

Bruce Riordan ([00:02](#)):

Welcome to the Berkeley Climate Change Network podcast. I'm Bruce Riordan. I'm the director of the BCCN, and today we're going to spotlight a new project, very cool project at Berkeley Law within the Center for the Law, energy and Environment, or Clee. It's all about the future of the oil and gas industries in a climate safe world. And we're talking with our special guest today, the project director, Darien Sturges. So welcome, Darien.

Darien Sturges ([00:36](#)):

Thanks, Bruce. It's great to be here.

Bruce Riordan ([00:39](#)):

Before we get into the project, tell us a little about your background, your experience. You've been out in various roles around climate and energy, and eventually how did you get to Berkeley, all of that.

Darien Sturges ([00:52](#)):

So most recently I was at the Department of Energy in Washington where I focused on portfolio strategy within the Office of Clean Energy demonstrations, meaning my group was working out how to commercialize and scale all the new energy technologies that our country is going to need in the coming decades. Obviously, the federal government has gone in a slightly different direction now. So I'm a native California and I'm from the Bay Area, and I was very excited for this opportunity to look at California energy policy with the same lens. How do we prepare for the future?

Bruce Riordan ([01:28](#)):

Great.

Darien Sturges ([01:29](#)):

I should say prior to the federal government, I worked for many years at the Clinton Foundation and the World Bank helping to develop clean energy projects and developing countries around the world. So I have some experience in this field and sometimes the issues, the problems, the challenges repeat themselves no matter what country you're in.

Bruce Riordan ([01:54](#)):

Excellent. Well, let's get into the project itself. Why did Berkeley and the donor put this project together? What's the problem we're trying to solve or the issues we're trying to illuminate? Tell us a little about the why before we get into the, what

Darien Sturges ([02:10](#)):

We're trying to do really is to reimagine the future. And I think it's important to look at the broader context, which is oil and gas are kind of inextricably linked to California. The state's been producing oil for a hundred years. Anyone who's seen the Darien Day Lewis movie, what's it called? There will be Blood. It looks at the early history of those days. We don't produce as much as we used to. Production's been slipping a bit, but it's still significant. It's around 300 million barrels a day. At the same time, we use a lot of oil and gas in California, so we drive a lot more than anyone else in the country. We fly a lot, so we use a lot of jet fuel. We ship products around by truck. We use a lot of products that are based on oil and gas, so that's steel, cement, plastics, fertilizer.

[\(03:08\)](#):

We just use a lot of it. And so that means even though we produce oil, we still import a lot. And that oil comes from all over the world, from the Middle East, from Alaska, from South America, et cetera. And the other side of that, the gas side, we use a lot of electricity and we use natural gas for power. And I think everybody's seen forecasts for power demand with the rapid growth of AI and data centers. So it's likely we're going to need a lot more power. So all of these trends are sort of swirling and intersecting right now. And at the same time, the state has these very ambitious climate and environmental goals that we want to meet to essentially zero out our greenhouse gas emissions by 2045. So because energy is such an integral part of people's lives here in California, I think people get worried when they have to start thinking about potential price spikes or shortages or blackouts or anything that's a shock to the system.

[\(04:14\)](#):

So we need to think about the future, how it's going to impact us as Californians, and how we're going to respond to changes and trends in the energy sector. And that's what the donor asked us to do. We sit within Clea within the law school. We sit at this interesting intersection for a think tank where we have influence with California policymakers in Sacramento, but we also have access to the wealth of resources available at UC, Berkeley. And the donor saw that and wants us to take a very forward thinking and expansive view of what the energy industry and what the oil and gas industry can look like in 20 years, and then also how it's going to impact various groups, whether that's consumers, whether that's workers, whether that's policy makers, and whether that's other parts of the country that California impacts.

Bruce Riordan [\(05:13\)](#):

Excellent. So tell us, what's the end product here? Is it a report? Is it a conference? What's it look like ?

Darien Sturges [\(05:25\)](#):

Think it's going to be all of the above. We're going to produce research reports. We're going to write pretty extensively on a lot of these questions from perspectives. We'll also hold public events at Berkeley in the spring and in the fall. And then we will also potentially hold similar events in other regions of the country who are facing many of the same challenges and issues. California is too. So we want the UC, Berkeley impact to be, like I said, expansive.

Bruce Riordan [\(05:56\)](#):

So the funder, the donor is funding the project and is the push for doing the project, but really your impact is going to be much broader and going to Sacramento and DC and maybe all of the above.

Darien Sturges [\(06:14\)](#):

All of the above. Yeah. I think sometimes people think about big oil here in the US without realizing that 80% of the world's oil comes from these massive national oil companies. That's the Saudi Arabian national oil company that's Malaysian, Nigeria, et cetera, et cetera. If we in California can think about how to structure the oil and gas sector to be more climate friendly, to follow very stringent environmental and labor regulations, we think that can have an impact around the world.

Bruce Riordan [\(06:51\)](#):

Okay. So let's talk about how you're going to do this project. What are the steps? Where are we now and where are we going this year? And it's a two year project, am I correct on that?

Darien Sturges ([07:05](#)):

Yes, correct. It's a two year project, and as I alluded to uc, Berkeley has a wealth of expertise and resources to bring to this. A lot of different departments touch energy markets and the energy industry. So we're going to be working closely with, for instance, the Business School Haas. We'll be working with the Goldman School of Public Policy. We'll be working with Berkeley National Lab. We'll be working with the talented engineers and engineering departments here on campus. And I think most excitedly we're going to be working closely with a group called the Possibility Lab. They're housed out of the Goldman School of Public Policy here, but they do really cool work engaging directly with communities. And when you think about the oil industry especially, a lot of it is very concentrated. So you have a lot of oil production in California happening in one county, Kern County, and then you have refineries that are very tied to their local community in terms of generating tax revenues, providing jobs, reinvesting in the community. And if you think about a transition away from fossil fuels, it's going to have very localized impacts. So the Possibility Lab is going to be working very closely with those communities to really understand their perspective and how they see the future as well. So that'll be a big part of the work.

Bruce Riordan ([08:31](#)):

So what form will this take? Research projects, conferences,

Darien Sturges ([08:39](#)):

All of the above.

Darien Sturges ([08:41](#)):

We will write extensively on the various issues that are impacting the transition, but we're also going to be holding events, public events here at Berkeley in the spring and in the fall we'll be speaking at conferences around the country. So I think we have a lot of avenues to get our voice and our message out.

Bruce Riordan ([09:02](#)):

Is it fair to say that you're going to help come up with a roadmap really for this transition that's going to have to happen in one form or another?

Darien Sturges ([09:14](#)):

Yes, that's the idea. We don't just want to describe the context. We also want to lay out scenarios and pathways and ultimately help educate not just policies, but also Californians.

Bruce Riordan ([09:27](#)):

And is the assumption at the beginning here that the oil and gas industries aren't going away? They're going to be here, and so it's a matter of what they look like and how could they be reshaped? Is that fair?

Darien Sturges ([09:45](#)):

That's exactly right. I think when you look at some of the forecasts for energy demand going out into the future, say 2050, the IEA, the International Energy Administration Association puts out their scenarios. And even in their most ambitious, most climate friendly scenario, their net zero world as they describe it, oil demand is still 30 million barrels a day globally. So that's a lot of oil. So as you mentioned, the industry isn't going away, but what we can do, and I think where California can really have a leadership role is to think about how we decarbonize industry as much as possible.

Bruce Riordan ([10:27](#)):

Can you see some different options for what this could look like? Or is that too soon to say?

Darien Sturges ([10:35](#)):

No, no. I mean, generally the industry is already thinking about this. There was a fee, there was a methane fee baked into the Biden administration's climate laws, and most of industry supported that. It's interesting when you see the uptake of things like solar generation in oil production fields in Texas, the California producing oil companies have some of the strictest environmental and labor regulations in the industry, which you may not see in, like I mentioned, Africa or Asia. So I think the US oil industry, or at least a percentage of them, they see the future and they want to decarbonize the industry, and they see this as a way for them to differentiate themselves from their competition from other countries, especially.

Bruce Riordan ([11:39](#)):

Interesting. Now, how do you feel that your previous work at Department of Energy and your other experiences has prepared you for all of this? I mean, working with the oil and gas industry is not a lightweight matter.

Darien Sturges ([11:57](#)):

Yeah, I think anytime you think about the future and some of these big questions, energy, climate, et cetera, by definition, it's going to require cooperation between the public sector and industry. So at the Department of Energy, that's what we were really trying to push. Our mantra was private sector led, but government enabled. And I think we're going to find a similar dynamic here. When we think about the trajectory of energy and economic growth and the importance of the environment to us here in California, it's going to require cooperation between industry and government. So I think that's what we want to do with Berkeley is help facilitate that.

Bruce Riordan ([12:43](#)):

How does this work connect with or intersect with the notion or more than notion, the idea that we've got to move with urgency here in the climate crisis?

Darien Sturges ([13:02](#)):

I would say it like this. I think if we're going to treat the climate crisis as an urgent challenge, we can't just work on the easy stuff. We have to work on the hard problems too. And I think decarbonizing the oil and gas sector is a hard problem, but it's one that's necessary. We have to figure out how to get low carbon steel to market. We have to figure out how to get low carbon cement to market, but that's not going to be easy. We have to figure out new technologies like carbon capture and carbon dioxide removal and direct air capture. All of these are going to be difficult, and I don't think we can do it in

silos. I think it's going to require, as I mentioned, true partnership between communities, between industry and between policymakers.

Bruce Riordan ([13:54](#)):

Excellent. So to wrap up here, Darien, how can either faculty or staff or students find out more about this project? And then maybe if it's not too jumping ahead, how can they get involved or engage with the project?

Darien Sturges ([14:15](#)):

We should have more public information available at the CLEE website. We are planning to hold a public event in the Spring, so watch this space for more information on the specific date and time for that. But I would say reach out. We are going to be doing outreach to the broader UC, Berkeley community, but if you are listening and you are interested in engaging, please feel free to get in touch.

Bruce Riordan ([14:42](#)):

Okay. Thank you. Well, thanks Darien. This has been helpful to give us the first overview of this really interesting project, the future of the oil and gas industry in a climate safe world, and particularly here in California, as you pointed out, with our great use of oil and gas and great production in this state as well, to go with the big climate goals and the way we've been trying California to lead the way for much of this country and the world on decarbonizing. So thank you and thank you all for listening. This is Bruce Riordan for the BCCN and we will see you next time on the BCCN Climate Podcast. Thanks.