Marsha here. Welcome back to the Realignment.
Realignment has spent a lot of time covering the future of nuclear energy and given the fact that Jeremy decided this past weekend to shut down its three remaining nuclear power plants, I thought was the perfect time to follow up on those conversations. I'm speaking with Emmett Penny. He is the editor-in-chief of Grid Brief, host of the Nuclear Barbarians podcast and contributor to American Affairs, among other publications. We cover what Germany's decision means for its energy mix, how countries like France can inform how the United States thinks about scaling up nuclear energy, why I think there is an actually a coalition in favor of a radical expansion of nuclear energy in the United States, and a bunch of other broader topics that capture how Emmett is really deeply thought out on a bunch of different spaces within the energy context. We're going to cover everything from Enron to the Grid to how a lot of these policy decisions started in the late 1970s and early 1980s. Hope you all enjoy this conversation and I will note that Sagan and I will have another Q&A, AMA discussion episode coming up this week. So if you have not subscribed yet, go to realignment.supercast.com or click the link at the top of the show notes where you can get access to future subscription episodes and all our other great content. Hope you all enjoy this conversation.
Hey, first time long time. Happy to be here, buddy. Yeah, great to chat with you and we've been having some fun before the actual recording started. The realignment is a audio first podcast. We get the vast number of listeners on the actual audio feed, but I suggest you all check out the YouTube version of this podcast because Emmett has a nicely set up background. It's artistic and nice to look at and not just sort of corporate and boring the way a lot of these fake backgrounds are. So it's nuclear power plants. Yeah, so this was, yeah, I'll just get out of the way for people watching YouTube so they can see it a little bit more clearly. This was done by a comic book artist friend of mine, Sterling Bartlett. Got to give him a shout out. He did a pro bono. And when I went to launch my substack slash podcast, Nuclear Barbarians, I had reached out to him and I said, can you do, can you take power slaves of power slave Byron Maiden, that album cover and turn it into a nuclear power plant? And he's like, do you want pit vipers on the statues? And I was like, yes. And this is what he gave me. So that is my background for my show. I use it for all my zoom stuff. Okay, so obvious question is going to come up. What is a nuclear barbarian? Yeah, so it's funny now, like it almost feels like out of date, like compared to like how I did it like two years ago. But you know, so I had, I got into all of this because I had become friends with Michael Schellenberger around 2017. I'd written an article he really liked called Lecture Porn, the vulgar art of liberal narcissism, which I think still exists on Pace Magazine. I've read it in five years, but people can find it if they want. And he started to convince me that nuclear was like a good idea. I had, he called me. He was like, what are you doing right now? And I was working at a bookstore. And my phone was broken. And I was
like, some famous dude just DM'd me. So I had the shipping guy take the front while I pretended to take a penguin random house order as my boss walked by. And I talked to Michael about nuclear for like an hour and a half. And then a few years later, I was out of a job. And he and I were still buddies. And I was like, Hey, I need you should hire me. And he was like, I should use like, because I'm about to write a book. And that book was Apocalypse Never. And so I had come out of that experience being really gung-ho about nuclear. And back then, and we'll probably talk about

this
later, that was still super unpopular. Like, anytime Michael would publish a piece in Forbes or something like that, all of us on staff would get this like sick feeling in our stomachs, because it was just like, All right, let's prepare ourselves for tomorrow's pile on. Like, we're going to get some of the most disingenuous like takes from weirdos. Like, we got to figure out how to handle this. And around when I launched the podcast, there was a German pro nuclear advocate, Britta Augustin,
I think her name is, who'd gotten physically assaulted by anti nuclear people at an event in either Austria or Germany. And at that moment, I was like, All right, I'm done. My contract was up with Michael. I need to do my own thing. I wanted to make nuclear happen. And I was like, you know,
doing this makes me feel like I'm one of the barbarians at the gates to like this cathedral built around our current energy policy. And I also think that there's something like a big, brawny, atavistic and powerful about fission. And I also saw that like a lot of nuclear stuff was like super clean, super corporate. And everything looked like, you know, a background for a level and Turok to just like really clean cut angles and stuff like that. And I was like, I'm not doing that. I was like, I want to bring a whole other perspective to this, that is based around like, old school civic virtue stuff. And the fact that I really love the Conan and the barbarian movie and that I've been lifting weight since I was a teenager.
Bringing that together with a album cover knockoff, not a knockoff, that sounds disparaging. But yeah, so this is actually a good start for your background, because this is obviously we're going to talk about nuclear, but I want to talk about energy broadly. We've done a lot of really interesting writing totally across the game. And we've done a couple of episodes on nuclear. But you have written for American Affairs, you help edit compact magazine, you listen to the realignment, all these publications slash the podcast in the case of the realignment are kind of like heterodox post 2016 political projects. So compact and American Affairs are further to the right than I would like place myself. This is more of a centristy vibe. But that said, they're still like heterodox. So given that and your interest in those spaces. How does the energy policy narrative fit into this post 2016 heterodox politics, energy space?
Yeah, that's a good question. I mean, first of all, I don't like, I'll just say this,
I don't even really know what heterodox is supposed to mean anymore. I don't really know, you know, I know that I think you and saga just had like a big exclusive about like,
what is realigning at this point? What does that mean all these years later? And so I guess, I'll just be completely honest, like, I don't really know how it fits into that space. Like, to me, it's almost better if this is all more like centristy politics in some way,
like that there are boring policy discussions that there are real debates around it. I've become really skeptical to this idea of like, God, I don't know, like, you know, for a while, I was in the DSA, I definitely was like a chopper guy. There seemed to be like this whole aesthetic both left and right of sort of like, shocking the centrists into order. And I think really what you end up doing is you just end up doing sort of like, free focus grouping for the two major parties, because we only have two parties. And so like dishonesty and advertising is built in to the system. So like, the parties have to figure out a way to reflect back to a bunch of different factions that don't like each other, that they can see themselves in their project, right? And so

I don't really know what is meant by like heterodox movements or any of that stuff. I think the disconnect between the conversations we have, the way politics works out, and the nature of our federalized system is really underexplored. I should also say it's really, no one really talks about the fact that all this stuff is like a market, you know, like a lot of people do an advertising for themselves, myself included, right? It doesn't mean I'm being dishonest about anything I'm saying, but like, this is a career. And people are motivated in that way. And that's how a lot of these ideas end up coming to the fore, right? It's like competition between people who spend a lot of time writing shit onto their laptops, like I do. It's interesting that your whole focus grouping for the political parties, you're kind of seeing that in a negative fashion, but what we're kind of getting at in this episode, I hope, is a conversation about theories of change and all things actually happen. And my takeaway from what you're just saying is kind of tracks with my evolution in politics over the past five, six, seven, eight years in the sense that actually, yeah, like the purpose of a populist outsider movement is to convince both parties that, hey, status quotas are actually maintainable. They're not actually good. You need to adopt new issues that focus energy different places. So actually, they get to win if you are kind of serving that focus grouping process, because that's how I actually see politics actually change. I think part of the reason why you're seeing the nuclear policy conversation change is because once again, you have nuclear barbarians making the case that you're making and now the debate is shifting from, okay, is everything Chernobyl is everything through my island to, okay, if we agree we want to decarbonize, how do we actually get there? That's the debate you're seeing at least in sort of the smarter space that you and I spend our time. So I think that's actually an example of politics advancing itself. I will say one quick thing. Before you say your quick thing, that might have sounded negative, but really what I'm trying to do is like, I think that that might be good. I don't know. I meant it very observationally. What I mean to say is that I think people who think for a living tend to think ideas are bigger and more important than they are and often think that their ideas are bigger and more important than they are. And I think we could stand a little bit of air out of the balloon and look how this all fits together structurally. No, that's a great answer. And then one other thing I just wanted to add is to your question, like, what is heterodoxy? I don't think this applies to me, but I do think a huge percentage, because I don't go around saying like, oh, I'm Marshall Coslaw, look at my heterodox thought. Because I think that A, because my actual take here is that a lot of the heterodoxy you see on Twitter and these new ship description spaces are people who, to your point about having careers, are operationally conservative, but know that at a brand level, they don't want to be called conservative or Republican. So it's easier just to say I'm heterodox when actually on paper, you're in a coalition with on paper, you're in a coalition of people who at a career level, you don't want to identify as when you just said like, what even is heterodoxy? The actual answer is too often. I mean, this seriously, it's marketing copy for I don't want to be branded as adjacent to conservatism or or Republican in the era of Donald Trump. So I just smiled when you said that. Yeah, no, completely agree. I mean, I think the fact that we live in a commercial republic and that consumer culture is the closest thing we've ever had to a national culture is under theorized in terms of our interaction with our own politics. Okay, so now we have to be very careful. We're getting a little foofy on both of our terms. So we're going to get very, very, very specific. Yeah. No, no, though, like,

I love like sinking of people on this. So let's just start here. You've got a great American affairs piece on nuclear that we'll just basically start with. You describe America's current energy strategy as being demonstrated by the following. We're tempted to decarbonize our electrical system while also electrifying everything. Yeah, because you explain what that sentence means in terms of our everyday lives and how we're actually experiencing this like I'm in Austin, I'm in Texas right now. I don't know where you are, but just explain it in those terms. What does that strategy mean operationally? Yeah. So at the time that I wrote that, that really meant, and I get it still mostly means this today, like in practical fact, it means that we're trying to put more human activities onto the grid. So the new EPA rules that are supposed to like put a lot of internal combustion engines out the pasture by 2032, allegedly, so that we can have more EVs is a really great example, right? We're going to put more driving onto the grid because you're going to have to charge your car rather than go to the pump, right? We're going to do that maybe for a lot of things. Maybe we'll do that for cooking, maybe we'll do that for heat, et cetera, et cetera. And at the same time, we are going to try to take carbon burning thermal generators, coal plants, natural gas plants, allegedly off the grid and replace those with a combination of wind, solar and batteries. And that is in practical fact, what decarbonization and the electrify everything movement is trying to achieve right now, right? Yeah, I want to separate that from the what you think shouldn't happen in terms of because just like I just want to understand like that's the actual policy. Yeah, that's the actual policy. We're seeing that right now, the interconnection cues for the different parts of the American grid have ballooned by like 40% year over year as of last year. I was just reading something about that, right? So we're putting a ton of stuff in the pipeline in terms of wind, solar and batteries to get them built and generating electricity for our grid in hopes to lower the carbon footprint of our electrical system. And where does natural gas fit into this story? So yeah, natural gas is complicated for a lot of people. How do I want to say this? Because it used to be that environmentalists
like natural gas, and maybe you'll put this in the show notes, but people who want a good story on that can read my piece about Enron in American Affairs and how all this goes.
Natural gas is a necessary component of the system. And the reason why natural gas is very valuable on
the electricity grid isn't just because we as Americans are blessed with the Permian basin, with Bakken, with all of these wonderful places where people are doing killer work for us in the fracking industry. It is also important because combined cycle turbines, so the turbines that generate about, I don't know, I think a 40% of our electricity last year can ramp up to meet demand when other generators fall off. So that would be most importantly, solar at night or wind whenever. And that's the value of natural gas and natural gas.
In a situation where batteries are not sufficient to store power for those situations.
Not necessarily. So yeah, bring batteries into this story then too.
Yeah. Look, I'm not like an anti-battery guy. First of all, they're incredibly expensive. That's one major hurdle to them too. The important thing for people to realize is that on the electricity grid, storage is not the same as production. It would be like saying having canned corn is the same as like growing it. It's not. You just have some corn for later. If you're growing corn, you can sort of keep doing that and keep producing more.

And the grid has to be balanced at all times. In America, it's 60 hertz. In Europe, it's 50. There's always this game between supply and demand that's being played and the balancing that needs to happen there. So batteries are in the wind, solar and battery strategy. Supposed to be where we store some of the excess power for wind and solar to then be discharged when we need it most. But that's not necessarily a super realistic idea because some places will need like seasonal storage. And how are we going to make sure that that happens if we're already making more of our electricity supply more intermittent and non-dispatchable? So those two key terms, which are used to describe wind and solar, are really important. Intermittent means that it can't run all the time. And dispatchable means you can't make it run when you want it to. So that's really important. So we can't just say, oh, these should be filling the battery right now. It's like, no, no, no, we actually need that for the grid. And syncing those things up is what a friend of mine describes as Rube Goldberg in the grid, where you're actually overcomplicating a system that is necessary for a flourishing industrial society. You are fragilizing it through complexity.

So I think the next big story to really frame this conversation people should think about is conveniently for our booking purposes over the weekend. Not conveniently for the planet, but conveniently for our booking purposes. This past weekend, Germany, after a year's delay, after the start of the war in Ukraine, shut down its last three remaining nuclear power plants, which is a really interesting issue. A good read up on the debate actually that was featured in the New York Times, like the German position, the position of the Greens, is essentially, and I'd like you to push back against this argument if you don't agree with it, which I suspect you will, essentially the following. Yes, shutting down these nuclear plants in the face

of decreased access to Russian natural gas and the fact that solar and wind and the battery storage we just discussed earlier aren't quite where they are. That's true. Our emissions are going to go up a bit in the next few years. However, given the fact that we are radically increasing our amount of solar and wind energy, overall, the emissions picture is going to stabilize in the next few years anyways. That's essentially, and once again, I'm just reading from the New York Times here, that is the green, that is the in good faith articulation of what they say is going to happen. I'd love to hear your pushback. I suspect you're not going to support taking down those three, but yeah, what's your response to that? Yes. Oh, and then one thing. And then the other thing they would add is, despite all the talk about how the winter was going to be a disaster for the Europeans, when it came to energy, at the end of the day, they were able to reduce demand. There was a complicated factor where a huge portion of the surging energy reality was driven by post-COVID lockdown dynamics. So they are saying they're confident about being able to handle the winters moving forward. That's their broad upfront view of it. I'll actually take that first. That's crazy to say. First of all, a weird thing is happening in Europe where because they're renegotiating some of their green stuff, there's just a writer's piece about this, that some of their traders don't feel comfortable making long-term LNG contracts. And those are the cheaper, safer

ones, right? And so the window. Lookified natural gas for LNG. Right, yeah. And so the window of time, the years going on is shrinking, which means they might be forced to buy LNG on the spot market. Second of all. What does that mean? Why is that significant?

Well, okay. So it's sort of like you could buy cheaper, more guaranteed now, or you can wait to sort of buy on the more immediate spot market, which has higher prices when you desperately need it in the dead of winter. Okay. Right, so that's the difference. And that's a shrinking window in Europe. And I would also say this, just because Germany and many European countries have reinvested in tons of LNG infrastructure, they've not actually replaced the volume of flows they were getting from Russia, right? So that's a huge problem for them as well. And that means that they're going into this winter, which may or may not be mild. We were all grateful for a mild winter. I don't want anything bad to happen to Europe, right? Like the things that people were scared about, scared about what have definitely happened had the weather turned south. But that means they're going into this winter with perhaps pricier LNG on the spot market and absent three or four continent wide powerful nuclear reactors. Belgium got rid of one of theirs as well. And decreased flow volumes overall. So they're claimed that they're going to just walk into this next winter and it's going to be just like the last one is incredibly risky and fragile. They're really putting it all on black for this. So who knows, right? Like my predictions are fragile too. But I think when I paint that picture, you can say, I wouldn't bet my economy on that. And they're like, oh, okay, we managed to quell demand. Well, yeah, because prices got really high. Like, sure, deindustrialization is always an option for getting rid of your emissions. Whether that gets rid of global emissions or energy consumption remains to be seen. Usually it ends up popping up somewhere else, which has even more lax environmental controls. And the other part of it is like, the system has to be reliable. There are weeks in, it's called the Dunkelflaute in Germany. There are weeks in the German winter where the wind doesn't flow and it's overcast every single day. What do we think they're going to use for that? It's going to be gas and it's going to be lignite coal. And that's it. Like there's no, they think that there's this complicated case where they say, you see, if we get rid of clean energy, we could actually have more clean energy. Getting rid of clean energy mean nuclear in this case. Yeah. It doesn't make any sense. Why would you do that? I can't, I can't really, it's really difficult to sort of like walk, walk through what the logical process of that is, because I don't think there really is like a strong like syllogistic case to make here. When this is, you know, me overshadding out this New York Times article, but I think the article did a good job of also capturing that nuclear politics have been like an underline, an undercurrent of German politics since like West, since Germany in this case was West Germany. So like this is about the reason why Germany has a unique energy story is there's a unique long standing. And to be fair, I understand if you're a German in the 70s, do you having a slightly complicated relationship with anything with the word nuclear in it, when you are essentially the country where it expects war worth three to emanate from. So that's a broader complicated story. I think the reason why this really matters is it gets at something I just from myself wondering as I was reading your book, sorry, reading your American Affairs piece, as I was, you know, listening to Brett Kugelmass, his podcast and interviewing him, since essentially February, March, April of 2022, the nuclear, the pro nuclear side has, I think, rhetorically in countries outside of Germany, one, actually, and actually, funnily enough, even in Germany, the shutdowns were delayed a year. So that was a that that was actually a time once again, it's not good from your perspective that this is shut down. But there was actually a win like there was a concession that's noticeable, right? Like we should we

should pay attention to that. I think you're right. So the debate has been one. But whenever I talk to anyone is pro nuclear, I basically find myself thinking, Okay, if this is so obvious, if this is so simple, why isn't this happening? And the conclusion I came to after reading your piece is essentially that the pro nuclear coalition in the United States, at least, just does not exist. So for example, at the top of your piece, just to cite things back to you, you wrote, you basically say, hey, well, a way of addressing this decarbonization, plus electrification plan is to radically upscale the amount of nuclear energy in the American economy. My conclusion is there's not actually a political political coalition in favor of that point of view, because for example, who's in favor of decarbonizing the American economy, while also not basically reducing overall demand. So basically saying, okay, look, we have a country, we have manufacturing needs, we're not going to tell people they're going to live in little hobbles, you're basically describing the center left of the Democratic Party. They are convinced that they could be in favor of nuclear like Jennifer Granholm, who's the secretary of energy. She says these like small modular reactors are good, the administration is putting energy into them, but they would broadly disagree with you and they would and then save it actually were confident about the batteries and the solar, the wind, that dynamic, they'd say they're confident
about that and nuclear could play a bit of a piece there. So that's a part of the coalition that is sympathetic to you on nuclear not being a Fukushima disaster, but they are not in favor of putting the bet on nuclear because they think they have something else. When it comes to the right,
I'd say the right has very little of any actual interest in the decarbonization piece of that current part of the debate. So you go to the right and you say, hey, nuclear is a way of decarbonizing without getting us all on fossil, getting us stuck on natural gas or high carbon things like coal or intermittent, you know, wind and solar. I would say we don't care other way. Let's just all of the above things were Alex Epstein, right? Like his POV is energy use is good. Let's use more of it. The right's just agnostic on sources. And then secondly, when it comes to the electrifying everything bit, the right, there's been a lot of interesting polling on this is actually broadly skeptical of electric vehicles. Electric vehicles despite Elon Musk's best efforts are becoming partisan. It's much like the Prius versus the truck back in the 2000s of hybrids. So I guess the question of you would be this is a long windup, but I think the context is important. And I put it that way. And I'm like, oh, yeah, no wonder we're not doing a radical buildup of nuclear energy because other than tech VCs and heterodox political thinkers like yourself, there is no actual coalition in favor of the seemingly simple at a let's pretend we're technocrats and could just turn the knobs from zero to one level of thinking here. So yeah, what's your broad response to this? So I think that's broadly correct. I'm so I'm a nuclear advocate who is in like, I'm not an optimist, like I'm not a doomer or anything like that. But you know, we're still on task one, which is getting people to like it. There are all sorts of things that need to change in the regulatory framework and all that stuff to enable us to build nuclear. Maybe SMRs are going to happen. I don't know. I'm not super confident.
Those are small modular reactors or reactors. Yeah.
Sorry, you have to be generous with the acronyms here.
Sorry. Sorry. Sorry. Those are all first of a kind. So who knows if those will be delivered

on time on on budget, all of these things just because something smaller doesn't mean it'll happen the way it is. Do we have a problem where despite the like Vogel, the nuclear plant in Georgia
was had all sorts of engineering disasters like now it's finally coming online. It'll be great for ratepayers there. People are right to be skeptical about that. Nuclear is also difficult in the American. Well, it wasn't that like several years late, $30 billion. It's just incredibly cheap, cheap. Now that it's built. But the question is how do you deal with those upfront costs right there? Well, and here's what I was about to say. The other problem to clear is that it doesn't really benefit from innovation, right? It benefits from repetition. That's how costs come down. So scale like building a lot of the same thing. You want to be like rubber, you know, rubber stamping it out. So you'd want way more AP 1000s, but there's not really an appetite in the utility industry for that for all sorts of reasons. I mean, there's some maybe like Westinghouse has some hope abroad for selling it to Poland, but that's like a whole other thing we don't need to get into. I would say this. I think conservatives have actually been more in favor of nuclear except for a certain clutch of libertarians that don't like that it basically needs to fit into a monopoly utility model for a long time. But what do you mean by the monopoly utility model? So the traditional utilities like ComEd or whatever, right? So libertarians tend not to like them because they're, you know, state backed monopolies that don't have to deal with the problems of competition. And they have like perverse incentives, which are easily summed up in a quote from a utility exact from the 60s, which is this is the only business I know of where you can turn a profit by redecorating your office, right? So what does that mean? So basically like you charge the rate payer for things that you build and do. And that's part of your guaranteed rate of return, right? So but they're largely agnostic. I think the Democrats have a major problem with their policy with wind and solar, like the people who generate these white papers or these models, these black box models, black box models that say we can do all this when solar and batteries, they don't talk to grid operators or energy traders or anybody in operations. And I know that because I talked to those people. And the grid operator, one of the only FERC commissioners, Federal Energy Regulatory Committee, spelling out the acronym, Commissioner
Dan Lee wrote a letter to some house reps last year where he said, all these people keep saying that weather is the biggest threat to the grid. It's not. It's this energy transition moving too quickly. So where am I going with this? Where are we going to get this consensus that we actually need to build nuclear? Well, I think that's going to take a really long time because hydrocarbons are still really cheap in America. And that gives us a huge margin of error for energy policy. And it really financially doesn't motivate us to build something like nuclear anytime soon. Now, that might be changing in certain states like where I live in Illinois, which is on track to through bipartisanship repeal its nuclear moratorium. And the reason it's doing that is because it is coming out of left and right Democrat and Republican communities in Illinois that are have or are near nuclear power plants and benefit from the wealth and clean energy and cheap energy that they get for that. And they say, we need more of this in the state. And that's starting to happen. So we're starting to see the glimmers of what that coalition is going to look like. This energy crisis was, you know, sometimes nothing's more disciplining than a bad time. And certainly it looked like we were all about to have a really bad time. I think that that's why

the Department of Energy was so motivated to try to and is still motivated to try and save the Palisades plant in Michigan. I also think that's because it would have made Jennifer Granholm, the former governor, look really bad had they just sort of let that plant die. That's politics. And that's that. That's that. Hey, I'm not complaining. I'm saying that's great. I'm glad. And Gavin Newsom
sort of understood that he had to let his hostage go Diablo Canyon in order to maintain reliability on the California grid. I mean, he sort of congratulated himself for letting his own hostage go. But again, that's politics. And I'm glad that he is interested in saving his own skin enough and maybe running for president that he's willing to do that. So when I take a look at all of these things, the repeal of the moratorium in West Virginia and stuff like that, you can start to see things shifting. Now, that's a long road. That's a complicated road. A lot of things can happen in between. But that's really where I'm looking at it. And I think the emphasis that the DOE and many others are making on replacing coal with nuclear could be a win-win for both parties.
There are a lot of coal plants in red states. Like if anybody's driven through a place where that plant closes down, whether it's nuclear or coal, those are places where even the Walmart goes out of business. It's tragic what happens there. And we need that reliability. There are some very complicated grid stuff that is going to happen once coal really starts to die by the end of this decade. And I don't think we really want to be here for that. We might want to have some solutions on deck. So that's what I think it's trending towards. So I think what's really interesting here is, A, you were incredibly realistic about the gap between what does Emmett think should happen, a.k.a. in the piece you're referencing. In the 70s, France went on an incredibly aggressive nuclear plant building spree now reaching 75% of their power generated by nuclear in the 90s. To your point, that would be ideal in the United States. But I guess what I'm always curious, we're always talking about France as the model in that category. But do you know anything about the political dynamics that made that possible? So here's the real question. Why is France at the 70s different than America of the 2010s or 2020s or even to the point of the Germans in the 2020s? What's the difference there? Right. So I guess I would say it's important that France used to be Catholic in America as a bunch of Protestant weirdos and that France is way more comfortable with centralized institutions that make those decisions and just do it by fiat. We don't really like that. That ruffles our feathers. That's not how we do things. That's not even how we did our own build out, which was very successful. We still have the most nuclear plants in the world.
So that's part of it. The other thing was they were desperate for fuel.
So they don't have the wealth of hydrocarbons that we do.
That's such an obvious answer. So when you don't have Texas, when you don't have that underlying dynamic, obviously you're not to find things somewhere. And somewhere in this case was centrally mandating a build out of nuclear power. Exactly. And it's not like it was super popular when it was happening. France is a very difficult and complex relationship and has not taken care of its fleet. They've actually put it in policies that have made it so the fleet has to lose money so that it can make room for more renewables on the grid. And that's part of why it's been so poorly maintained, right? They were like, well, we can't get all of this energy from nuclear because it would make renewables useless. So we have to make sure it can't sell above a certain amount onto our

grid so that I guess we'll defend the French on for a second is like doesn't it doesn't I mean isn't pursuing some type of policy that would enable like an energy mix make a lot of sense. So like I can see the French saying like, look, like maybe we don't want to have such a disproportionate percent of our energy reliant on the existence of a nuclear power industry where political winds could shift. So I'm just like, what would be your response to that kind of devil's advocate pushback? Yeah, I guess I would say like it depends on the quality of the resource and you're replacing a high quality resource with a poor quality resource. So your point is it's not this would make sense if these things were all perfectly substitutable. But the fact that they're not is where your beef would come in then. Yeah, it's strictly an engineering point. And then that has like economic effects. There's a whole other thing that's happening here in energy in the West where we tend to think energy is a subset of economics, but it's not. Anyway, I think you did that classic smart person thing where you just like drop a bomb and then you're just sort of like, right, and we move on. Let's not move on. Why is energy not a subset of economics? Okay, because you have to get the engineering of the system right first. Otherwise, it's just not going to work. And then how's anybody going to make any money? Right? Go one level deeper than that. Yeah. So go one level deeper than that. Like let's say that we commit to imaginary disastrous energy policy that frustrates the reliability of the grid. The problems are going to come from the fact that it is very difficult from an engineering and management standpoint to keep that system together. And that is going to cause the economic effects. It's not the other way around. It's not get the money right and then the physics works. It's you have to get the physics right and then the money can work. Okay. So the point is by treating it as that. So your point is it's not that there aren't energy economics by definition. It's that if you start with the economics but don't start, the economics is actually downstream from the engineering is the point you're making. Yes. That's the point I'm making. Right? Obviously they're interrelated and I would never make a case like we live in a capitalist society. How could you not appreciate that? Right? But so I think that what happened in France will never happen here is the major point I'm making. I think it's helpful as an example to understand. Right? I think it's also helpful to see what the Canadians did with Ontario, where they scrapped their pole plants and replaced them with nuclear plants, decarbonizing their grid and maintaining the coal workforce by retraining it for their nuclear workforce. That's amazing and we don't talk enough about that. Hugely important, especially because they're our neighbor. You know, obviously they're, I mean they have socialized medicine and stuff like that. They're more comfortable with some of these things, but it does indicate that we could do some sort of version of that. Right? I'm not anticipating a world where America phases natural gas off the grid anytime soon for both practical, political and economic reasons, but I can see a world where we start to replace coal assets with nuclear.

Let's talk about the grid for a second. I think the grid is an interesting story because unlike a lot of these issue areas, it's a deeply personally felt at a, at a literal level. And it's also affected, obviously I think the, the weird kind of centers of American politics for now are California, Texas and Florida. But in the case of the grid conversation, Texas,

red, California blue, both have huge grid problems that everyone deeply visually experiences. And it's hard to turn it into a fit. There's no equivalent of, oh, that's not actually happening because that's blue coded. That happens in so many different policy areas and it's deeply frustrating, but you talk to anybody in both states, they're like, yeah, this is very, very, very bad. You've also written an American affairs piece you referenced earlier about America's power
grid. Talk about the problem for our grid and then get into the Texas version of that problem and the California version of that problem. Yeah. Okay. I'm going to preface this now, in case there are people who are like ERCOT traders, that's electricity reliability council of Texas. That's the grid operator there and their market. I'm not an expert on the Texas situation. I know a little bit more about the other markets, but so I just, I just want to copy out that, right? Like I'm painfully aware of my own limits as somebody who's interacting with this highly complex system that has like over 3000 different players every single day through the work that I do. It has been one of the most humbling experiences of my life. So I just want to copy out that. Like anybody who's like hyper confident about how they think that this all is going to go immediately be skeptical of them. Quick side note, because to your point about this being a career, this is the thing you just have to learn as a listener. The more confident someone sounds, the better the entertainment experiences, but also from an analyst perspective, it's actually not, it's also not good. I'm not going to name names. There are a couple of people in these broad spaces who are incredibly confident about things that they actually literally at a constitutional level should not be confident about. And that should set off warning lights. Keep that for entertainment purposes, but don't let that shape your actual thinking. Yeah. Absolutely. Absolutely. Okay. So that said, give me a meaty soundbite that tells me everything I want to hear.
So here's what's up with the grid, right? From the late seventies, so
PRPA, the Public Utility Regulatory Policy Act under Carter in 1978, I think that's what the acronym stands for. We start to get the process of prying apart the utility industry, right? So it's those regulated monopolies, which we've already talked about, that are comprised of three port parts, which is generation, transmission, and distribution, right? In other words, making the power, sending the power to power lines, and then getting it to your house, right? So those are three parts. And the utility is vertically integrated, so they have all three of those parts. In the eighties, during Reagan's push to deregulate trucking, air traffic, all of this, there is the beginning. You can't gotta shout out, you know, homie Jimmy Carter, who is there too. Like I said, this begin, but this begins with, it's Reagan that commissions economists to look into this, right? So of course, it's Carter who's a prime mover on electricity deregulation too, like none of this really happens without PRPA, right?
Oh, I was referring to the trucking thing. It's funny. Yeah, we're just obviously, you know, proud to former president Carter isn't doing well. So I just felt the need to shout out, well, his politics were like, that's the perfect example of like seventies politics were weird. He was just a hyper deregulator to the point where some leftists don't even like him in the first place. I just wanted to shout that weird. No, you were right to do that. So
the question is, how are we going to do that? That's a really difficult
question to answer. The sort of common law that dates back to the like Anglo-Saxon middle ages the utility framework is based on is like pretty entrenched. The industry has been around for a

while, basically 100 years by the point that people start thinking about this sort of thing. And changing something that's already that old is very, very hard. And so the idea, there's a book called Markets for Power written by Paul Joskow and something small and see British small and see from MIT Press in the early 80s, they were the economists that the Reagan administration tapped to look into this. And they said, well, you know what we'll do? The polls and wires transmission, that's a natural monopoly, because you don't want a bunch of different wire competitors. We did that in the early days of electricity. It sucked. It was crazy. So I see all those old photos of cities. And it looks like the sky is clotted with the spider web of transmission lines, right? So we don't want to do that. But what we could do is make it so that they have to bid into a spot market. The generators have to bid into a spot market. And that's how we'll do it rather than it being one vertically integrated thing. And that will make different companies that own different generators compete against each other and bring costs down and stuff like that, right? All the benefits you get from competition and the free market. Okay. So on a parallel track, this is really important. A similar thing is happening in natural gas with Enron being like a really big spearhead of that. And then once we get into the 90s, when it starts to feel like we might actually be able to form these spot markets, Enron comes into the fore again, because they see they need a lot of cash and for because of their crazy business decisions. And they're like, Hey, this is a multi tens of billions of dollar industry that's way bigger than our natural gas division. If we can get into trading electricity first, we're going to be making a ton of money. So they lobby for all sorts of stuff. And eventually, FERC passes a few orders, Federal Energy Regulatory Commission, again, that starts to create these regions where now everyone has to bid into a market to provide electricity. The first real example of that is what happens with California in the late 90s, early 2000s, when dynagy most powerfully and then Enron most visibly game the hell out of that system and create rolling blackouts and stuff like that. So it's a rough start. But that starts to smooth out after that. And the market systems that flower in Kaizo, California independent system operator, right? And then you've got the Southwest Powerful. And then you've got MISO, which stretches from Minnesota to Louisiana, Urquhart, Texas is its own thing doing its own thing. It's not hooked up to anybody else. It's doesn't even have some of the other market frameworks that other places do. It's a very weird place. Good for them. And then you've got NISO, New York independent system operator, PJM, which covers 13 states between the Midwest and the East Coast. And then ISO and independent system operator of New England. So those are the major market areas. And they work like this. You've got markets at five minutes, hour ahead, day ahead. And then you have maybe a week month ahead. I mean, there's some differences between these. I think you have these overarching
things called like capacity markets, which goes seasonally. So that's to make sure that during the hot months or whatever, you've got enough power on deck because people have bit into that market
to supply your consumers with what they need. Is all that tracking so far?
Yeah. Okay. Okay, cool. Okay. So that's what happens, right? And people want to be saying, great, awesome. That's how that works. We love that, except it didn't really do anything that it said it was going to do. It didn't necessarily bring down, you know, bills for consumers. Which is kind of the whole point. Which is kind of the whole point.

Because the quick thing, the reason why I brought up the aside from just giving this shout out citations on Jimmy Carter is that the purpose of that broad regulatory project starting in the 70s was to reduce prices. This is why airplane tickets are affordable in comparison to the way it was before. So if this thing isn't reducing prices, you've got to kind of wonder like, okay, that's for a lot of people, at least at a political level, what's the entire purpose of these enterprises, correct? Yeah, exactly. And so there are some interesting reasons that have to do again with the physics of electricity, right, that are really important. Even if your market reconciles at five minute intervals, physically electricity reconciles at microseconds. What do you mean by reconciling? What does market reconcile?
So like supply needs demand, right? Like that has to happen for the grid to stay balanced. Like needing juice and getting the juice has to happen like at a microsecond level, like at the same time, basically synchronously 24, 7, 365, every single microsecond of the year, right? That's the stakes. They're very hard to store. Batteries are nowhere near, close to like the storage we get out of natural gas. Like the natural gas deregulation we did was great. It made clear price signals for the market, it stabilized the market, it helped us to have a robust, powerful natural gas industry we should be proud of, right? Not really the same thing with electricity. The stakes are way higher, and it's way more finicky as like a physical entity, I guess, for lack of a better way to put it.
Now, it has created, this is something that Paul Joss Galvin's schmalency, both say in an interview with MIT, and I think around 2019, is they see, you know, we're starting to see some weird problems, right? Like one of the reasons why the greens were really game to work with Enron and work with them they did was that they understood that deregulation would help them get wind and solar onto the grid. Enron understood this as well too. There were board meetings about how much renewable energy they could build and sell, because they were like the premier of that in the 90s at the time. Everybody understood that this was going to allow that to happen, because utilities weren't really motivated to buy wind and solar. Why would you do that when you could buy like a traditional power plant with your same base rate model that's just baseload? It's just flat. But having fluctuations in demand allows for natural gas to ramp up, like I said at the beginning, and creates the types of dynamics that are attractive to traders. So we can see this all start to fit together, both the physics and the economics of it go together. You get a little more volatility, you get more traders to get on either side of that, and then you get natural gas to sort of fill in the gap. And that's what happened. And Shmalensee and Jaskow said, you know, all of these production tax credits for renewables, these PTCs have this effect where they start to make it impossible for coal plants, nuclear plants, whatever that can't really ramp up to meet demand, to make money on the grid. And they are essentially freeriding on the reliability that those plants provide. And we will likely start to see some problems and need to rework this system when we start to lose enough of those. And now we're getting warning signals from the mid-continent independent system operator, again, Minnesota, down to Louisiana, and PJM, so 13 states along the East Coast into the Midwest. I don't know what PJM stands for, by the way. Still haven't figured that out. I was going to stop you the second you didn't get one, because you kept getting them. That's impressive. Acronyms matter more for concepts than like actual regulatory agencies and like bureaus. Yeah. So, okay, sorry. So they're saying we've got all of these renewables coming on. Our coal plants can't make money in capacity markets or any market

whatsoever. The same thing for nuclear. That's a big problem. Those are way more reliable. We don't really know what we're going to do. And you might be saying, what's the problem with that? Well, it means that you're reserve margin, right? So that's the amount of electricity that you have on deck starts to shrink, which means that you get closer and closer to unreliability, right? And if we put, remember, PJM and Miso are neighbors. They import and export from each other when times
get tough. If they're both saying this, then that means that they will be less inclined and less able to get power from each other when they most need it. Meredith Anquan, who wrote the book on this called Shorting the Grid. Everyone should go check that book out. You should have her on, actually. I think she'd be a great guest. She's been on odd lots, all sorts of places. Love, Meredith. She's like a mentor to me. She's the reason I have this whole career. I read her book and I went from being just a nuclear guy to like literally reorienting the intellectual scope of my concern about energy. She calls it the fatal trifecta, which is that these regions become over-dependent on just-in-time natural gas, intermittent, non-dispatchable renewables, and their neighbors. And those things start to not work out when things get difficult, right? Here's a good example. Texas right now, again, Texas is its own thing, right? But they're investing a lot in natural gas to provide reliability for their system. And there are good reasons for that, but those natural gas plants rely on pipelines that if they aren't winterized, won't produce. Now, the problem is, is that in that market framework, you're not really incentivized to spend any money on winterizing from it because it's just going to cost you and you're not going to get anything from it. So we've taken away incentives for reliability as well through all of this.
When you said earlier, you quoted the nuclear executive saying that he got paid more based on the fact that he's redecorating in his office. Is there like a structural change you could make to the natural gas situation where you could get paid more for winterizing and changing?
Here's the problem. So ERCOP might be able to do that. They're not under FERC's jurisdiction, by the way. So they're their own thing. They're trying to figure that out. It seems very complicated. I don't totally understand it. Again, those are the limits of my expertise on that. Don't feel comfortable saying more. Generally, the difficulty with this is, is that the independent system operators can't say, you need to have fuel on deck because that scene is market favoritism. Or you're going to get rewarded for being winterized in such a, such a way because, again, like that creates an allegedly unlevel playing field between the bidders into the auction house of the electricity market. And so that's all that they're actually, all they should be market competing with is just like the price, right? Like who could, who could meet exactly who could provide supply at the perfect like intersection marginal. Yeah. Yeah. Exactly. And so this is again, the problem I was talking about before between whether or not we think energy is just a subdivision of economics or not, right? So you're just like, if, yeah, go ahead. No, I was just going to say, if we just because you're maybe getting the right price signals or something doesn't mean that overall, you're getting a durable system that can actually provide you the physical and then financial wealth your society needs. This last section, I really just want to zoom out. So folks across the spectrum here could have some great takeaways. So
I like to think of all of the energy dynamics you're describing here is similar to the 1930s in the sense that you have an opportunity and we're doing this by our policy right now

to transform the way the country faces energy. You've got, you know, at 30s, you had like the TVA, you had all the new deal programs, electrification. This is a whole part of like the, you know, first Lyndon Johnson book by Robert Carrow talking about like, you know, electrifying the whole country, like that sort of energy transition. It seems like proponents of this change, whether they're pro nuclear or pro wind solar battery are saying we have an opportunity to accomplish this at a couple of different levels. What would you say the broad approach needs to be
to reach this goal? Since you've already conceded, despite our desires, there's no way to say we're going to be France in the 70s because once again, literally a different country at a social cultural level, but also like there are structural differences when it comes to decentralization and centralization. So we can't be France. We're not doing that. What is your recommendations for the next 10 years that recognize that you're not getting everything that you want and maybe some side, there's going to have to be some sort of battery subsidy, no matter what you say here, like that's how politics works and these things actually advance. Jennifer Granholm could work to preserve a Michigan thing because she's doing this other thing in the more like left category. What's your broad takeaway? Yeah, so I think sadly more pain is required. I think that the disciplining mechanism here is going to be more things like winter, summer blackouts, right? I mean, or just like totally failing your clean air goals or whatever, like in California, the diesel aggregation, so that's their whole backup thing is like 15% of their grid now. That's how fragile they've become, right? That's filthy. That is filthy air quality. So it's going to be things like that. Let's just pause because I made the question too broad. No, I actually had parts. Oh, yeah, no, sorry, because I wanted to just like hit one thing you just said that was helpful. Just to then go on, but your basic point is, if I'm saying at the start of the episode, the reason why we haven't seen this like Mark Andreessen, Brett Kugelmas, fuel nuclear renaissance in the past year, I say, oh, that's because there's not a coalition. Your point is there's actually something that happens before a coalition, which is pain. Like you, yeah, that's that's that and a coalition would be like, there are all these greens and they're always like center right people and they're always like deindustrialized coal miners who all together want something new and that would cause this renaissance. That seems what you're saying, but sorry, go on with your point. Yeah, sure. And I would also say that like the electric like, look, all we could get all of that right. But if a nuclear plant can't make money in our electricity markets reliably, then no one's going to try to build one. Right. So we have to get that right too. And we're half a century in to restructuring electricity. Right. So it begins with Carter, you know, extends till now, we're still fine tuning it. I think it was a mistake to ever do that, but it doesn't that doesn't matter. That's my opinion. We're half a century in. So we've done it. And now what are we going to do? Right. Like we have to have a practical, prudent response to the problems here. So I think that there's going to have to be like a termination of investment tax credits and production tax credits for renewables. Everyone wants to keep talking about how cheap they are, et cetera, et cetera. Fine. Don't subsidize them anymore. It complicates the price signals and it makes it harder to run the grid. I think that there's going to have to be some compromise like that. I think that just like FERC is trying to work with New England's grid operator to create winter reliability programs, no matter how fludgy they are. Even if it means that New England ends up having oil make up 20% of its demand during the winter, which is again, terrible for the air, but better than blackouts,

that we're going to have to start figuring out things like that in order to make this work.
In other words, there's going to have to be some level of market discipline and then some level of planning that go hand in hand to stabilize this system, not just to help us onboard nuclear, but just so that we can have it reliably at all. So the last question before we shout out all your various podcasts, newsletters and different gigs you have. Until recently you ran a podcast called Exhaust and the broad theme you articulated was it was about why nothing feels possible. When you told me that, I just wrote that down because I thought that that to me felt like such an excellent, it's one of those visceral, you hear that sentence and it just feels visceral.
You know, I was just talking a second ago about, oh, and the New Deal, we did this, this, this, and that I felt even slightly silly saying that because a baseline assumption that I don't want to say I have, but I feel as if it's just true is that, oh yeah, like there's no New Deal again.
And by the way, I know they're right, they're right leaning parts of the audience who say, yeah, but New Deal was a bad idea. That shouldn't be possible. It's not quite what I'm saying.
I am just saying, for good or for ill, the government underwent a project that was grand, national and scale, and it did this, this, this and that, the Hoover Dam, you know, the conservation youth core. Yeah, exactly, exactly, exactly. That does not feel possible for good or for ill. When I hear the by administration talking about green industrial policy, whether or not you like that policy, I am just skeptical about the entire enterprise constitutionally.
And that's why the phrasing of why nothing feels possible for good or for ill just resonated for me. So just close by talking, talking about that, talk about that project, the thought of that.
So me and my friend, John, you know, I've known each other for like 10 years, during COVID, we were both out of a job for a little while.
And, you know, he and I kept having these like four hour conversations.
And we were just like, we need to start turning this into an intellectual project, because we seem to be moving towards something here. And it might be helpful to have the discipline to think it out regularly. And when we wanted to encounter like why nothing feels possible, we really wanted to talk about like a certain perhaps cultural malaise. And then we wanted to talk about perhaps a loss of the protean quality of both industrial society and politics in the early 20th century. What does protean quality mean?
Yeah. So it's shifting, right? Like that's part of what you just identified.
Things feel more ossified now than they do dead then for better or for worse, right? A lot of weird stuff came out of that too. Not just in America, right? So, you know, what's the deal with that? And we wanted to look at a bunch of different things. We wanted to look at cultural history. We wanted to look at economic history. We wanted to look at like big like pan out synoptic things like historiographies of the industrial revolution and how long did it actually take. And where we ended up and why we closed down the show was one, John and I, our lives changed. And we had different responsibilities and couldn't keep it up. But the other thing was we'd sort of like reconciled within ourselves that what we didn't understand as an animating aspect of what we were doing was a perhaps a nostalgia and a lack of a willingness to accept the world as it is. And what we came away from the show with was it didn't really matter if things felt possible or not to some degree, because things were always going to be possible. And history had demonstrated that, but you don't get to pick when and where you're born.
And so you just have to operate within what's handed to you. And people can check out our last

three episodes. They're for free. They're still up there where we actually talked through some of this while reading through the entirety of Francis Fukuyama's The End of History and the Last Man. I'm interested in your kind. So I'm going to literally go listen to this afterwards. But what does it mean to accept? Because the reason why I'm asking you this is I'm doing a lot of reading about the early Obama administration, because I spent some time with a lot of folks who are in the Biden administration. And they were similar, I think were of similar ages. They were kind of like closer to our age during the early Obama administration. And now they're in their 40s working in the Biden administration. When you talk to them, they will say to themselves like, man, like the thing that's so different between this administration and Obama administration, for good or for ill, this isn't a policy endorsement, is we just feel like there's just so much we can do. We can do things that were possible. Then things, things, things always were possible. We just didn't really realize they were. And we've just taken a different approach through this administration. So how does one actually know? This is like my real last question. How does one actually know what's actually possible? Right? Because if you read the New York Times opinion page, there are a whole set of things that are possible and not possible. Like if you're in this like post 2020, if I don't want to say woke left, because that's disparaging, but if you're like a defund the police person, you're being told a whole lot of things are like not no longer possible. Post 2020, then you believe during that summer. Same thing goes if you're like a MAGA Trumpist person in 2021, and even the 2022 midterms of whole lot of people who thought if there's a red wave, some things are on the table that are not actually on the table. So how does one actually judge when that's just cope or actually a real thing? There's actually a limit. Okay. So the first thing I would say is that like, you can't get high if you're on supply. That's like the most important part of that, right? Like you can't be blown smoke up your own ass about like your aspirations and what you're going to do.

A lot of people I think learn the hard ways from the Bernie situation like me about like what the realities of that are. Okay. The second thing I would say is like you need to have a tragic sense of life. You don't ultimately get to pick what is or isn't possible. You're either there when it's happening and you're making it happen or you're trying to get there and you don't know if it will or it's just not. And you might die unsatisfied and that's part of life. You have to be willing to eat that as a possibility before you can feel like you can do anything. If all you say is I'm coming home with my shield and that's all that's ever going to happen, you're dreaming. You might be coming home on it. That advice just resonates because there's a huge portion of this audience and definitely a much bigger portion of the breaking points audience that doesn't like the fact that we're in this deeply politically binary moments. They're like, why can't Andrew Yang break through with the forward party or why are people mad at Marianne Williamson for running the awkward version? My version of yours is the advice is sometimes you're in either or moments and there actually isn't a third way and there's a huge portion of this country. I think that's very uncomfortable and it's frustrating too. It's frustrating. And this is why we started the episode talking about this heterodox politics space. I think this is why even the heterodox politics space that seemed so open and free in 17, 18, 19, even early 20, it's really still polarized in both directions because that's the nature of a binary moment. So I think my version of you saying that sometimes things are not

possible
to reconcile that is like sometimes there are two options and your choices are choose or just sit out saying that your third choice, the forward party's legitimate option that's going to mean something is not, is it in of itself a choice in of itself? So that's just resonated when you describe that. So thank you. Yeah, yeah, of course. I mean, you know, the other ways any economists will tell you is that there are only trade-offs. There are only trade-offs with everything you do. It's never going to be perfect. I think both sides are thinking the right is not honest with themselves about this. I think the left is way more honest with themselves about this. Everybody wants FDR's majority. Everybody wants that level of power right now.
That's what they want. They want this almost like erotic release of total control of the polity, right? That's what people are thirsting for. And part of that has to do with the fact that a lot of this happens online. So we're always bickering at each other in the dumbest way as possible. So you just want to own people. You just want to be like, you don't, you don't matter. I don't need a coalition with you. We'll just do it all my way. And you're just going to have to eat that. And I'm going to enjoy watching you have to eat that. You know, that's just like not realistic. That's, we're never going to be moving towards that. That was a very rare moment in history.
If it comes again, it probably won't be in my lifetime, but you never know. And I think, I think we have to ban TikTok. No, I'm kidding. I think that we're going to have to figure out how to reconcile our own feelings of despair in order to be more productive overall and every avenue that we're in. And that despair is, I think palpable. And it was why John and I started that podcast to begin with. And there aren't going to be any easy answers there. But having successive generations no longer believe in the American project to the extent the previous generations did, and to believe that nothing is possible rather than just nothing feels possible will not produce salutary results for America or anyone living within it.
Oh, dude, I keep trying, not trying to end the podcast, but we're hitting time. But I'm so glad you said that because it's just got at, you know, all these, all these polls come out every once in a while where it's like, no, majority of Gen Z doesn't believe in patriotism and thinks everything sucks and this, this, this and that. And like every time we get one of these polls, and there will be another poll saying like Gen Z like hates their lives and thinks that America's in the like, you know, in the crapper and has all these problems. It's like, guys, these two things are tied together. In the sense that if we don't believe in the country, don't be shocked in a world where that country is then able to not also do things either. You know, it deeply matters. And this is more to the left than to the right in that sense. But it deeply matters that that FDR progressive like Nudu era was a era where things were, were confident and not inherently deumerous. Like there's just, I think at a, just to talk crap about Gen Z for a second, there has to be a generational realization that deumerism literally does not solve anything. A deumerous affect does not get you anywhere. And we've effectively run a 10, 15 year post 2008 financial crisis experiment in whether that's an effective means of enacting change.
So I would say this just to defend them a little bit because I've tutored and I've talked with Gen Z and stuff like that. My wife works with Gen Z. I would say this, like that is on us to help them get to that place. That like, that is our responsibility. Even if they're just, they're like young adults now, we have to figure out how to get them there. We can't just say,

this is the problem. This is the problem. This is the problem over and over again.
They don't believe in anything like a, they know that B, we know that already. So what are we going to do about it? Like that, like, how are we going to bring them into that? How, how do we do that? How do we bring people back into the fold of committing themselves to the American project?
And look, this whole society is premised on faction that will never go away.
It's whether, it's whether that faction is an engine for prudent outcomes that benefit society or a chokehold for the dreams of every citizen they're in.
And that's what we need to figure out with this.
This is the heaviest ending to the Realignment podcast we've had in a long while, but I really deeply enjoyed it and have a lot to think about. Emmett, could you shout out all the various things you do?
Yeah, I do. I do have a complicated byline. I do a lot of different things. So look, if you guys want to learn more about energy on a daily basis and figure out how some of that all that is working, I run a free daily newsletter, go to gridbrief.com, sign up. It's usually under a thousand words a day. So you can read it with your coffee. You'll get through it quick. It's a digest that I put together for people. The other thing I do is you can check out the nuclear barbarian substack. I do occasional writing there, but mostly that is where you will get podcasts with everybody from historians to nuclear advocates to people in the fracking industry, to whoever. I try to bring conversations to the energy world that is closer to the ground and more historically anchored than I see elsewhere. And then other than that, you can find me on Twitter at nukebarbarian. And there you'll see me put out my publications from Compact, where I'm a contributing editor, or any of the other places where I get published, like The American Conservative or The American Mind or what have you. And if you're a Compact subscriber, you will soon be treated to my review of the movie How to Blow Up a Pipeline.
Yeah. So I don't know when this episode comes out, but the week that we're recording it is tomorrow. Oh, great. You're just like me. This is how I do it. So yeah, that's how it is. I used to say that I would respond to DMs, but then basically my inbox would get clogged after appearances. So I can't guarantee that I will, but I just want to thank your listeners for taking the time to listen to me. And if they check out any of my stuff, I'm very grateful for that, too. And I hope that even the ones that don't agree with me have new questions to ask themselves and other people, because at the end of the day, that's really what I want. That is even more important than agreeing with me. So thanks for having me on. 100%. Emma, thank you for joining me on the realignment. Hope you enjoyed this episode. If you learned something like this sort of mission or want to access our subscriber exclusive Q&A bonus episodes and more, go to realignment.supercast.com and subscribe to our $5 a month $50 a year or 500 for a lifetime membership
rates. See you all next time.