

The Climate Show – Episode 36

Transcript

00:00:04 Linnéa Nordlander

Hi, and welcome to the Climate Show, a podcast that explores the law and politics of climate change. This podcast is brought to you by the University of Copenhagen.

00:00:16 Beatriz Martinez Romera

Hi, we are Beatriz Martinez,

00:00:18 Linnéa Nordlander

And Linnéa Nordlander.

00:00:19 Beatriz Martinez Romera

And we are your host at the Climate Show.

00:00:26 Linnéa Nordlander

Welcome back to the Climate Show. Today we're talking about green hydrogen. This could be a real game changer, a way to decarbonize heavy industry, shipping and other hard to abate sectors while reshaping our energy systems in Denmark, the EU and globally.

00:00:38 Beatriz Martinez Romera

Today we're not just asking, can we do this technically, but how can we govern it? Who benefits, who carries the risk, and how do people on the ground react when these big projects arrive in their communities?

00:00:49 Linnéa Nordlander

Green hydrogen raises complex questions of law and governance, from EU and international regulation to infrastructure and markets, and equally complex questions about democratic engagement, legitimacy and social license in the places where production is planned.

00:01:03 Beatriz Martinez Romera

To help us unpack all of this, we invited Dr. Meng Zhang, postdoctoral researcher at CLIMA, working on EU and international hydrogen law and governance, and Dr. Simon Lex from the Department of Anthropology at the University of Copenhagen, who specializes in democratic engagement. Enjoy the show.

00:01:26 Beatriz Martinez Romera

We are joined today by Dr. Meng Zhang. He is a good colleague working at CLIMA with us. He is a scholar that focuses on the governance, law and policy of green hydrogen in Denmark, the EU and internationally.

00:01:39 Beatriz Martinez Romera

And Associate Professor Simon Lex, who is also the Deputy Head of the Anthropology Department at the University of Copenhagen, and he specializes in democratic engagement, public participation and cross-sector collaboration in green energy transitions. Simon, Meng, welcome to the Climate Show.

00:01:56 Meng Zhang

Thank you very much.

00:01:57 Simon Westergaard Lex

Thank you so much.

00:01:59 Beatriz Martinez Romera

I would like to start by asking you, Meng, what green hydrogen is and why is it so relevant for the energy transition?

00:02:08 Meng Zhang

Thank you, Bea, for the introduction and the question, what is green hydrogen? That's definitely a very good starting point question. We know that everyone likes hydrogen, so there's no problem with hydrogen. But the problem is how hydrogen is produced.

00:02:22 Meng Zhang

Due to the production process of hydrogen and its associated environmental impact, we know that hydrogen is classified in what we so-called the color-coding spectrum. There are green hydrogens, blue hydrogens, pink hydrogens, and green hydrogens.

00:02:40 Meng Zhang

So long story short, green hydrogen is produced through electrolysis of water and using renewable electricity. So, green hydrogen is our favorite child in the hydrogen family. And why green hydrogen and why now? We know now at this moment we are recording the Climate Show. But at this moment, where is the biggest climate show happening? In Brazil, the COP30.

00:03:13 Meng Zhang

So already warned many times by the COPs, by IPCC reports that the window opportunity for us to make some meaningful actions to keep the climate goals from the Paris Agreement to within reach is closing. But to be very honest, if I can say something, it's like we are on the bus without the brakes rushing to the cliff.

00:03:40 Meng Zhang

But do you know what we are doing now? We are still arguing about how we are going to get there. So, I would say what's more important is to stop looking for unicorns and try to process all the renewable solutions in hand.

00:03:56 Meng Zhang

And of course, green hydrogen should be definitely included. And why? Because of the urgency. We don't have that much time left. And it's also because of the fee. Because green hydrogen is really, really important to help some like hard to abate sectors and energy incentive sectors to achieve their climate targets.

00:04:22 Beatriz Martinez Romera

So, I see green hydrogen is a very promising avenue in the energy transition. And I understand the particularly special moment that we have for accelerating hydrogen deployment. Why is it this relevant in Denmark and in the EU?

00:04:40 Meng Zhang

Well, you know, I said how important green hydrogen is, but please don't get me wrong. I'm not saying green hydrogen is a superhero who can save us from the climate urgency overnight.

00:04:53 Meng Zhang

But I would say green hydrogen is definitely a game changer who has proven itself not just only a technical miracle, but a real happening and here in Denmark, in Europe and any other corners of the world to really like to like how to say to speed up the decarbonization process. And we can see lots of like the projects are happening now here in Denmark especially targeting those hard to abate sectors like steel, chemicals and shipping.

00:05:28 Beatriz Martinez Romera

The EU has set ambitious targets for producing and importing green hydrogen by 2030. And it is pioneering a governance framework that includes not only the third renewable energy directive, the hydrogen and gas market package, and even also we can consider the carbon border adjustment mechanism.

00:05:46 Beatriz Martinez Romera

From your research, from your work, how do you assess the progress and limitations of these legal and policy efforts? How do you see the position of the EU in the international hydrogen landscape?

00:05:58 Meng Zhang

Indeed, Bea, as you just mentioned, the EU has set a very ambitious hydrogen target. If you look at the Repower EU plan, which we know that is a very important cornerstone piece of the entire EU energy policy adopted in 2022.

00:06:13 Meng Zhang

10 million tons of renewable hydrogen will be produced within the EU, and another 10 million tons of hydrogen, renewable hydrogen, should be imported from the third country by 2030. But we know that no matter how ambitious a target it is, at the end of the day, the target itself doesn't decarbonize.

00:06:35 Meng Zhang

But actionable rules do. So that's the reason why we see the EU has been turning the policy ambition to legal framework in order to build an EU internal hydrogen framework. Specifically, we see in 2023 that the two important delegated acts that's very related to renewable hydrogen have been adopted by the EU.

00:07:03 Meng Zhang

So those two delegate acts set up some important principles. If you meet those principles, then your hydrogen products or hydrogen fuel-based products can be called renewable hydrogen. Those important principles are additionality, temporal, and geographical correlation. I will not go to the details of the very complicated legal principles.

00:07:27 Meng Zhang

But what's more important here I would like to highlight is that the main purpose of the EU principle for renewable hydrogen is to make sure the production of green hydrogen should go hand in hand with the production of renewable electricity.

00:07:45 Meng Zhang

So, and also another message has been sent to the from the EU is from the EU level. The entire EU policy and framework is centered around renewable, the concept called renewable hydrogen. And so, which means we can see the EU is trying to turn that color coding-based spectrum of hydrogen terminology into a legal definition that is mostly based on carbon intensity.

00:08:14 Meng Zhang

So, at the end, as shown in the EU experiences, of course, the tech story matters. But the governor's story, it is what turns pilots into pipelines. So, the legal certainties provided from the legal framework can really encourage the civil society and can build this kind of trust from the investors and the public to pay more attention or to put more efforts on the deployment of green hydrogen in Europe.

00:08:48 Beatriz Martinez Romera

Yes, and that kind of lead us to the next question, which is for you, Simon. Large-scale renewable projects, whether it's green hydrogen or renewable hydrogen facilities, offshore wind or integrated energy parks, require not just technical and legal readiness, as Meng was saying, but also democratic legitimacy and social license.

00:09:08 Beatriz Martinez Romera

From your fieldwork, from your expertise, and the interdisciplinary work that we're doing in our project, RIGHydro and other projects that you have such as that. What are the key lessons that you gather on ensuring meaningful public engagement and cross-sector collaboration in the green energy transition in Denmark?

00:09:29 Simon Westergaard Lex

That's a good question. I think first of all, it's important that we take people seriously. So that we actually see and understand that it's not only about the technical stuff or the governance, but it's also about people's needs. It's about their concerns.

00:09:49 Simon Westergaard Lex

And I think the question would also be how to take people seriously. And what we've done, we have traveled to the local communities where these different projects, where these, both within renewable energy but also within green hydrogen, is going to be deployed or implemented, and talk to people to enter into a dialogue with them.

00:10:13 Simon Westergaard Lex

And this is, of course, from a research perspective, but I think the local governance, the developers, the private industry, are also doing something similar. So, you need to

engage in a dialogue in order to these kinds of collaborations in order to also hear the people, not only in, one public hearing, but actually to engage with these people in a dialogue over time. And also taking seriously the concerns that we see among these local communities.

00:10:47 Simon Westergaard Lex

And maybe I could just identify some of the concerns that we see in our data. We've done a lot of, conducted a lot of interviews as mentioned. And first of all, we see how people, they perceive the introduction of, for instance, solar panel parks or on land, right? As unfair. So, there's an unfair distribution of the values, of the goods and bads that are connected, linked to these projects.

00:11:22 Simon Westergaard Lex

For instance, that they see that they have, they're noisy or they're dangerous, like a PTX plant could maybe explode or something like that, or fall in, or decline in the house prices, environmental harms, the tranquility, people lose the tranquility of the area. And they do not feel that they get enough like compensation of value for these losses.

00:11:47 Simon Westergaard Lex

So, they feel that this unfair distribution of values. Also, because there's a lot of like value creation in these profits and green energy. And we hear from these residents that they feel that these values are channelized out of the local communities. So, there's no local value, there is local value creation, but they feel it's not enough. So that's a very important concern and you need to balance these kinds of distributions of the values.

00:12:22 Simon Westergaard Lex

And the second headline is about the process. So, the dialogue that I've mentioned before, the involvement, the engagement, we hear that they feel that these kinds of project developments are not transparent, that there's no openness, that they have no, they have some kind of involvement but no influence in the decision making. They feel that they are run over by actors coming in from outside.

00:12:52 Simon Westergaard Lex

That might be a private company, developer, or maybe also the municipality. In Denmark, it's the municipality, the local governance, the regional governance, who's responsible for the deployment of these kinds of green energy facilities.

00:13:09 Simon Westergaard Lex

So, there's this local project, a perception of an unacceptable and not a fair process connected to concrete projects. But also interestingly, on a national scale, we see that some of these local communities where they have already introduced a lot of renewable energy, solar panel parks, for instance, they can see on a national scale that other municipalities or cities or, for instance, the Copenhagen, the capital, that they have not, of course, it's different from the urban areas, but also some of the municipalities in the northern part of Zealand, where that's what we hear at least, there's a lot of powerful people living and there's not a lot of solar panel parks there.

00:13:56 Simon Westergaard Lex

So, what we also hear, there's also like this, again, perceived unfair distribution of the burdens across the municipalities and the different regions. And the last, just to, on the concern part, people also feel that there's a lack of recognition, a lack of respect for their history, identity. For instance, these areas are also, you know, traditional with the agriculture.

00:14:25 Simon Westergaard Lex

And yes, we know that there's a lot of difficulties in that, but they feel that there's a lack of respect for their identity, for, and a lack of trust. So, you need, you really need, again, back to the dialogue and these kinds of ongoing collaborations across the sectors, including the municipalities the developers and the civil society.

00:14:52 Beatriz Martinez Romera

And the role of law here becomes also like relevant in a sense, but also difficult on addressing these concerns, I guess. And if you could prioritize one action in Denmark at the EU level or an internationally, what would you choose in order to accelerate the deployment of green hydrogen and other renewables? Taking also into account these concerns that you mentioned, what could it be? Meng, do you want to go first?

00:15:23 Meng Zhang

Yeah, I would say yes, as Simon just highlighted, no matter how perfect the legal framework that we build here, at the end of the day, the public's likes and dislikes can make or break all the governance efforts to speed up the deployment of green hydrogens in the EU, in Denmark and globally.

00:15:46 Meng Zhang

And based on my observation, I would say at this moment, the deployment of green hydrogen in Denmark and in the EU is kind of exposed to a cedar style pressure. So, from the above, from the very ambitious EU hydrogen target, from below, from the mismatching public awareness and acceptance.

00:16:10 Meng Zhang

I think the EU policy and lawmakers, they kind of realize that. That's the reason why you can see some efforts from them. They are trying to design the EU hydrogen market in the way of what we call the customer centered.

00:16:27 Meng Zhang

But from another part, we can also say that, you know, maybe Brussels, they really think that they already provide the perfect law for the market, for the people. But we see this kind of gap, what we call the gap between law and public feelings.

00:16:46 Meng Zhang

And what's more important is some concrete mechanisms and measures to facilitate the public participation at the member states' practice level and more importantly, at the grassroots level community. For example, we might have some more concrete measures and mechanisms like building participation, some co-ownership, and also a benefit sharing mechanism.

00:17:13 Meng Zhang

So, what we really need to do is not just to make the voice from the public to be heard, but to what extent we can really take those public opinions into consideration during

the policy making process. And I would say smart rules, real participation, that's how green hydrogen moves from plant to practice.

00:17:37 Simon Westergaard Lex

I think you have a good point also, Meng, on the co-ownership part. We also see that in our data, that a lot of people also are positive if they have some kind of legal, administrative, financial, economic co-ownership, you can see. So, when you see the wind turbine, it's not a burden, but it's actually also something that creates value in the local community for you as an individual resident living there.

00:18:06 Simon Westergaard Lex

And maybe also on a district development in a sense. So, some of these local communities are also under pressure. So how can you also not see it only in like an individual value for the residents living there, but actually for the whole community to evolve and flourish?

00:18:25 Meng Zhang

We need that kind of very genuine engagement and not just like a box-taking activities.

00:18:31 Simon Westergaard Lex

Agree.

00:18:32 Simon Westergaard Lex

And I think the co-ownership is important. There are also some risks, but let's not talk about them now. But I think another thing that we see works, because now I mentioned all the concerns and the reasons and rationals for why people are resisting.

00:18:51 Simon Westergaard Lex

But there are also people who are very much already engaged in this, like with the co-ownership as mentioned before, but also who would like to also have this sense of ownership. So, to take this ownership into not only their own hands, but actually to be part of the green energy transition and take responsible for it.

00:19:13 Simon Westergaard Lex

But here it's super important with the local governance. So, and here one could talk about these kinds of collaborative and multi-purpose planning, models that we see in some of the municipalities.

00:19:27 Simon Westergaard Lex

There's one municipality, for instance, in the northern part of Jutland called Thisted, and they have made a new strategy, and they have also allocated resources to develop this strategy to develop a new and more transparent and inclusive process of the local communities.

00:19:44 Simon Westergaard Lex

So, they have started by dividing the different areas in the municipalities into negative, neutral and positive energy zones. So, you okay, where can we position or situate these parks? And then they have also developed five criteria for the energy projects. So, when these applications are coming in from, for instance, the developers, there are some really, clear criteria's, okay, what do we want here?

00:20:13 Simon Westergaard Lex

And that's, as we mentioned before, one of these criteria is co-ownership. There's another one on coming back to the fairness of this, the just transition, fair compensation. And another thing which is important is the multifunctional.

00:20:28 Simon Westergaard Lex

So, this is about, we talk about energy, right? Green energy, but it's also about the development of the landscapes. So, what about within the green transition? The nature, the forest, and also the cultural part on recreative areas.

00:20:44 Simon Westergaard Lex

So, they also have a criteria on more nature, forest, and recreative areas. And they have respect for existing landscape and broad local support. So, they've introduced these criteria, which I think are super important.

00:20:57 Simon Westergaard Lex

And something which I think is very innovative is that they have established these local so-called energy associations where they try to open a space where people can, you know, also discuss back to the dialogue, discuss these kinds. This is also changing. So, it's difficult. There are some things that, you know, it's not, it's also tough, the green transition. We need to do different things that we maybe do not like or maybe it's not that comfortable.

00:21:30 Simon Westergaard Lex

So, but to open these associations where you can bring your concern into a dialogue with your neighbors or maybe somebody from the municipality, and where you can also develop some kind of ideas or designs for how we actually want to develop, design our landscapes, our local communities within the green transition.

00:21:51 Simon Westergaard Lex

Of course, focusing on the green energy, the deployment of renewable energy, on green hydrogen, but also on the other parameters that I mentioned before. So actually, giving people a space where they can have these conversations, ongoing dialogue, and also give them a say and also some power to actually implement this.

00:22:15 Simon Westergaard Lex

And this, it's also, I think, important to say that I think this needs to be governed by the local municipalities because it's also a lot of work. So, there's also this fatigue, engagement, fatigue among civil societies, because it's, they're not being paid for doing this. We need to take that into consideration as well.

00:22:40 Simon Westergaard Lex

It needs to be the municipality and not the state, because the state is, oops, it's too far away. You need to have some kind of local knowledge about both the communities who's living there, the local cultures, the landscapes, etc.

00:23:00 Simon Westergaard Lex

And that's why it needs to be, and it's not the responsibility of the private sector. They will also engage in these dialogues. But from the beginning, you need to establish these kinds of planning processes from the municipality and then involve the citizens and then the business. And right now, it's the other way around, right?

00:23:22 Simon Westergaard Lex

And other examples, and we talk also about this interdisciplinary, cross-sectoral collaboration. We see some really nice examples in Denmark about this more multipurpose or multifunctional planning, where developers, the private developers, civil society, interest groups, citizens, residents, public authorities, are working together.

00:23:48 Simon Westergaard Lex

So, the co-design, the parks, again, back to not only on climate, but also on nature, culture, identity, landscape, the history, developing, you know, the whole package. And that's green transition of our society.

00:24:04 Beatriz Martinez Romera

Really fascinating and I'm so happy that we are collaborating together in this research project because we're really learning so much as lawyers of the work that you're doing on the ground with your views and your work.

00:24:19 Beatriz Martinez Romera

I would like to ask you before we wrap up, if there is anything else that we haven't touched upon and that you would like to raise.

00:24:27 Meng Zhang

Well, for my part, I would say we are with most of focus on Denmark's and the EU's deployment of green hydrogen, but I would say a sustainable Danish and EU green hydrogen market cannot stand without a healthy global market. But of course, as lawyers, we know that we won't get a global hydrogen treaty or market by treaty overnight.

00:24:53 Meng Zhang

I would probably suggest we need definitely a kind of a voluntary-based global mechanism, like based on climate club, where those kind of big players for green hydrogen, they can coordinate with each other how they measure ratify and recognize each other's green hydrogen products. And from that part, we can see the future of green hydrogen at the global market.

00:25:27 Meng Zhang

And another part, we know that last year, a very important event happened in the EU, that's the European Parliament's election. And we see a huge policy redirection from the EU level in terms of the green transition. That is, the EU now has a new policy called the EU wants to achieve a so-called green just but competitive transition. And this kind of a policy reduction can also be witnessed in green hydrogen field.

00:26:02 Meng Zhang

For example, last year, the European Union passed a new law. That's mainly say that's the green hydrogen or renewable hydrogen projects, if they would like to get the EU funding, and the China's components should be lower in their projects, should be lower than 25%. But if you ask the practitioners, ask the industrial field, who is the main producer or maker for electrolysis, that's definitely China.

00:26:35 Meng Zhang

Let's pose another important question. How to balance the economic competitiveness, strategic autonomy, and green energy transition in the entire process? That's a big question mark and challenge for the EU. The EU need a very deep consideration to think about how to navigate this entire process.

00:26:58 Beatriz Martinez Romera

I see. It's very interesting.

00:26:59 Beatriz Martinez Romera

What about Simon? Any final thoughts?

00:27:01 Simon Westergaard Lex

Yeah, well, I think, the economic part, as you also mentioned, Meng, is super important. And for the projects that I talked about before, then, you need to put some resources into this. And that's back to also what I said in the beginning. This is not nice to, this is need to.

00:27:18 Simon Westergaard Lex

So, and that's, in my opinion, also the role of the state. The state also needs to perhaps develop some kind of overall strategy for that kind of citizen engagement in the green transition and also, fund some of these projects.

00:27:34 Simon Westergaard Lex

So, the municipalities have some, because they're prioritizing a lot of different things. They need to prioritize a lot of different things, right?

00:27:40 Simon Westergaard Lex

And so, they need also some resources to make these kinds of structures and governance models, planning models, as I mentioned before. So how to finance this is, of course, important. I know the industry is also, of course, chipping into this with what in Denmark is called the green pool. So, they are funding in this.

00:28:02 Simon Westergaard Lex

But I also think the, Meng, you also mentioned the more international and the global perspective on this. And I think, you know, people are, how can we also find inspiration across the communities, across the states and the national borders? And we see some fascinating examples of citizen engagement in the green transition, green energy transition also, for instance, in Colombia or in Australia or in South Africa.

00:28:35 Simon Westergaard Lex

Of course, it's very different cultures and different environments, but there are also overlaps. So, I think it would be amazing if we could ensure, also cross-cutting dialogue, both on the governance part, but also among the local communities.

00:28:54 Beatriz Martinez Romera

Thank you very much. It's been a pleasure, and I hope to see you soon.

00:28:58 Simon Westergaard Lex and Meng Zhang

Thank you very much, Bea.

00:29:01 Beatriz Martinez Romera

To our listeners, stay tuned for our next episode.

00:29:11 Beatriz Martinez Romera

Thank you for listening to this episode. If you would like to learn more about the projects DART and RIGHydro, check out the information in the show notes. Stay tuned for our next episode.