market if it meant freezing their own citizens. One, hyper free market doesn't work with natural gas and potentially even with electricity. You still need an element of government to ensure security of supply and gas producers are not going to produce gas unless you give them a contract and tell them that they have a market for many years.

Two, what Europe did, and now U.S. is copying this, any good benefits you had from the market they're ruining with a lot of legislation that takes out the market aspect of it. You come up with this kind of a hybrid to use their happy word, hybrid, maybe the worst of both worlds, the free market world and the heavy hand world.

**Marshall Kosloff:**

I would actually love for you, since you gave a great rundown of the European approach, if you can just give the outlay of how the U.S. is approaching energy policy questions. It's also interesting when you gave the example of taxes, there's obviously the federal version, there's the state version. So I would love for you to lay down just a broad overview of the U.S.-centric perception.
Professor Brenda Shaffer:

Right. So it's really good, Marshall, that you broke it down as states versus the federal government, because traditionally, energy, electricity, policy was pretty much local, it was states and it wasn't a heavy hand of the government, but here, it started under the Obama administration and some of the legislation that's proposed, you're getting a lot more federal government intervention. And one of the reasons why we have, despite the very significant rise in global oil prices, we don't see U.S. shale kicking back in and going to work, one of it, it's the regulations and legislation that the Biden administration put in really in its first days to freeze exploration on federal lands, to up other regulations, and it gave a very clear signal to the market, "Hey, don't invest in oil and gas production in the U.S. because we're only going to make it tougher for you."

So you're seeing this incredible situation where global oil prices is at 85, it's heading up for more, and yet no one's going back to the oil patch, or very few are going back to the oil patch in the U.S., and that also affects natural gas prices in the United States. If you notice, they're up. Gas, I don't mean gasoline, I mean gas itself that we use in the U.S. for power production and for heat. They're high because a lot of the gas in the U.S. is called associated gas. When you produce oil, the gas comes out, so it's a by-product of the oil, and we're getting a lot less of that nowadays with the oil production still stunted in the United States.

So one is that it's starting to become more federal, and that'll be an interesting play if there'll be sort of a conflict between the states and the federal government. There's been a lot of interesting court cases over the years that tended more to keep those rights to the states versus the federal government. But another issue that's really missing in action is the geopolitics of energy. So the United States used to always-

Marshall Kosloff:

And sorry, before you pivot, because I just want to get at what you were just saying, could you talk more about what those conflicts look like between the state and the federal government? And then we could pivot to the broader geopolitical angle.

Professor Brenda Shaffer:

Okay. So one of the conflicts that's sort of a theme between the federal government and the states is, for instance, the levels of environmental reporting I would say. So, some people when they saw, for instance, the Trump administration getting rid of environmental reporting to the federal government, let's say, or needing permits, for instance, to anything that affects waterways or local waterways or on methane reportings, said, "Oh my God, now everyone could just pollute as they want."

No, all he did in most of these regulations was remove the federal government from the picture, meaning that if you have a non-interstate waterway, a creek, for instance, a large creek in California, Washington doesn't have to come check what you're doing with that creek or give you a permit to change anything. You live with this creek, it's your creek. People who live there are most affected by the changes in the environment, the states should do it.
So this is sort of something that's gone back and forth between... The Obama administration put the legislation in place for the federal government to be an extra layer of permitting and checking, the Trump administration took it away. The Biden administration put it back.

Another thing is an important Supreme Court case on power plant limitations in terms of pollution, carbon emissions. Again, should this be the states that regulate it, regulate their air, or should this be the federal government? The courts have kind of gone back and forth on that.

But an issue that was clearly the federal government and is clearly part of America was always the geopolitics of energy. And in fact, for years, even when it was the USSR and later Russia, sort of the biggest voice warning Europe about being dependent on Russian gas wasn't in Europe, it was actually Washington.

And if you notice that, for instance, usually that every national security doctrine had energy in it, usually that at least the vice president was taxed with global energy, energy security, and those things are currently gone from the U.S. government. Energy policy has become a subset of climate policy, hard to even hear of a energy policy. Unfortunately, even the aspects of the climate policy which are energy policy I think are divorced from... What do people like to call it? The science, for instance. When you hear policymakers in the U.S. and in Europe as well, what they talk about all the time is how to produce more energy. You know, how do I get more wind capacity in place, or how do I get more gas capacity in place and produce more energy?

Producing energy or bringing energy is not the hard part. That's easy. The hard part is actually producing stable electricity and heat, meaning taking all those sources of energy and getting them to work together. It's kind of like a band. Renewable energy is like a drummer just doing his thing. Okay, that's nice. It's good, and we like it in the end, right? But if he doesn't have a guy with a bass guitar and someone singing, there's really very little music going on there, right?

So first thing, renewable energy in today's current forms, in order for it to be converted into electricity, right, you don't just take a windmill or a solar farm and you just stand by it and plug in your car to that solar farm, right? We talk about we plug this into electricity grids. Those grids, they don't work well with changes. They don't like here he comes, here we go. So they need something all the time. Humming production, right?

So basically we keep almost 100% capacity in natural gas humming along so when the wind drummer comes in and the solar singer comes in, that they can make some music, right? But it doesn't happen without that base load. We call it base load capacity keeping the grid stable. And second, you need that capacity in case you don't have the wind or you don't have the solar, or you don't have enough of it. And that capacity in gas is never computed into the price of renewables.

So you hear from our policymakers today in Europe and the United States, "Gee, I wish renewables could be stable. I wish gas could be stable priced like renewables. Look how renewables prices don't change." Well, one, they don't change because it's not a real market for them. They're sort of commissioned. The production costs do change with the metals and everything going into them, but you have gas that you have to keep commissioning that capacity, and that the public pays for. So it's usually the debts of the utilities. If you're forcing them to buy the renewable capacity and they have to still buy the gas capacity, they generally can't make a profit. So half the time government is bailing out utilities or it's a direct allocation to the utility companies.
Mike Doran:

Let me make sure that I understood what you just said with your band analogy. The issue here is that because the wind doesn't always blow and the sun doesn't always shine, and because we don't have a storage capacity or capability, we don't have a battery yet that can store up whatever energy is created by renewable sources, the unreliability of it and the fluctuations in it means that we have to keep a very significant, maybe a 100% capacity that's burning carbon energy.

So when you bring renewables online, you're not actually displacing... Let's say we get 20% of our electricity from renewables. It doesn't mean that that 20% has reduced the burning of carbon energy by a comparable amount because we have to have the system working all the time anyway. Am I right, or am I wrong?

Professor Brenda Shaffer:

Well, somewhere in the middle, you're going to have to have that system working all the time as a base load to keep the grid stable, but you might be using less of it because of the renewables, but it's not completely a replacement. And therefore, when we [crosstalk 00:21:05]

Mike Doran:

It's not a [crosstalk 00:21:06]. I can say it more clearly. It's not a one-to-one replacement.

Professor Brenda Shaffer:

It's not a one-to-one replacement. And when we calculate the cost of renewables, we should calculate the cost of keeping that backup capacity in place. It's like saying you own a car and you only want to pay for the cost of your car, whether it's your insurance and your repairs, only for the days you drive it and, "I don't want the other costs." Well, sorry, dude, you're going to have those other costs because if you own a car, you have the luxury or the convenience of having a car by your house. You're going to pay all month for insurance. You're going to pay all month for repairs, all month for parking, right? It's not just on the days or the hours you want to use your car.

The second thing that we need to think about is renewables. And again, this is going back to why renewables are not necessarily green and they have environmental impact, is that current renewables, and again, maybe we'll jump. I mean, hopefully I'm sure we'll jump. Of course, science advances but current renewables, mainly solar and wind, they have huge land usage, so we cannot scale up solar and wind to the levels of energy intensity that you get out of natural gas, nuclear, coal, without really destroying most your open spaces. The amount of space you would need with solar farms or wind farms, right now the United States, I think that the secretary of interior is thinking about a massive permitting for offshore wind. Well, California, New England, I believe South Carolina, I'm thinking about what are those marine animals there? How's that going to look? Are Californians going to enjoy these huge towers?

It's not like these things don't have environmental impact. Someone should go look at a solar farm. I saw one recently in Africa, where it's locked, right, this huge area and fenced, so the fact animals can't migrate where these solar farms are. So the point is that I'm far from against encouraging development
of renewable energy and in many cases, to use it. But also, we have to look at the full environmental and even climate impact of renewable energy. It's not free and it's not without environmental impact.

**Marshall Kosloff:**

Speaking of environmental impact and the broader tie to how different countries and systems are approaching these topics, I'm curious as to your thoughts on the state of nuclear energy, Europe, U.S., France, Germany, all the basic players that are looking at that type of technology and energy production.

**Professor Brenda Shaffer:**

Yeah, I have mixed feelings. Marshall asked earlier what the debate should be. We need a new debate on nuclear energy. So on one hand, there's nothing that can deliver carbon-free, low environmental impact energy, like nuclear energy and even very small on land use. And on the other hand, the real reason why nuclear energy isn't expanding anymore and the capacity is declining in the world is price. So as we got better at making nuclear reactors safer, they got much more expensive. And today, nuclear energy really can't compete on price with any of the competing fuels. I think this is one of the reasons why the climate lobby went against natural gas.

Natural gas when you use it, basically no air pollution. Not perfect on climate, but not a real bad guy, right? And suddenly it got cheap after the Shale Revolution and discovery of natural gas in a lot of new locations around the world with new technologies, improvements in offshore drilling and suddenly had a fossil fuel that wasn't an easy enemy, right? For years, I didn't know the focus was on carbon emissions. Now suddenly methane emissions, because there's methane released with natural gas production and transportation, and suddenly, natural gas became the enemy because it was cheap, no air pollution and medium to low environmental impact, depending on the scientists and the different views, right? Nuclear was no air pollution, no carbon, no climate impact, but was very expensive. But I think we need to give a new look at nuclear energy, especially for people who are concerned about climate.

**Marshall Kosloff:**

Can you say a little bit more about the national security dimension here? I mean, where your thought is leading, back to your band analogy, is that you actually need all of these things and you need to be able to play them like a keyboard, I guess, if I can switch from band to keyboard, but one of the factors has to be national security. And I guess that's going to lead you to say we need a multiplicity of suppliers from a multiplicity of regions and we need redundancies in the system and we need to not be dependent on nasty actors like China and Russia. Is that where it's going to go?

**Professor Brenda Shaffer:**

Yeah. That's great, Mike. Yeah, a few things. So for instance, the big policy focus right now in the U.S. and to a certain extent in Europe, is electricity, right? Let's get everything on electricity and that'll be really good for the environment and for climate. And people who don't think too much about electricity, they just say, "Wow, I just plug something in the wall. I don't see any smoke coming out. Or if I have electric vehicle, there's no smoke coming out of its tail pipes. I guess it's clean, right?"
So, they don't see one, how we produce electricity, right? And so when China is using much more electric vehicles, we think, "Wow, they're doing great on climate." Well, most of their electricity is produced by coal, so that actually is much more air pollution through going over to electricity.

But they're thinking more about national security issues, which not wanting to import as much oil, so that's why they go over to electric vehicles. But what we've always learned over the years, Mike used this word diversification, we don't want to concentrate all of our energy on one pipe, one system. We want a diversification. That's the backups or redundancies. That's the best way to have a stable energy system. And so again, by putting everything on electricity, you're increasing your risks of security of supply. You're also creating all the cyber risks. Well of course, a pipeline system, power plant, anything can be hacked, but when you put it all on electricity or most on electricity, you're raising your likelihood of cyber threats.

And what really what we're doing, so we're making it very hard for oil and gas companies to operate in the West. I mean, what's this current global crisis about? A big element of it is that publics in the West or governments perceiving publics in the West, don't want big, bad oil anymore. They don't want these companies, but the needs have not gone away for oil, for gas, for coal. So basically we made it very difficult for oil and gas companies to operate in the West, but they're still pumping in Russia and the Middle East, everywhere else. And it's just created a huge wealth transfer from the West to those national oil companies in the Middle East, in Russia, and other places.

And second, as you pointed out, Mike, the geopolitical implications... Things we used to, again, have dedicated high level positions in the U.S. government, the president, the vice president thinking about and speaking about, and the same in Europe, right? How to lower dependence on these malign actors, how do diversify, right? I mean, if you look at the numbers, we've completely gone back into worrying about what Russia's going to do again about gas, calling up OPEC and asking them to pump more, when the U.S. was the largest producer of oil and gas in the world and can be within six months to a year, if the policy framework was in place, again, like the market design that Europe made, that makes Russia the price center. Russia is just walking through a door that Europe opened for it.

**Marshall Kosloff:**

So speaking of that dynamic, something I'm curious about is earlier in the conversation, you referenced how during previous geopolitical conflicts or eras or different theaters, European or otherwise, there was a real focus on the geostrategic implications of energy production. And as we're nearing the end here, something I'm curious about is how do you think energy policy, as we're discussing on this episode, how does that discussion relate to the broader discourse around pivoting away from Middle East, focusing more on Asia or Indo-Pacific regions, how does all that play into moving deeper into the 2020s?

**Professor Brenda Shaffer:**

That's a great question. I think we need a longer discussion on that. Okay, so one of them of the pivot to Asia, most of the U.S. military energy supply lines run on civilian supply lines, so it's not like the military has its own gas station where you go in and you use a government credit card. I mean, they use government credit cards, but that has a little label of the federal government or something. Most of it's
done, "Hey, go to the local gas station and you get reimbursed," but it works the same with ships and with air airplanes and the government might store energy in all sorts of places around the world.

But a lot of it's done, again, using the market to different places. So first thing to pivot to Asia means U.S. dependence on a completely new set of actors to get their energy supply for these missions. And obviously, the Pentagon is thinking about that. It's not necessarily something negative, but it's a completely new challenge. Second, I think again, something that the U.S. public doesn't always get, that its energy prices, certainly for oil and coal and in some sense, renewables, and I'll explain that, are global markets. U.S. can't divorce itself from those price [tens 00:32:48], from those events that affect the prices. So you can say, "Hey, the U.S. wants to get out of the Middle East." It's going to still come back and bite the United States. Second, why do I say that renewables are even a global market, because they're not, right? It's not like we have a global solar price. But what our policymakers forget, and I'm just shocked when I hear them say, "Gee, I wish we could have more solar where the prices don't change." Well, don't they know that steel prices change? Lithium prices change. Copper, cobalt, shipping. You ship most of the solar panels are produced in China. Global shipping prices are changed so, of course, the prices of renewable are highly influenced by these global market trends. In fact, that most of what you need for today's renewable energy, it entails a lot of mining. And mining, one, produces a lot of emissions. These materials are generally mined in countries where their electricity is on coal. Whether it's in Indonesia, India, Congo, even on oil rights, [it takes] polluting and expensive forms of energy to mine these materials that make your little clean and humming electric vehicles and other electrification.

Even just take an example, because we have Michael Doran here, from the Middle East. If you're Iran right now and you want to get back into a JCPOA, the best conditions for yourself, what you need to do is a few more attacks like they did in 2019 on Saudi Arabian infrastructure and other oil infrastructure. Get oil up to a hundred dollars a barrel, and you'll see the U.S. running for a deal that might mean much more advantageous to Iran than what the U.S. had expected. Every aspect of what we do is affected by energy, that we can't ignore the geopolitics of energy. In fact, even for the Biden administration, for their agenda, if they want to alleviate poverty, if they want more equality among people, which you need a good economy for, if you want to clean environment, if you want to reduce carbon emissions or climate change, you have to have a good energy policy.

It's the cornerstone. None of these things can take place unless you have affordable environmentally friend friendly and stable energy supplies.

Mike Doran:

You make a lot of sense, but I'm hard pressed to compress anything that you've said into a sort of bumper sticker slogan, which is what the green energy or the climate people have. If you listen to the debate in Britain today, all of a sudden you have these energy crisis. Energy companies are folding. Every day, there's a new bankruptcy. Energy prices are skyrocketing and set to go even higher. It's being presented as a carbon energy crisis. The climate voices are coming in and say, "You see? The supply of carbon energy is really unreliable. So therefore, we have to go to renewables even faster." What I mean to say is that, in terms of sloganeering, they always have a ready answer that sounds common sensical. But when you start to unpack it all, you see that it really isn't very good for anyone, whether in terms of national security or in terms of price. I mean, it ends up being a huge tax on poor people and so on. And
you’re even saying that from an environmental point of view, it's not necessarily the best thing, the green energy.

But it's very hard to defeat such a simple slogan that produces such a beautiful image in mind with a lot of very wonky argumentation. What would be your answer to that? Can you turn your worldview into a simple slogan?

**Professor Brenda Shaffer:**

Michael, you're absolutely correct that energy policy's been dragged into the cultural wars. Almost everything I see, from a policy maker or to a pundit, to a journalist, is focusing on this question of renewables versus fossil fuels. Going back to our band, it's a drum and a bass guitarist. You want them both, and you want more. You want more participants to make the very good music. And so, yes, you're right, it doesn't fit into these clean slogans.

I'll give you another example of where the slogans have really, well, two examples where they've misled the public. One, U.S. government publications, U.S. figures are talking all the time about clean energy. Well, who's against clean? We all love clean, right? They don't say green energy anymore because they know what they're doing isn't good for the environment. Or at least the professionals. It might be good for climate, but a lot of it has a huge environmental impact.

Second, we've gone from concern about global warming to concern about climate change, to now to catastrophic weather. On one hand, they've created this best slogan. Because you always have hurricanes and tornadoes and cyclones and all this damage and flooding, and it's awful. But on the other hand, they've gone to a sphere where the science does not justify, it's very, very weak, on a connection between current catastrophic weather events and climate change. But since when we see these hurricanes suddenly battling Louisiana or Florida, and feel bad about it, I mean, I think they really have found a great marketing technique because to blame this on climate change, then who's not going to want to make sacrifices for that? But that's actually one of the issues where the connection between current catastrophic weather and climate change is actually probably the weakest fear of the climate body of climate science out there today.

But I wish there was a slogan. I mean, I actually think that the body of people that I respect in the energy sphere are actually the ones that are most concerned about green energy. I mean, I consider myself a greenie and I think what's being done now in terms of when I travel ... Especially outside the west, where we're telling people in developing countries that they shouldn't enjoy the benefits of electricity. They shouldn't enjoy the benefits of natural gas. They have to go, if you look at the Green New Deal in the U.S. and in Europe, it talks about all these pre-industrial people, how they live so much in peace with the animals and so beautiful. Well, it's not the case. People have to have minimum, cooking, water purification, boiling, and in some cases, heat. They do that from wood. They take down forests. They make a sort of homemade charcoal where they take down forests and they bury it. This is much worse for nature.

Again, I'm a person, my passion is traveling around to different places and seeing animals in their natural habitat undisturbed. That's a lot more disturbing to nature than an underground gas pipeline and a far away natural gas power plant than forcing people to burn charcoal and wood because you give them no alternative.
Marshall Kosloff:

I think that's a great place to leave things. Brenda. Thank you so much for joining. Do you have any upcoming work or recent- Mike referenced your Foreign Policy article that folks can check out. Is there anything you'd like to shout out to the audience?

Professor Brenda Shaffer:

Hi. There's another article at the RealClear Energy, which is "Renewable Isn't Always Green," explaining the environmental impact of a lot of our current renewable technologies. Again, U.S. government is telling you "Clean energy means low carbon." It doesn't necessarily mean green energy, which is low environmental impact. We want green energy. And maybe doing some thoughts about a new book on this topic with an emphasis on the national security aspects of where we're going with our current energy policies. We don't need to be shouting out to OPEC and Russia anymore to pump more.

Marshall Kosloff:

Great place to end everything. Once again, thank you for joining us at Counterbalance.

Professor Brenda Shaffer:

Thank you.