

## Transcript for #76. Former FERC Commissioner Neil Chatterjee on Power Generation and Electrification

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Guest Neil Chatterjee, Former Chairman, Federal Energy Regulatory Commission

Fueling the Future Intro (00:01):

You're listening to Fueling the Future of Transport hosted by Tammy Klein, the founder and CEO of Transport Energy Strategies. We'll talk all about the fuels and energy it takes to keep the world moving forward.

Tammy Klein (00:17):

Hi everyone. Thanks for joining today. I am really excited to have with me a special guest that's going to talk to us a little bit about the transport energy side of things, but also bring in his vast experience on the power generation side as well. I'm super excited to welcome Neil Chatterjee to the program. So many of you will be familiar with Neil's name. And the reason is he's a former Commissioner and Chairman of the Federal Energy Regulatory Commission also known as FERC. Prior to his time at the Commission, Neil served as an advisor to Senator Mitch McConnell, where he aided in the passage of major energy highway and agriculture legislation. Neil also has experience working as a Principal in Government Relations for the National Rural Electric Cooperative Association. And he began his career as a staff member on the House Committee on Ways and Means. There's a lot of deep knowledge and expertise in the energy sector. And we're super excited to welcome him to the program. Neil, Great to have you!

Neil Chatterjee (01:18):

Thank you so much for having me.

Tammy Klein (01:19):

Yeah. Great, great to have you and I have so many questions that I want to ask you, but let's start with the Inflation Reduction Act, which was recently enacted. So I want to talk to you about what you think about the act in general and this approach on incentivizing decarbonization in all sectors really. but especially on the energy side - power generation and transport energy, let's start there. What's your reaction to the legislation. And then I want to ask you some more details on the electric vehicle side of the coin.

Neil Chatterjee (02:03):

Sure. Look, passage of the Inflation Reduction Act as it pertains to energy policy specifically was a big deal. It's a considerable investment in a host of energy technologies that I think will help us drive towards decarbonization while also maintaining reliability and affordability in the in the energy sector. I think there were some really smart policy initiatives. I particularly appreciated the investment in domestic manufacturing and really bring the supply chain that will be necessary for the future of electric vehicles for the future of decarbonization technologies in the electricity space home to the US. so we don't find ourselves in a situation down the road where we're dependent on potentially adversarial nations for the component parts of these technologies that are so essential to our energy future. Really good policies there. I think that the stability that will come out of the passage of this long-term tax credits for wind, for solar, for hydrogen, for storage, for carbon capture, I think providing not just the incentives, but the duration is just important for investors and for capital.

Neil Chatterjee (03:27):

I think one of the things that has been problematic in the past few years is that these provisions have been falling into these extender packages that may or may not get done at the end of the year in particular congresses. And you know, that has a chilling effect on investment. And so I think being able to provide that clarity and stability I think is fantastic. So this is a big deal that does a lot of things across a lot of spaces. My only qualm with it, to be honest, is I do wish it had been bipartisan. And I think that we were not in the environment we're in today, where everything has become polarizing, including energy policy. This very easily could have been the Energy Policy Act of 22. When you look at the

combination of offshore leasing, coupled with permitting reform, which looks like it's going to come here sometime this fall paired with these tax incentives, that's something that would have garnered bipartisan support.

Neil Chatterjee ([04:29](#)):

And I wish Congress had gone down that route. I do worry that because this was done on a party-line basis, it may further add to the political polarization around clean energy and the energy transition and decarbonization. And that's unfortunate. I'm a Republican from Kentucky who believes climate change is real and that we need to take urgent and smart steps to mitigate emissions. I don't think these issues should be political but I do worry that they will become political, but that's just the reality that we all have to live with.

Tammy Klein ([05:04](#)):

So, one thing that I want to ask you about is, you talked about the lack of a true bipartisan policy, but in your view, what makes a good...you've been in the policy-making business for a long time, what makes a good climate and energy policy in your view? And by the way, why isn't there, on the Republican side, some of these things that are in the act or that are happening, bringing jobs battery manufacturing,? Like these are all good things that bring benefits and they're actually going into Republican states. So why isn't there, why shouldn't we have more of an Republican energy platform beyond just drilling, you know? So, yeah. I'm wondering if you can comment about on those two questions, what's a good climate policy and do you see the Republican side coming up with more of a climate energy alternative because I think there's a big vacuum there and there's an opportunity there.

Neil Chatterjee ([06:11](#)):

Yeah, I actually think a lot of the policy that was included in the IRA would've garnered considerable Republican support. I think particularly when you look at some of the tax incentives, these are provisions that have been supported by Republicans. In the past. I spent a considerable portion of my career working as an energy policy aid in the United States Senate. And during that time, we worked on a number of bipartisan bills. Most of the legislation that I worked on during my tenure didn't pass the Senate with the bare minimum 60 votes. We often got north of 80 or 90 votes because energy policy issues historically have not been polarizing or political and we were able to get bipartisan consensus. And so just examples of some of the things we worked on you know, Senator McConnell, negotiated an infrastructure bill that had a number of energy policies in it with Senator Barbara Boxer of California...two polar opposites on the political spectrum came together on infrastructure.

Neil Chatterjee ([07:15](#)):

When I was an aid to Senator McConnell working hand in glove with Senator Reed of Nevada, who at the time was the Democratic Leader, as well as President Obama and the Obama Administration, we negotiated a compromise where we expanded and extended credits for clean energy technologies and paired that with the lifting of the crude oil export ban. And that had sort of been the ethos in Congress for a long time when it came to energy policy. And so it didn't need to be political or polarizing. And so I think as I look to the future House Republicans in particular have led by Congressman Curtis of Utah and Congressmen Graves of Louisiana have been very open about talking about innovation and a clean technology innovation agenda. I think a lot of what they probably would've wanted to focus on potentially was included in this bill.

Neil Chatterjee ([08:11](#)):

Similarly, you've got a lot of leaders on the Republican side and the Senate - Senator Murkowski, Senator Cassidy Senator Romney, Senator Kramer, who really tried to work with Democrats on a bipartisan approach to a lot of the issues that wound up being included in this package. I think they're frustrated that the process that was used was a political one, not necessarily the policy, and that's really where the...and it's a very wonky DC inside baseball thing that I think most Americans rightly don't pay attention to and shouldn't...but the reality was the vehicle that was used to pass this budget. Reconciliation is designed to be partisan, is designed to circumvent the Senate minority and the Senate's 60-vote filibuster threshold. And I think that is the source of the frustration. Otherwise, I think you would've seen, I think, a

similar coalition that came together to pass the bipartisan infrastructure bill last year. I think that same coalition could have come together and done a bipartisan energy bill had it not been for the reconciliation process.

Tammy Klein ([09:19](#)):

It's an interesting perspective. One of the things that I'm seeing that I don't know, it'd be interesting to get your takeaway, is the appetite for complicated regulatory programs like you're not seeing that in this legislation. What you're seeing is okay, we're going to incentivize our way to decarbonization. So what does that mean for things that...for policies that you've actually supported. You've supported things like carbon pricing in the past. Will we see policies like that cap trade carbon taxation are those things gone and is this going to be a trend where to get the things that we want to happen on climate and energy, we're just going to do incentives and sort of stay away from regulatory programs that will likely end up in years of litigation, that kind of thing?

Neil Chatterjee ([10:22](#)):

Yeah. I think one of the challenges of the process that was pursued of using this budget vehicle, the reconciliation process to move this in the Senate has very strict rules on what can and cannot be included in a reconciliation vehicle. The parliamentarian has considerable power to determine whether a potential provision is budgetary in nature, or has a policy impact. And due to that restriction is hard to get anything that would be like substantive policy or delving into a complicated regulatory framework through the budget reconciliation process. And so you wind up being limited to what you can get through, which are things like tax incentives and changes in the tax code. And that's been one of my big frustrations regarding energy policy writ large. We really haven't passed a major energy bill in Congress since the Energy Policy Act of 2005, right?

Neil Chatterjee ([11:23](#)):

All subsequent energy policy has been done either through omnibus appropriation bills or through the tax code or through these budget deals. And so they're not subject to the same parameters that substantive legislative policy would have. They're not really the product of committee deliberations and hearing. And that's unfortunate because, look, as someone who sat at a regulatory agency, what I found was that in the absence of Federal legislative guidance on energy policy and an update really in 15 years, more and more of the key decisions regarding the energy transition were falling to regulatory bodies like FERC. And look, we didn't have the tools at FERC to make the kinds of decisions and make the kinds of policy changes that are necessary to accommodate innovation and the energy transition. And so I do hope that there is still a window for that kind of policymaking going forward.

Neil Chatterjee ([12:24](#)):

I have been in divided government multiple times throughout the course of my career and we've actually been counter to the narratives. We've been very productive during times when we've had divided government. And sometimes you get durable policy when it's bipartisan and done with divided government and no one political party has to own it one way or the other. and it'll be interesting to see how things play out in the energy space, post IRA. I think initially this IRA, because it was so all-encompassing, probably takes the wind out of the sails of a lot of things in the legislative arena that could have been done going forward. But I think long term, what we'll see is, and I hope I'm wrong, but I suspect the IRA is going to significantly underperform in terms of emissions reductions and recognized very quickly that we need additional policies to get there. I, for one, prefer market-based solutions over regulations, which is why during my tenure at FERC, I came out so strongly in favor of a price on carbon. In my view, a price on carbon is a vastly superior tool to emissions as compared to regulations and quite frankly, as compared to subsidies as well, because we have to focus on reliability. One of the concerns I have with subsidies is that subsidies pick and choose winners and losers among fuel supply. And sometimes those losers are necessary to maintain reliability and affordability. And I prefer engineers and markets to make decisions about when to transition resources. So to me, I think that's better policy to challenges politically. We just saw it with this legislation. It's much easier to pass incentives than it is carbon.

Neil Chatterjee ([14:23](#)):

Everyone agrees. If you care about decarbonization, I don't say everyone, but economists experts, energy experts, the experts would agree, a price on carbon is the most effective, efficient way to go about reducing emissions. Unfortunately, the politics around a price on carbon are really, really, really, really challenging and so it's something that we need to continue to work on. I think right now, you know in a time that Americans are feeling the pain of inflationary pressure, really tough to try and talk about putting a price on carbon and potentially increasing energy costs. But at the same time, the political left has lost some of the enthusiasm around a price on carbon. And I think they're excited by the prospects of the IRA, but if the IRA does underperform in terms of emissions reductions, I think that may reinvigorate some conversation about a market-based solution. I'm hopeful that more and more Republicans will appreciate market-based solutions as alternatives to regulation and subsidies. It's going to take work, but I'm committed to working on it. And many others are as well.

Tammy Klein ([15:33](#)):

So you're the first person since the Act was signed by President Biden, who said, 'hmm, this might underperform.' I mean, Rods come out with an analysis, Princeton, came out with the analysis there's going to be a 40% reduction. And yet you are one of the first people that I've heard say, 'well, we, I don't know if that's going to happen.' That's really interesting because it's like we can get there on incentives and oh my God....

Neil Chatterjee ([16:05](#)):

Even the Roadium analysis, it projected I believe it was somewhere in the neighborhood of 32% to 42% reductions with a number of assumptions, including like a 100% deployment of electric vehicles by 2030, but it's...

Tammy Klein ([16:20](#)):

...Gonna happen <laugh>.

Neil Chatterjee ([16:22](#)):

But in that same analysis, it said with no bill at all, you'd get somewhere between a 24% and 35% reduction just based on where the markets are taking us in terms of decarbonization today. And so when you factor that in that no bill at all, we would've still gotten 24 to 35% and the bill might only get us somewhere in the neighborhood of 32 to 42%. It starts looking like a really modest impact in terms of decarbonization.

Tammy Klein ([16:49](#)):

Yeah. Yeah. I want to turn to the issue of electric vehicles from your perspective, a little more deeply. I think the first thing is the question that seems to arise frequently for some folks is, can the grid handle on massive scale up of EVs, especially on the timeline that the Biden Administration is targeting, which is 50% sales by 2030. So my question to you as an expert, as a regulator is, can it? And what needs to happen on the power generation side to enable that and how do things like resiliency fit in? Do we have the right mix of policies to really support the scale up? And it's not just light duty vehicles. I mean, now there's talk about medium duty vehicles electrification, heavy duty vehicles...states like California have mandates, as you know, there's a lot of talk in the news about the car ban regulation. That's about to be signed that some of the states are following them to heavy duty trucks as well. What's your view on those issues as it relates to power generation in the grid?

Neil Chatterjee ([18:05](#)):

So I think I had greater concerns a number of years ago. One of the big concerns that I had was that if the projections were accurate and we would see this significant spike up in demand, there wasn't a lot of communication and coordination between the auto industry and the utility industry. You know, I found it very interesting. You have these two giant sectors of the American economy, and there's not a lot of familiarity between them, not only in terms of like the substance and policy and structure, even just relationships like the CEOs don't really know each other, at least they

didn't in the past. I think some of those barriers have become overcome, and there has been a lot more coordination amongst the utility sector and the automotive sector, I think in particular, utilities are excited about the prospect of increased vehicle electrification.

Neil Chatterjee ([18:58](#)):

Electricity demand has been relatively flat for more than a decade. And so I think utilities are definitely very much in favor of the prospect of increased demand that will arise from greater vehicle electrification. The challenge will be getting the logistics right. And I think when we spoke earlier about why I think both of us express some skepticism about the possibility of having a hundred percent deployment of electric vehicles by 2030 to me, the real challenge will be logistics and culture. You know, culturally, I think Americans are so used to our engine-based cars convincing people to switch to electric will involve an element there, but I think companies are being really smart. Like I love this Ford F-150 electric pickup, which demand for to that is through the roof.

Neil Chatterjee ([19:51](#)):

I think that's a smart way to make EVs more mainstream for consumers. But the other thing is we got to address concerns people have regarding range, anxiety, and where they can charge and how they can charge and how fast they can charge. You know, right now, if you're charging at home overnight, that's fine. And if you're just using an EV to commute locally you can get it done, but not every community has charging stations available. Not everyone has a garage where they can park...you know, plug in a car. We have to think through some of those obstacles. And then in terms of like long term range anxiety, right? If you want to go beyond just commuting locally and you want to take a much longer road trip in your electric vehicle, you want to be comfortable that you have the infrastructure in place to charge a vehicle.

Neil Chatterjee ([20:43](#)):

And that is where I think it gets really, really intricate and complicated. So to me, it is not in the utilities interest to be in the service station business. To be in the charging business, utilities should benefit from the uptick in demand, but they don't want to be selling hot dogs and coffee. And the ideal way to do this would be to kind of partner with the existing petroleum refueling network, right? You have petroleum retailers all around the country that are basically real estate companies. They're real estate companies who happen to sell a particular commodity today - gasoline - but they would gladly pivot to replacing the petroleum refueling with electrical vehicle charging. It makes sense because their footprint is already where people are comfortable to go to recharge. But brokering that arrangement is proving to be rather complicated, because what you have is in some states, the resale of the sale of electricity could potentially subject you to utility jurisdiction EV charging station.

Neil Chatterjee ([22:00](#)):

You know, these petroleum retail owners would have to make considerable investments in updating their stations to accommodate this new charging equipment. And I think if they can't charge for the electricity or their subject to demand charges in the...like, I don't think the math pencils out for them that someone would come in, plug in their EV, charge for 30 minutes and then go inside and get a bag of chips or soda...that economic equation I don't think pencils out for a lot of these retailers. And so we got to find a way to broker arrangements between utilities and these retailers to accommodate that. We need to get charging stations put in greater locations and find ways to address some of these issues. And so that's going to take investment, but that's also going to take really thoughtful analysis and study and planning to get right. And so it's a super exciting opportunity but there are certainly hurdles in place that that need to be addressed.

Tammy Klein ([23:02](#)):

So what you're saying is really interesting. I've worked with fuel retailers that are making that selection. And I think that it's...there is one thing that I've noticed, but I've also gotten to know in my work, some of the utilities involved like Duke Energy as an example, and it is interesting because I think part of the issue also is the cultures are very different because

of the nature in which the way their businesses operate. So it's like taking two different cultures and trying to put them together and they might not quite sort of speak the same language. It's been really interesting. It's like farmers in the oil industry, it's like neither the Twain did they meet until we had an RFS. And then suddenly we all had to get a lot sharper, real quick about you know, farming ag-biofuels, feedstocks, so on and so forth. So I wonder if you had any thoughts about that, because I think that does sort of influence how things work.

Neil Chatterjee ([24:17](#)):

Yeah. I think that learning is occurring now, but you are right. Like you have totally different cultures, you have totally different setups. The culture within the utility industry differs based on region. You still have some regions in the country that have traditional vertically integrated utilities whose rates, terms and conditions are set by their local PUCs. You have other utilities that participate in competitive markets. The culture just within the utility industry varies greatly based on the structure of the utility. Similarly within the auto industry, within the refueling industry, these are folks who this is new to everybody, and we're all kind of trying to sort out and figure out the best way forward. I think there's an intimidation factor for a lot of folks particularly looking at how to get the footprint right for where to put charging.

Neil Chatterjee ([25:10](#)):

They're not familiar with state PUCs, they're not familiar with utility tariffs, which are super complicated. And it's going to take a while to overcome that learning curve and get there. And similarly for utilities, I think they need some assurance that this is going to work out for them as well. As I mentioned earlier, I don't think they want to be in the selling hot dogs and coffee business. And so there ought to be a way to get to the table and broker some of these compromises and make 'em work and put efficient policies in place. But it's going to take more of the folks from these different industries learning, not just the policies, but the personalities, so we can forge the relationship to build that trust, to get the utility, the charging folks together, to find a workable path forward.

Tammy Klein ([26:04](#)):

What do you see one of the thing issues that you raised a bit earlier is the issue of demand charges. Do you see state PUCs beginning to really address that with respect to EV charging? Because I think that is a major, major barrier. I mean, you've got some utilities or some states that offer more electric vehicle charging, designed rates but it's certainly not widespread yet. So what's your thought on that?

Neil Chatterjee ([26:36](#)):

This is where I think...I hope...we don't go down a combative path and that why I keep using this word compromise. I keep talking about the importance of relationships. I want the utilities and the charging folks to get together and work this out. If it becomes combative at the PUC level, I can tell you right now, the utilities are going to prevail in most regions of the country, because PUCs know the utilities, they know their structures, they know their frameworks, the utilities know their tariffs, they know the PUCs and, you know I think it'll be much more difficult for counterparties to come in and prevail at a state PUC or even in a state legislature. And so my counsel would be get together and work this out and find an equitable path forward. But you know, there may be certain utilities who don't want that, who understand their inherent advantages within their state PUCs and who don't want to back off of demand charges because they know they can prevail, you know in my view, to really make sure we get this investment right. And the Federal government, state government, industry, they're all making considerable investments in the transition to EVs to get it right. I think we all have to come to the table.

Tammy Klein ([27:52](#)):

So how do you see from we have an IRA now to we have Federal funding from the infrastructure legislation. Last year passed in 2021 NEVI we had the Diesel-gate settlement several years ago, which, which provided funding for charging. How do you see...we had the market scaling up, more models are coming out \$500 plus billion of investment from the auto industry. So from your standpoint, how do you see ultimately the EV market and EV charging evolving over these

next 10 years? What are the biggest opportunities and challenges to developing the infrastructure, to supporting EV scale up?

Neil Chatterjee ([28:40](#)):

Yeah, there's huge, huge opportunity here and it's definitely a very, very exciting time to be in the space. But a lot of what we've already talked about to this point - cultural challenges, logistical challenges, locational challenges are going to have to be addressed. I think, you know there is still a perception that EVs are mainly for the wealthy, that the cost is too much, the price point is too high, there have been promises about bringing down the cost of EVs, but I don't know that that has been born out yet. And so I think that is a barrier that needs to be overcome. But I think it can be and I think there's huge opportunity there. But you know, there's a lot that has to go.

Neil Chatterjee ([29:28](#)):

But, that's always the case when we see that in electricity, in the energy transition and I'm sure we'll see it in the EV space as well. But you know, I'm encouraged by it. I think competition in the space is really beneficial. I think it will lead to greater innovation and will also lead to cost discipline and driving prices down and making EVs more accessible and affordable. So I love the fact that more and more companies are getting into the EV space and I think that the fact that the major autos are now making these considerable investments is a real sign that there's a promising future here.

Tammy Klein ([30:16](#)):

So fun and last question: what excites you most about the energy space and why?

Neil Chatterjee ([30:25](#)):

Innovation? One of the cool things, I was so fortunate to have a front row seat to the energy transition during my time at FERC and it gave me the ability because of the convening authority at the agency and the ability to bring people together to meet with some of the smartest, most ambitious, courageous, innovative people out there. And I'm really excited to see the fundamental transformation that can occur because of innovation. I worked in the policy arena. I worked in the political arena, as we spoke at the beginning of this podcast we've struggled to really get energy policy done, to achieve carbon reductions and really transform the regulatory and landscape, but it hasn't mattered because the market has been working because innovative new technologies have been coming in and we're able to generate and consume electricity in cleaner, more efficient ways.

Neil Chatterjee ([31:31](#)):

And it's super exciting to see that one of the things that I'm proudest of, or a couple of things that I'm proudest of during my tenure at FERC, is we work really hard on a couple of FERC policies, a couple of FERC orders that removed barriers to entry for new technologies for energy storage and for aggregated distributed energy resources here...think EVs, think rooftop, solar advanced appliances. And what we did was basically remove some of the barriers that existed within the power markets to enable these resources, to be able to be compensated for all of their attributes for capacity, for energy, for ancillary services. And I'm super excited to see what will emanate from those rule makings, because I think what it will do is drive greater innovation will lead us to the breakthrough in long-duration storage. And with this aggregated distributed energy rule, like when you think about it, if you have one electric vehicle, your ability to impact a power market is N but if through the power of aggregation, you can harness thousands and thousands and thousands of EVs suddenly you're competing against the power plant down the street, and you're doing it at the point of demand.

Neil Chatterjee ([32:44](#)):

And what could be really exciting there is not only would this lead to decarbonization in the power sector, but this power sector reform could theoretically enable what we've been talking about, the accelerated deployment of EVs, which could lead to emissions reductions in the auto sector. And to me, that's like super exciting to think about. And it's what makes me so eager to be a part of this industry. I think it's an exciting time. The politics of it are frustrating to guys

like me sometimes. Like, I personally think that this antiquated notion that if you're for fossil fuels, you're the political right. And if you're for clean energy, you're of the political left is totally outdated and it's out...we got to get past this.

Tammy Klein ([33:29](#)):

Yeah.

Neil Chatterjee ([33:29](#)):

I think conservatives and Republicans need to embrace the opportunities in the clean energy transition. And when we start to see some of these benefits...job creation, lower cost because of greater efficiencies, benefits to consumers, you know, to me I am very, very optimistic about what our energy future holds and really love working in this space.

Tammy Klein ([33:53](#)):

Well, Neil, it was great to talk to you. Thanks so much for coming on the show. It's been a real pleasure.

Neil Chatterjee ([33:59](#)):

I really enjoyed it. Thanks so much for having me.

Fueling the Future Intro ([34:04](#)):

You've been listening to Fueling the Future of Transport. This show is hosted and edited by Tammy Klein produced by Carolyn Schnare and engineered by Alexander Nikolic. To hear more great episodes of this show, learn more and sign up for a free biweekly newsletter. Visit [transportenergystrategies.com](http://transportenergystrategies.com).

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