



CleanLaw Episode 83

EPA's Proposed Power Sector Rules with Jody Freeman, Jay Duffy, Kevin Poloncarz, and Carrie Jenks
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Introduction: Welcome to CleanLaw from Harvard's Environmental and Energy Law Program. In this episode, EELP's founding director Jody Freeman, who is also an independent director of ConocoPhillips, and EELP's executive director Carrie Jenks speak again with Jay Duffy, litigation director at Clean Air Task Force, and Kevin Poloncarz, a partner at the law firm Covington & Burling. Jody, Jay and Kevin recently joined CleanLaw to discuss the Supreme Court's decision about the Obama administration's Clean Power Plan, and now, with Carrie, talk about EPA's recently proposed greenhouse gas regulation for the power sector and their views on how EPA's approaches were shaped by both the Supreme Court's decision, *West Virginia v. EPA*, and Congress's enactment of the Inflation Reduction Act. We hope you enjoy this podcast.

Jody Freeman: Welcome to CleanLaw. Today, we'll be talking in depth about the EPA's new proposed rule to control greenhouse gas emissions from power plants. This is a much anticipated and very controversial proposal. We will have a terrific panel of experts with us to discuss what's in it and help us understand the policy, political and legal implications. With us today are Kevin Poloncarz, Jay Duffy, and Carrie Jenks. Kevin, let me introduce you first. You're well known to us and to CleanLaw audiences. You've been here before to talk about power sector rules and EPA clean air rules. And we're very happy to have you back.

Kevin is a partner at Covington & Burling. He co-chairs the firm's environmental and energy practice group, and he is a super climate lawyer known to everyone across the country as one of the top lawyers for all things related to the power sector, carbon emissions, and clean energy. Kevin also convenes a coalition of utilities that participate in EPA rulemakings and in litigation over regulation. Kevin, welcome and thanks for joining us. I understand too, you're now teaching at Stanford Law School, right?

Kevin Poloncarz: I do. It's wonderful to be here. I can't wait for class to be over, but it's been one of the most exhilarating experiences of my career.

Jody: Well, I'm glad you've joined the professor ranks. Also with us is Jay Duffy, who, like Kevin, has been with us before on CleanLaw to talk about clean air regulation and particularly carbon rules from EPA. Jay is the litigation director at the Clean Air Task Force where he has worked since 2013. And like Kevin, he has been deeply involved



in litigation related to EPA's clean air rules, especially greenhouse gas rules. Jay, thanks so much for being back with us. Welcome.

Jay Duffy: Thanks so much. It's great to be here. Hoping that the third try is the one that gets us across the finish line.

Jody: Yes. The third try for the rule. Jay is talking about how many times EPA has tried to regulate carbon emissions from power plants. We'll get into the explanation of that a bit later. But for now, let me make sure to introduce our third panelist, Carrie. Carrie is our executive director here at the Environmental and Energy Law Program at Harvard Law School. She's my right-hand person running our fantastic program. She makes magic happen with the team here. And Carrie has been deeply involved in this rule and other Clean Air Act and carbon rules coming from EPA. Carrie, thank you so much for being a guest on really what amounts to your own podcast.

Carrie: Thanks. I'm looking forward to the discussion.

Jody: Just by way of background before we start talking about EPA's proposal, and I don't want to spend too much time on history, but I think it's worth noting a little bit of the background. Until now, until this rule was proposed and until it goes final, we will not have had in this country any federal regulation of carbon emissions from the existing, that is, the old fossil fuel fleet of power plants, old natural gas fired- and coal-fired power plants. So it's an important fact to know that this is a sector that's responsible for a very significant share of emissions, 25% or so of the emissions in the economy. And we have not had a rule be legally effective and implemented to control the oldest and dirtiest power plants in the country.

So the federal government has been at this for a while, trying to put a rule in place going back to the Obama administration, which in 2015 promulgated and finalized what became known as the Clean Power Plan. But that rule was litigated and the Supreme Court stayed the rule, so it never went into effect. And ultimately, the approach the Obama administration took in that rule was struck down by the Supreme Court in litigation that culminated in a case that most people are familiar with called *West Virginia versus EPA*. In fact, there were many steps before the Obama approach was struck down, the Trump administration actually rescinded that Clean Power Plan, it rescinded the Obama-era approach, replaced it with its own much weaker rule for power plant carbon emissions.

And that rule was litigated in the D.C. Circuit, and it was that rule that ended up reaching the Supreme Court. And under the auspices of reviewing that rule, the Trump rule, the Supreme Court went out of its way to find that the Obama-era Clean Power Plan was unlawful. And in the Court's view, the EPA had used an approach in the Obama rule that was not within its authority under the Clean Air Act. The court said that the agency had relied on something called generation shifting, meaning it had established that a certain amount of clean energy, wind and solar energy, for example, would displace coal and natural gas and that would force coal retirements.



And that approach that had a substitution effect for coal was unlawful in the court's view.

And many people are familiar with this. It resulted in the court embracing a doctrine called the major questions doctrine, which says that when agencies do really important big things, they need to have very explicit authority from Congress. We can talk about that more later. I wanted to get this out on the table though, because this long saga of litigation, first the Obama rule gets litigated, then Trump rescinds it and replaces it, that rule gets litigated, then it reaches the Supreme Court, and the Court ultimately constrains what EPA can do. It really sets the stage for the Biden administration to issue this proposal.

So I hope that the nuances of all of that are known to our audience. If you've listened to our podcast before, you know we've dug into this, but I wanted to make sure that was on the table. So let me turn now to Carrie and ask her to summarize the Biden administration's proposal. In essence, what is this rule trying to do? How has EPA approached setting standards for the nation's coal and gas fired power plants? Carrie?

Carrie:

Yeah. So they're using section 111 to set standards, both for new units and for existing units. And this section 111 requires EPA to set standards of performance that's based on the degree of emission limit that's achievable through what they call the best system of emission reduction or BSER, and that's adequately demonstrated. And I think one piece to keep in mind as we go into this is that they need to consider energy and environmental impacts as well as cost. And the IRA, the Inflation Reduction Act that Congress enacted last summer really changed the calculus on what cost is because of all the incentives that are in there for CCS, carbon capture and sequestration, as well as hydrogen.

So what EPA has done is proposed this rule, and I think of them as three buckets. They've got standards for coal plants, existing coal plants, standards for new gas plants, and then standards for existing gas plants. And there's a bunch of tiers depending on how these plants operate, how long they plan to operate them. But generally, I think it's important to keep in mind that EPA said, "If you're going to run all the time as a base-load plant and you're going to operate far into the foreseeable future, you need to control your emissions with adequately demonstrated technologies," which they define for coal plants to be CCS. And for gas plants, they say it can be CCS or hydrogen based.

Jody:

So Carrie, I have to stop you there because I just want to make sure we all know what we're talking about here. When you say section 111, that's the legal authority under the Clean Air Act that EPA is using. And second, you said standards are based on CCS, and you're referring there to carbon capture and sequestration. So I just want to make sure that we're clear about these things. When EPA says we are setting standards based on that technology, based on CCS, they're not telling any particular utility that they have to use CCS necessarily, but they have to achieve a level of



emissions control that could be achieved if that technology were in place. Is that fair enough, Carrie?

Carrie: Exactly. And I think it's really important to highlight that because that's very consistent with how they've done rules under section 111 for other sectors in the past. EPA says, "Here's what we think you can achieve if you use this technology, but you can meet this rate however you decide makes sense." And companies often find other cost-effective ways to do that. The energy sector is transitioning and companies want to operate their plants differently in the future. They see some plants retiring. And so EPA included a bunch of different options that we can talk about that allows a company to say, "Well, no. For example, this coal plant is going to retire by 2032." And EPA said, "Okay, if that's true, then you don't have to do anything except continue to meet your emission limit as you've been doing in the past."

They also said for, existing plants, they decided not to regulate all existing gas plants, but rather only regulate the big ones, the ones that are over 300 megawatts or above 50% capacity thresholds. And there they said, "Because you're going to be operating a ton, you need to control your emissions either with CCS or hydrogen."

Jody: So let me now ask Kevin and Jay to weigh in on this and really to help us frame or understand the thrust of the proposal. Because the way I understand it is EPA is saying, "If you can tell us a date certain for retirement of your units, we're not going to make you invest in costly emissions control technology or take certain steps or practices because there's a line of sight to you going out of business eventually. You're going to retire this unit. However, if you plan to operate either a natural gas or a coal-fired unit in perpetuity, in other words, you're going to keep it online, and especially if you're going to operate at a lot," Carrie, as you said for base-load, "then we're going to expect you to control your emissions very substantially. And we're basing our expectation on carbon capture and sequestration, that level of control."

So the way I understand it, EPA has taken a sensitive, graduated, and moderated approach here in the sense that the stringency of the regulation and what you must do is really dependent on how long you expect your units to last, how much you expect them to operate, and considerations like that. Is that a fair enough generalization? Is that a fair enough way to describe it?

Carrie: Yeah. I think that's right on. I think they're trying to control the emissions of the biggest emitters.

Jody: And Carrie, is there anything else you want to let us know before I turn to Jay and to Kevin for their analysis?

Carrie: I think the new gas standards are also important to flag. And here, they're updating standards that have been in place before, where they've said, "If you're building a new gas plant, then you have to meet heat rate efficiency standards for the first phase. And then by 2031, you've got to pick which path you're going to take, whether



that you're operating in base-load, intermediate or peaker." And as you said, there's different standards based on how much you're going to operate in any given year.

Jody: And there's an opportunity to co-fire with cleaner fuels like hydrogen. Is that right?

Carrie: Exactly. So base-load new gas plant could either do CCS or up to 96% hydrogen. But if you're intermediate, then the rate is based on a 30% blending of hydrogen.

Jody: So as listeners can already tell, this is a very technical rule. We have people here on our panel who are excellent translators and will help us really understand it. So we'll get into some of this kind of nerdy detail if you'll indulge us. But I think by the time we're finished, we'll have a real picture of the thrust of the proposal. And Kevin, let me ask you to help us understand this a bit better. Back us up a little. Carrie gave us a sense of what the rule requires for each type of unit that emits carbon in the power sector, but can you give us an overview of what's been happening in this sector, what's been happening at power plants? Because you know how the utilities operate, explain how this proposal from EPA intersects with market dynamics for producing electric power.

Kevin: The power sector has just been going through a dramatic transformation. And perhaps, no sector has been as effective over the past decade at reducing its emissions. I mean, it bears noting, Jody, that that Clean Power Plan you mentioned, it had certain goals for 2030 that ended up being achieved in 2019, a decade in advance, even though it never went into effect because the power sector is changing so dramatically as utilities bring on renewables, storage, and other solutions to replace fossil generation.

And this all happens now against the backdrop, as Carrie mentioned, of the Inflation Reduction Act and the Infrastructure and Investment and Jobs Act, which make available lots of different incentives for utilities to transform their systems and their portfolio of assets even on a more expedited basis than they were already doing. Most existing utilities have established net-zero targets. And so this rule is really about setting expectations for how they operate their existing fossil resources until they get to that point where we can truly have a zero or near zero emissions grid.

Jody: And Kevin, let me ask you this. I think most folks don't really understand how when they plug something into the wall to charge it, they get electricity. I mean, it's really simple seeming how we get all this power, but it's quite complicated. Right? We have power plants all over the country. They're essentially connected to each other on one of three grids. We have an eastern interconnect, an eastern grid, a western interconnect, the western grid, and then we have Texas, which is largely, I mean not a 100%, but largely isolated with its own grid. And so the way to understand this is, we have a network of power plants connected in the form of what some people might think of as a giant machine that circulates electrons essentially and provides power.

And grid managers can dial up power from different sources. They can dial up power from natural gas plants when they need it. They can dial in wind energy and solar



energy when the sun's shining and the wind's blowing. And so the grid managers are balancing all of this power using this system to meet demand at any given time of day. Is that about right, Kevin? I want people to have a picture of the complexity of the system, and what it means to adopt standards for all these different plants which are operated by different utilities in different parts of the country. So, is what I'm saying generally correct? Can you shed some light on how the system works?

Kevin:

You're absolutely correct, Jody. The three grids that we have contain lots of different sources and different balancing authorities. And every single time load goes up, that's demand for electricity from the grid, they need to be sure that an equivalent amount of electricity is being produced by sources. And so they bring up and down different sources based upon circumstances like, is the sun shining? Is the wind blowing? And right now on the grid, fossil resources are either playing a base-load role where they're always on, like some coal units are, or, like gas units, they're filling in the gaps. Because we have wind, we have solar, we have other types of resources, and that can't today meet a 100% of demand because we don't have readily available and widely deployed storage technology.

And so these fossil resources are there. They used to be the predominant mode of generation. But increasingly, the grid is going towards zero carbon resources. I mean, new zero carbon resources are incredibly competitive and are more competitive than new fossil resources. And so it's just a matter of time until we can get enough of these renewables online, until we can get enough storage resources online so that we don't actually need to use these fossil resources to be providing base-load power.

Jody:

So that's very helpful. I'm going to come to Jay next to talk a little bit about how he views the proposal, especially compared to 10 years ago. As you said, Kevin, the difference between now and the last 10 years in terms of how the market has evolved is very significant. But before I turn to Jay, I just want to nail down a couple of other details with you. First of all, we have a nuclear fleet that's still operational and still providing some amount of base-load power for the system, right? And these rules aren't about nuclear power. They don't touch those units. They're directed at fossil generation, right? At coal and at gas.

And over time, we've seen coal use decline, as you said, Kevin, and natural gas use increase to take up the slack somewhat. So I think it's fair to say, I want to make sure I get this right, that we've shifted already significantly with coal being used less, natural gas being used more. Overall, both sources are reducing over time. Is this right? And more wind and solar has come online to supplement hydro power?

Kevin:

That's correct. Coal resources are not very flexible. They kind of operate like a nuclear plant does or like a hydro resource does, where they're providing a constant amount of power to the grid. And so as we've brought on all these, what we call variable resources that are providing power only at certain times of the day, it becomes increasingly important to have resources that can ramp up and ramp down quickly. And that's a gas plant today. And so those gas plants play the role of filling in the gaps and going up and down throughout the day. Sometimes, they stop and start two



or three times a day depending upon how the load is, depending upon the season of the year.

And so the gas has been increasing and has superseded coal in terms of the largest fossil generation resource. But all projections are that the amount of gas capacity, the number of gas plants is going to remain relatively close to where it is today for the near future, but those resources are going to operate a lot less. They're going to be operating only during certain hours of the day and only during certain seasons of the year when they're really needed to bridge the gap between demand and the renewable resources we have available.

Jody: So the reason I've been pressing on this is understanding at this level's actually quite important in order for us to see what EPA is doing with this new proposal. And now let's turn to Jay, finally. Jay, tell me, why is this important? Once we understand the grid of today compared to the grid, as Kevin described, even 10 years ago, we know it's a cleaner grid on average, there's less fossil energy on average compared to even a decade ago, more wind and sun, et cetera, et cetera. And the shift between coal and natural gas is happening too. So we're already seeing a greener grid. And that leads me to ask you, Jay, in particular, why do we need the Environmental Protection Agency to establish standards to cut carbon from the power sector when it's already getting cleaner over time due to market dynamics?

Jay: Sure. I think it's because the Clean Air Act says so, right? That's the short answer. But the longer answer is, the Clean Air Act, it's technology forcing, it's forward looking. It isn't supposed to just look and follow trends. It's supposed to push the trends. Moreover, the trends can shift. And the act provides a backstop to ensure that any of these fossil plants that do continue to operate are controlling their climate pollution commensurate with the best controls available. The other thing is, things are shifting, as Kevin said, but we are still seeing gas plants. This proposal would regulate new gas plants. Over the next 10 years, the US is expected to add at least 25 gigawatts of new natural gas fire capacity. The rule has the potential to cover a large portion of the existing gas generation if it's strengthened.

Jody: So Jay, one more question. Since the Clean Air Act requires these standards and EPA must set them, what do you think of the job they've done here? I mean, can you talk a little bit about how the NGO community, the environmental community thinks about this? What were they hoping for from this rule? And what the reaction is to the proposal?

Jay: Sure thing. And of course, I can't speak for the whole environmental community, big diverse crew out here, but I can certainly bring our perspective. So looking at this proposal, we were hoping for a legally resilient rule, first and foremost. As I said at the top, hopefully third time's a charm. The rule will not get any emission reductions if it doesn't pass legal muster. That muster is getting thicker by the day. But within the confines of *West Virginia* and the Clean Air Act, the rules can and they must still be strong. After all, the Clean Air Act tells EPA to base emission limits on the best system of the emission reduction.



And I think EPA did do a good job overall. We're at a really good starting place. All of the elements of a strong and legally resilient rule are in the proposal. We've got these traditional, inside the fence approaches for subcategories based on, as Kevin was talking about how these plants are operating. The proposal is key to many of those realities. Coal plants are retiring, fossil plants are running less, supporting an increasingly renewable grid. And pollution costs are coming down, both due to learnings and advancements and incentives that were passed by Congress. So all that said, I do think there are ways to strengthen the rule, both as far as stringency and legal resilience.

Jody:

So I just want to be clear here, Jay. You referred to a phrase inside the fence line, and I just want to make sure everybody understands what that means. In this rule, EPA targeted carbon emissions at the individual plants, at the individual units. So very source focused. And it's a different approach than what EPA did during the Obama administration when it looked across the entire interconnected system of power plants and said, "We can set a standard based on an expectation of substituting in more wind and solar energy, for example, for coal and natural gas."

That approach of expecting a shift in generation, setting standards based on that was what the Supreme Court rejected in *West Virginia*. And that was called going beyond the fence line, meaning the approach the Obama administration took, that EPA took then was not focused on things that each particular source could do at the source. And so when you said, Jay, here what EPA has done is stay inside the fence line, you're saying they're focused on steps that an individual unit can take, like co-firing with lower polluting fuels along with the higher polluting fuel they're already using, or installing CCS, carbon capture and sequestration to essentially capture the emissions before they're vented to the atmosphere.

Those are traditional approaches. They're plant specific or source specific. So I just wanted to be clear that we all knew what we were talking about. Let me turn to you now, Kevin, because it'd be interesting to have your perspective on whether this rule takes into account appropriately what the Supreme Court said in the *West Virginia* case when it said, here are things EPA cannot do when it promulgates this rule. Do you think the Biden administration has pretty much hit the ball down the fairway here?

Kevin:

Yes, that's correct. This rule is very traditional in its structure. The Supreme Court said EPA can't force generation shifting by deciding what is the appropriate amount of coal-fired generation without it being tethered to a technology or a health-based standard. But they made very clear that they weren't saying incidental generation shifting, as they called it, was a problem. We made clear that no matter how you set a standard, it's going to cause generation to shift to the lower emitting sources.

And so when you set a standard that's based on CCS, as you said, Jody, that doesn't necessarily mean the sources need to put on CCS if it turns out that the utility operators decide that it's more economical for them given their own carbon reduction goals, given other standards that are coming place just to retire that coal unit over a



few years and replace it with batteries, with new renewables, with other resources that can help fill the gaps.

Jody: So this is a point I always like to stress. Building on what all of you have said, in fact, not just carbon rules, all pollution rules wind up leading to economic decisions that utilities have to make, right? So if a pollution rule essentially raises the cost of burning one kind of fuel, in fact, that's the whole point, right? We regulate in order to reduce pollution, that makes it more costly for the firm to pollute. And so the whole point of it is to have them reduce that pollution by making certain changes.

So companies have to figure out what they're going to do, whether they're going to shift to a different kind of fuel, run the plant less often, or perhaps eventually retire it. Those are natural consequences of regulation. It does lead to some economic decision making in the industry. Is that a correct way to understand it, Kevin?

Kevin: Absolutely.

Jody: So I point this out because when the Supreme Court said in the *West Virginia* case, no "generation shifting," it's not as if what they're saying there is, "Well, the agency can't do anything at all, and the existing market for electric power has to stay frozen in place. The EPA can't change anything." Because pollution rules always affect the market. They always affect the industry that's being regulated. So I just want to make sure everybody understands that.

With that said, let me go to Carrie for a moment and ask Carrie, is there anything else about this rule we need to understand? You were talking before about its structure. You said it's aimed at new facilities that might be built new units for coal, natural gas that might be coming online, but also significantly at the older or what we've described as the existing fleet of coal- and natural gas- fired plants. Can you explain a little bit more about that distinction and why it matters in the Clean Air Act and why in particular here it matters that the EPA is regulating not just the new sources, but also the older or existing sources.

Carrie: Yeah. So it's two different parts of the Clean Air Act. It's 111(b) for new sources, and 111(d), as in dog, for existing sources. And states have a much more prominent role in the standards for existing sources. But as EPA explains in the preamble of the regulation, they say, when they modeled what would happen if they regulated just the coal existing plants and the new gas plants, they saw that the large existing gas plants started to emit more over time.

And so they wanted to make sure that they didn't have what they call leakage happening where you started to see those existing gas plants run more. So they said, if you're really going to run over 50% or you're really large, then that's where it's cost-effective and you need to start to control your emissions. Anyone who's below that threshold though is not regulated in this rulemaking.



Jody: So the way to understand it is, EPA had to regulate existing older gas plants to make sure they don't take up a larger share now of production now that the new units are going to be more closely regulated. It's sort of a gap filler.

Carrie: Yes, exactly.

Jay: If I could just hop in there, we've got to cover more of the existing gas fleet. As Carrie said, the current proposal covers units that are larger than 300 megawatts and run more than 50% of the time. But EPA is taking comment on capacities as low as a 100 megawatts, and lowering that capacity factor, how much the plant runs, down to 40%. So this is really important. The current proposal covers just 7% of all gas-fired units, and that accounts for 25% of generation and 29% of CO2 emissions.

If EPA were to finalize a rule covering existing gas plants that are larger than 150 and operating at 40% capacity factor 40% of the time, that would increase to 44% of all units, almost 80% of generation and more than 80% of CO2 emissions. So there really is a big swing that could happen here during the comment period.

Jody: So this is very important, because remember, this is just a proposal. Things can change between a proposed and a final rule. And what we're talking about here is, what scope of units will be covered, how large, how small in terms of their operation, what percentage of greenhouse gas emissions will be covered. That's what the disagreement, the negotiation will be about at this stage. And at what cost. So with cost in mind, let me come back to you, Kevin, and ask you about the utility sector's reaction to this rule. I know you can't speak for any particular company, but can you give us a sense of the range of reactions from the industry to this proposal?

Kevin: There's a broad range of reactions. Some, as they always are, are going to say the sky is falling, that this rule is going to jeopardize reliability of the electricity grid, when that's the sine qua non of an electric utility is to assure that the lights stay on. Others are saying that this just tracks the trends and the projections that they've already baked into their long-term resource plans. Utilities operate at a decadal scope. They look out over 20 and 30 years as to how demand for electricity is going to be met by the resources they have available.

And so what utilities are seeing for the first time in a long while is that demand for electricity is expected to increase quite significantly, expected to more than double over the coming years as we increasingly electrify other sectors like transportation and buildings. And so with that increase in demand in mind, utilities are saying, "How are we going to achieve our emission reduction goals and provide affordable and reliable power?" And so admittedly, a bunch of them are likely hedging and thinking, "I don't know if all of those renewable resources are going to come online on the schedule that we project."

There's supply chain constraints. For storage, there's a supply of critical minerals that is currently controlled largely by China, and the Inflation Reduction Act tries to create domestic and friendly sources for those minerals. But those are big question marks.



And so a lot of utilities are saying, "Maybe I'm going to need those gas resources more than I planned beyond 2035." And so there's a little bit of hesitation among some in the power sector as to whether this rule is truly just following trends or is going to be driving transformation.

Jody:

So Kevin, you alluded to something really important, which we need to bring into the conversation, and that's the power sector dealing with projections, as you said, about increasing demand over time from other things, for example, from electrifying the transportation sector, which of course is another rule that the Environmental Protection Agency is putting out to control emissions from light duty cars and trucks. And so if that federal rule is successful in helping to drive down pollution from the transport sector largely by electrifying that sector, it will increase demand on the grid.

And so in order to be successful at a decarbonization plan, you must also simultaneously green the grid. And so these rules that EPA is issuing are related. And the final piece here, and I'll come back to you, Jay, and to you Kevin, both on this, but both of you have referred to the Inflation Reduction Act and also to the infrastructure bill that passed in 2021. And I just want to be clear about what these pieces of legislation included, because they had very substantial incentives, tax credit, subsidies, and investments that were designed to make it easier to decarbonize these sectors we're talking about, both transportation and electric power.

So for example, there are tax credits for carbon capture and sequestration in the Inflation reduction Act that I think boost the subsidy to something like \$85 a ton of sequestered carbon. And there are incentives for clean hydrogen to be adopted too. And maybe you guys can talk a little bit about how that legislation is related to EPA's regulations, right? So over here, Congress passes these bills, and then we have EPA rules, and how are they connected? Jay, let me start with you to talk about that and maybe Kevin can then chime in.

Jay:

Sure. So in order for EPA to choose a particular system to be the best system and the basis of the emission controls, they have to determine that it's adequately demonstrated and it's cost reasonable. So in 2015, that rule that Carrie alluded to earlier, there is a standard for new coal plants that is based on partial carbon capture and sequestration. And there, they found that CCS was cost reasonable. Back then, that incentive that you just mentioned was \$20. So this isn't a prerequisite to basing a standard on... The Inflation Reduction Act that is, isn't a prerequisite to establishing standards based on CCS, but it certainly helps. It brings the cost down a great deal.

And in the interim time, since that 2015 rule, the costs have declined for carbon capture just through deployment and learnings and things like that.

Jody:

And Kevin, what's your reaction to that? Can you talk a little bit about how the legislation interacts with the rule?

Kevin:

Sure. The Inflation Reduction Act provides once in a generational opportunities for us to truly decarbonize the entire economy. It's truly what we've been waiting for for so



long to have a strong tool that is driving innovation, that's driving emission reduction. And now, these rules are being proposed against the backdrop of the incredible price reductions for some of these technologies that the Inflation Reduction Act provides. As you mentioned, \$85 a ton under 45Q for carbon capture and sequestration is a fairly significant incentive that makes it seem like it might be an economic choice for some of these operators of existing gas plants to say, "Okay, we're going to invest in carbon capture and sequestration and take our emissions to 95% below what they are today because we have these incentives available."

So it dramatically changes the cost calculus. As Jay was alluding to, when EPA decides what's adequately demonstrated, they have to consider cost. And now, we have a package of incentives that makes that cost significantly reduced and makes it something that seems almost economical for utilities to deploy.

Jody:

Carrie, can you speak to this too, because I think it's sometimes hard for people to understand how the incentives that Kevin just described and that Jay also talked about, how they really tie into EPA's mission and its job under the Clean Air Act. The language of the Clean Air Act talks about setting standards based on technologies that have been "Adequately demonstrated." And EPA, under that law, the Clean Air Act, has to consider cost.

So we read a lot about this in the media. We read a lot of accounts that suggest that, for example, carbon capture and sequestration is just extremely expensive and little used, and so it should be completely off the table, that EPA shouldn't consider it when setting standards. And so I guess I wonder about your reaction to that kind of reporting that says, "Well, CCS is just unrealistic." And I guess, given how the market has been moving and evolving and given there are these additional incentives in the legislation, I wonder if you could speak a little bit to the interaction between what Congress has done and what EPA is doing under the Clean Air Act?

Carrie:

Yeah, in the Clean Air Act, I think they're two separate considerations. First, I think EPA has to say, what is adequately demonstrated, what technologies exist, and what emission limit is achievable? When they consider that, they also, one factor in that, is it cost-effective to do that? But it hasn't been cost-effective to widely deploy CCS. Doesn't mean that it's not achievable or adequately demonstrated. The cost hasn't been aligned yet to actually get it widely deployed. But you saw companies even before the IRA and before the standards were even proposed thinking about CCS and thinking about hydrogen and starting to move forward in that.

It has been done before. Companies have just stopped doing it because it wasn't cost-effective. So now that you've got Congress injecting all of this money and incentives in for CCS, that's what's really changed the game for EPA.

Jody:

So I always like to say that the Inflation Reduction Act and the infrastructure bill, and even the CHIPS Act that came afterwards, all of this legislation has an extra bonus to it that people haven't entirely recognized, which is that, in addition to subsidizing and investing in clean energy so that it can help supplant older dirtier energy, the fact that



Congress is helping to drive down the cost of clean energy technologies makes it easier for the EPA to set standards that are ultimately more demanding. Because now, EPA can look and see that the costs of decarbonization have dropped, that the companies can take advantage of these subsidies and incentives and tax credits, and it makes meeting stringent standards more economically achievable. Does that sound about right, the way I'm thinking about it, Jay?

Jay:

I think so. Irrespective of the Inflation Reduction Act, I think you have enough evidence out there that CCS has been adequately demonstrated. In 2015, EPA found that it was adequately demonstrated and cost reasonable. You look back at the seventies and like sulfur scrubbers, right? Then, when they set standards based on sulfur scrubbers, there was one vendor out there for the technology, and there were only three in operation. Now, we have 13 vendors of post combustion CCS, and we have them in the power sector, we have it installed in the power sector, we have it in multiple other industries.

So I think the Inflation Reduction Act changes the baseline. It changes the world we're operating in. And I think EPA is keying to the realities of that. But I do think that CCS has been adequately demonstrated and cost reasonable for nearly a decade here under the Clean Air Act, and is even more so now. Technology doesn't need to be on every street corner in order to be the basis of standards, then of course the Clean Air Act wouldn't be necessary if folks just did it by themselves. But the regulations are necessary to push that technology forward.

Jody:

Kevin, let me come to you now for a reaction about the reporting we see claiming CCS is really extraordinarily expensive and far into the future. Is that right, or is Jay right about what he said, that it's actually been adequately demonstrated for some time? And is Carrie right about saying that the costs already have been coming down? What's your take on this?

Kevin:

My reaction is to agree largely with Jay, that EPA can set standards. The D.C. Circuit has held for 50 years that EPA can set and determine what is adequately demonstrated by looking out into the future and projecting the availability of technologies. They say that they can't crystal ball gaze, they can't engage in just a purely theoretical exercise, but they can look out and they can say, "Hey, we've got these new incentives, and we've got the Infrastructure Investment and Jobs Act that is creating direct air capture hubs and creating hydrogen hubs. We've got the Inflation Reduction Act, which is providing the 45Q carbon capture and sequestration benefit of \$85 a ton. We've got the green hydrogen credit under 45V. And we are projecting that these strong incentives and these grant programs under the infrastructure law are really going to cause this technology to be rapidly deployed over the next few years."

And that's the timeframe upon which they've set these standards. They've looked out and they said, "Hey, we can look into the future and we can say that we see the industry embracing these technologies and putting that infrastructure out there, and



we therefore can base the standards upon that technology and say that it's going to be available and commercially deployed at that time."

Jody: So let's turn now to think about the legal vulnerabilities of the proposal if it were finalized in something close to this form. If what we're saying is generally correct that the EPA has set standards appropriately following the requirements of the Clean Air Act, considering all the factors that the law requires the EPA to consider, showing that the technologies are adequately demonstrated and so on as we've been discussing, if all that's true, where is the legal vulnerability here? I mean, is this a slam dunk kind of proposal that should do very well, survive judicial review easily? Or is it going to be challenging? Can you help us understand that, Kevin?

Kevin: Well, the narrative that I've heard repeated over and over again from folks who aren't really examining what the Supreme Court said is, the Supreme Court just said EPA, "You can't decide on the appropriate amount of coal-fired generation and shut down coal-fired power plants. And that's exactly what this rule does. It requires coal-fired power plants to shut down." And that's a very facile understanding of what limitations were imposed upon EPA by the Supreme Court. This is a very traditional rule. A scrubber just like those used to scrub out sulfur dioxide is like a scrubber that could be used to scrub out carbon dioxide from a flue gas. And so this embraces the very traditional approach that EPA has used for over a half century to regulate power sector emissions.

Now, where the potential legal vulnerability is, is what is adequately demonstrated. That is usually a technical exercise that even putting questions about *Loper Bright* and *Chevron* aside, an agency is usually entitled to make technical judgements about the feasibility of emissions control, EPA is an expert at that, about the cost of that emissions control. And the D.C. Circuit has held for 50 years that adequately demonstrated means you can look out into the future. And so where there's some legal vulnerability in question is, will the Supreme Court embrace that view? It's never been tested in the Supreme Court. They've never decided or affirmed a D.C. Circuit case that says adequately demonstrated means you can look out into the future about the availability of technology.

And so some folks are saying, this is not my view, but some are saying that this Court is very likely to shut down EPA from doing a transformative rule at all. And this rule is too transformative because it tries to use technologies that aren't readily deployed today. And so I think that's what we're ultimately thinking will be the issue that is litigated in the D.C. Circuit, and I hope not the Supreme Court.

Jody: So Jay, do you pretty much agree with that assessment that the risk here is that the Supreme Court will not, in fact, embrace 50 years of D.C. Circuit precedent?

Jay: Well, as I was listening to Kevin, I was thinking maybe he stole my notes before this podcast. You can tell we have been working on these sort of rules in coalition for 10 years. But the final rule, it's going to be challenged in the D.C. Circuit because they all are. And there will be arguments, as Kevin said, over whether this is adequately



demonstrated and cost reasonable. EPA in the past has based adequate demonstration findings on much slimmer records than we have here and on much higher costs. And those things have been upheld.

This is about that weedy record-based technical questions. It's not about statutory interpretation, it's about reasonable decision making. Where, as Kevin said, the agency should get more deference. These are the types of cases that the D.C. Circuit deals with every day. The Supreme Court usually takes up those big legal questions, not technical questions, as here, is the record strong enough to support emission limits for an increasingly small portion of the power fleet that's based on carbon scrubbers that essentially pay for themselves?

I think it's important to remember too that the portion of the fleet that has a CCS-based standard is pretty small compared to prior rulemakings. But who knows? The Supreme Court tends to surprise me.

Jody:

Well, I think it's fair to say, many of us are nervous about the Supreme Court when it comes to major rules that have any kind of significant economic impact. And clean air rules always do. They always have a significant economic impact. They tend to historically have high costs, but also very high benefits. But if everything the EPA does in this realm, even technical decisions about where technology is and whether it's being deployed or not, and whether it's been demonstrated and whether it's affordable, if those kinds of decisions are considered major in the sense of the major questions doctrine, meaning they're going to require explicit congressional authority, then that's the end of any meaningful notion of deference to agencies.

Even when they're operating squarely in their lane, pursuing their core mission, I think there is concern about how far will the Supreme Court go? Will it really go that far to make it impossible for agencies to make decisions that statutes like the Clean Air Act require the agency to make on a regular basis? It was designed as a technology forcing statute, and that is how it's been understood and interpreted by decades of D.C. Circuit jurisprudence. And we'll just have to see whether the Supreme Court will disrupt it.

Carrie, let me get your voice here on this. Of course, we don't know what will happen. I've talked now about my anxiety some. But what's your sense of the legal vulnerability of the proposal? And how does your take on it match up with the reporting you're reading, the narratives you're reading in the press coverage of the rule?

Carrie:

Yeah. I agree with what Jay and Kevin said. I think there's a lot of people saying, of course the Court's going to strike this down. But we're at a point in the electric sector where the transition is happening, and the debate is about the timing and the pace, not whether we're going to significant emission reduction. So if the debate is about timing and pace, that it should be a technical discussion and a technical rulemaking, it's not legal precedent that should be attracted to the Supreme Court. But it's hard to predict what they will decide to take up. But it should be a rule that we're fighting



about whether should it be 2032, 35, 38, how much hydrogen, how do you qualify that hydrogen? That's not the type of case that normally we would see the Supreme Court take up.

Jody:

What concerns me here is the reporting, as Kevin suggested, can be quite simplistic... overly so. To me, this is a complicated rule. I mean, the audience can hear how long we're taking to understand the basics of the proposal, even understanding different types of generation, like gas versus coal and the set of graduated requirements EPA is putting in place here. It basically works in a very intuitive way, right? If you're going to operate your units for a really long time and you have no plans to retire and you expect to run them a lot, then you are going to have to do more to control your emissions.

You just do not have a legal entitlement in perpetuity as a coal or natural gas plant to run forever and never control your pollution. That is a deeply intuitive, sensible position, not to mention legally defensible under the Clean Air Act. And it's important to understand that, in this sector, these older units have never been controlled, and the pollutants are legally pollutants under the Clean Air Act, which had been found to pose endangerment to health and welfare. So in a sense, one reaction to the rule at the most basic level is, isn't this very reasonable of EPA to put in place a graduated set of requirements with lots of lead time for the industry, giving utilities years and years to decide what to do?

I mean, Kevin, am I being too friendly to the EPA in my analysis here, or am I being too naive?

Kevin:

I don't think you're being too friendly to EPA or naive with that characterization of this proposal. The proposal really does, as you suggest, say, "Hey, if you're going to be operating a lot in the future and for a long time, you need to reduce your emissions." Now, many would say that the most efficient way to reduce emissions would've been to impose an economy-wide price on emissions. We don't have that. What we have instead is the Inflation Reduction Act, which provides these incentives to reduce emissions. And now those are available.

And EPA is leveraging that to be able to say, "These are cost-effective, adequately demonstrated emission technologies that you should be adopting because we believe they make sense to do so, and they will help reduce emissions not only in the power sector, but throughout the economy as other sectors of the economy are increasingly electrified."

Jody:

Let me switch gears now and ask all of you about other things we have read in the coverage of the proposal, including concerns about reliability. Kevin, you've mentioned reliability already, and that's a preoccupation of many people who are knowledgeable about the electric power sector. And of course, we need reliable energy. Everybody wants to make sure the lights stay on. So, is there something to this concern about reliability? And when we hear politicians say the system will be



unreliable if this proposal goes forward, how realistic are those concerns? Actually, Jay, let me turn to you first, and then I'll jump back to Kevin.

Jay: Sure. I think, with respect to this rulemaking, I don't think there are big reliability concerns. I think EPA has looked at it, has worked with DOE to ensure that, but with the long lead times and the incremental impact of this rule, I don't think there's an issue here. I do think there is a great transition happening outside of these rules that certainly needs certain adjustments in order to ensure reliability, as we have an increasingly renewable grid and things are shifting, I think the grid needs to shift along with it.

Jody: But when you say it's not EPA's jurisdiction, I mean, it's interesting, the grids, they're not really something EPA regulates. They fall under the jurisdiction of FERC to some extent, and the states to another extent. We don't have time on our podcast to talk about the way the Federal Power Act divides authority between the Federal Energy Regulatory Commission and the states. But Kevin, you're an expert on this. You represent the utilities, and you can speak to these other issues that will affect the ability of the power plants to comply, right?

There are concerns here that fall outside of EPA's remit, outside of their jurisdiction, that have to do with the grid's resilience and have to do with the need to approve new infrastructure state by state. States have to build new transmission lines, et cetera. And that whole set of issues, the things we need to do to fortify the grid, the things we need to do to modernize the grid, that doesn't fall to EPA. So it's a pollution regulator, it sets pollution standards. But Kevin, can you give us a sense of those challenges and how this proposal connects to them?

Kevin: Well, first, reliability is a real concern. On last September 7th, we nearly had the lights go out here in California. And the only thing that kept them on, first of all, was that the governor's office was working for two years to keep deploying resources that would avoid any reliability related concern. But then the California independent system operator, the grid operator, used the Amber Alert system to send out an Amber Alert to everyone to say please reduce your consumption of power because we are nearing an emergency. That's not the way the grid should be operated.

And utilities have justifiable fear that, trying to rapidly deploy new resources while demand for electricity is increasing, could pose strains on the grid. And it's to no one's benefit to see the lights go out. The governor was so laser focused on making sure that didn't happen. Why? Because if it happened, then California's left coast ambition to decarbonize its power sector, to move to electric vehicles would be the laughing stock of the nation and would be a Republican talking point about the problems with deploying clean energy.

And so that didn't happen, thankfully. It got 117 degrees here where I am that day. And that's a strain on the grid that we couldn't have anticipated prior to climate change. I mean, these types of impacts are things that I expected would be happening when I was retired, not while I'm still practicing. And so we're seeing the



pace of strain on the grid just increasing even more than we thought it would've been 5 or 10 years ago. And so when utilities think about their resources, they're thinking about all of these dynamics, about the change in costs, about the increase in temperatures, about the Texas winter storm that incapacitated many resources.

And so, it's natural for utilities and grid operators to err on the side of saying, "Hey, I want a hedge. I want to make sure that my resources are available." So that means they want to keep these resources around. Well, what this rule is saying is there's no such thing as a free option.

Jody:

But I think what we're saying here is, in order to accomplish a clean energy transition of the scale and scope we're talking about, we don't just need this proposal, a rule to cut carbon pollution from the power sector. I mean, yes, that's one part of it. But we also need to modernize the grid so that it can absorb and operate with much more variable resources like wind and solar power. And that means we also need states to site and approve new infrastructure and fund it. And we need decisions locally to allow utilities to adopt and get reimbursed for big capital investments that they will have to make, in things like CCS, for example.

So in other words, there's a lot of state level activity that needs to come, a lot of regulatory activity that needs to happen at the level of the state public utility commissions. It doesn't all fall to EPA. EPA is a pollution regulator, a federal pollution regulator. But the rest of transition is going to need help from the states, from FERC, which sets up the market rules for wholesale power. I guess, what I'm trying to say is, there are a lot of players in the system. And the power sector is complex. And EPA doesn't have all the control.

So I wanted to mention it because we tend to get laser focused on just what EPA is doing, but there are an awful lot of other contributors to our electricity system. Carrie, is that a fair way to describe it?

Carrie:

I think it's exactly right. I also think the court in *West Virginia* told EPA to stay in its lane. And so they have to be pollution regulators. It doesn't make the challenge that Kevin's describing any easier, but I think it's going to require all these different federal agencies, state actors, utilities working together to figure out solutions. And then I think a lot of stakeholders are going to be providing feedback to EPA about what happens if what we hope happens doesn't actually come to the grid. And so if there's a transmission line that needs to get built and it doesn't get built in the right timeline, what flexibilities does EPA have to address that specific case?

But here, EPA is just starting the process to figure out what is the standards that are consistent with what they can set under the Clean Air Act.

Jody:

And Jay, let me ask you about this. The EPA has provided a lot of flexibility for the states to come and say, "Look, the units in our state can't meet this standard for this or that reason. We can't co-fire with green hydrogen because we're not located near a pipeline so we can't get access to the fuel," or some other reason. And the states will



then come to the table and come back with a plan for EPA. And so I just want to understand this process. After the EPA sets the emissions guidelines, it falls to the states to come up with a plan to comply for the units in their jurisdiction.

And I just want to understand how that works. Is there flexibility in that system with the states coming to EPA with plans where they can say, "Look, we need an exception, we can't meet the standards, we need some accommodation." Jay, am I describing this right?

Jay: Yeah. I mean that's exactly right. The states have two years to write plans once this is finalized. So we're already at 2026 with just doing state plans. And they have the flexibility to consider the remaining useful life of the plant, how much longer it's going to run and other factors. EPA has put a lot of guardrails into the proposal to ensure that the states are actually documenting where there are issues, maybe building on a pipeline or getting a permit or something along those lines. They've also built in a lot of time to accommodate that sort of build out. So there is flexibility, but I do think the states will have to come with receipts if they are to get that flexibility.

Jody: Kevin, I also wanted to get your sense of how you see things moving going forward. You're representing some companies here and you probably expect to be deeply involved in litigation over the proposal once it's final. But can you lay out for us what litigation you anticipate and the timeline on which you expect to see that evolve?

Kevin: EPA has made clear that they want to finalize this rule in June of 2024, and that's for a number of reasons as you alluded to, both the election, but also a worry about a CRA coming from Congress.

Jody: Wait. Let me make sure the audience knows what you mean by the CRA. You're talking about the Congressional Review Act, right? Which would allow a future Congress to basically reach back some months and essentially disapprove a rule that EPA had already published.

Kevin: Yes. That could mean the Congress could register some disapproval of the rule and try to keep EPA from doing something like it. So EPA is battling against that deadline. That's a very tight deadline for EPA to finalize a rule that hasn't even appeared in the Federal Register yet. And then of course, once it appears within the Federal Register, people can sue in the D.C. Circuit, and there will be litigation there. Usually, we put a timeframe for litigation in the D.C. Circuit. Upon 12 to 18 months, there might be stay motions filed.

Typically, we would think that because of the long lead time provided here, those stay motions would be very weak because no one can say they are imminently harmed. But hey, back in the Clean Power Plan days, people filed lawsuits challenging the proposed rule saying this would require such radical changes to the structure of the utility sector that they needed relief now. And so I wouldn't anticipate stay motions, but they could be filed, we say 12 to 18 months in the D.C. Circuit. And then assuming we get a decision from the D.C. Circuit, as I anticipate, adhering to their



precedent saying that this is a very traditional rule, EPA stayed within its lane, they assessed the cost, they assessed what was adequately demonstrated here, that's proven.

Then we would anticipate that there might be petitions for cert to the Supreme Court. And the timing there, gosh, we're already post-2024 election, we're into the next administration.

Jody: So Jay, before we close, let me just turn to you for final thoughts on EPA's proposal. Anything we may not have covered that you think is important.

Jay: Sure. I mean, I think it really is astonishing the moment we find ourselves in. There's never been a time that such an effective pollution control has been available during such a pollution crisis at such little cost. EPA is on solid ground basing standards on carbon capture. And history tells us that deployment can happen rapidly. Technology costs will decline further, and most importantly, climate pollution won't reach the atmosphere.

Jody: I think you're right. I think there's a lot going on right now. And the proposal also feeds into a very hot political narrative. And at the center of that narrative, of course, is Joe Manchin. So I'm really watching not just for the legal developments, but also for the political developments. I mean, you see Manchin has already announced he'll oppose every nominee for any post related to climate change because of this proposal. And so there are a lot of political headwinds in addition to some legal headwinds. Carrie, do you have anything in closing to say about that or is there anything else we may not have covered that you think is important?

Carrie: No. I think it's important to put this rule in context of the other rules. You mentioned the car rules. So to the extent we're electrifying the transportation fleet, it's critical that the electric sector is decarbonized. I think the methane rule is the other one that I'd want to mention where EPA is really trying to finalize a rule by this November that will reduce emissions of methane emissions. And that's important for the electric sector because the natural gas power plants are the largest consumers of natural gas in the US. So to the extent that the gas is cleaner, and we're continuing to see gas be used for all the reasons we've discussed, that's one other component that I think is critical for all these pieces to fit together.

Jody: That is a great point. EPA has got three major climate rules now being proposed. The methane rule Carrie just talked about, which is important to make sure that if you're going to keep using natural gas, it's cleaner to do that. The power sector rule, which we've been talking about here, which should help make the grids greener. And of course, the transportation sector rule, which is, as we've noted before, trying to drive electrification, which of course puts pressure back on the grid to continue to become cleaner. So there's all of this happening at the same time and they work together.

If you're trying to decarbonize major sectors of the US economy and deliver on the US commitment to the Paris Agreement to reduce our GHGs up to 52%, below 2005



levels by 2030, you need all three of these rules and you need them implemented, and you need the industries in these sectors, the oil and gas industry, which is subject to the methane rule, the auto industry is subject to the transportation rules, and the power sector, which is subject, of course, to this rule, you need them all moving in the direction of decarbonization. Kevin, before we wind up here, let me turn to you for final thoughts.

Kevin:

Well, Jody, one thing I'll say is that Congress has spoken clearly in the Inflation Reduction Act. And there, they've made clear that they expect this transformation to happen. And there's a little notice provision there. Ted Cruz noticed it when it was put out, but there's a new section 135 of the Clean Air Act that says EPA is to assess the changes in domestic electricity and generation and use that are expected to occur over the timeframe when these incentives are rolled out, and to use the existing authorities under the Clean Air Act to ensure those reductions occur.

And so we are in a different world now that the Inflation Reduction Act has been passed. And I'm hopeful that this court would stay their hand and affirm that EPA stayed in its lane here, they're a pollution regulator, and what they're doing is traditional and not as transformative or radical as they interpreted the Clean Power Plan to be.

Jody:

But of course, every step of the way, we expect litigation. We've come now to expect it certainly for every major EPA rule, and we expect to face a Supreme Court that has shown itself to be increasingly skeptical, if not outright hostile, to major regulations and seems less and less interested in giving any deference to the administrative state and embracing new doctrines like the major questions doctrines to say that, for issues of major political and economic salience, we expect to see Congress speak more clearly to the agency's authority. That puts enormous pressure on agencies and makes litigation always, always risky.

So, I hate to sound depressing. I certainly don't want to close in a depressing note. But I point out that there's a long road ahead for this proposal even once final. Kevin and Jay and Carrie, you've all been terrific. I want to thank all of you for joining us. Kevin and Jay, you've done several podcasts now with CleanLaw. I really appreciate you lending us your expertise. Thank you, Kevin, so much for being here.

Kevin:

My pleasure.

Jody:

And Carrie, as always, thank you for all the work you do running our program so superbly, and for being deeply involved in helping to make these rules stronger and more defensible. And Jay, thank you so much for all the work you do at the Clean Air Task Force and on behalf of the NGO community. Like Kevin, you've been a regular on CleanLaw, and we'll have you back in the future. Thank you for being here.

Jay:

Thanks. Looking forward to it.

Jody:

We'll be following this story and update you. See you next time.



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