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Rob Stavins: Welcome to Environmental Insights, a podcast from the Harvard Environmental Economics Program. I'm your host, Rob Stavins, a professor here at the Harvard Kennedy School and director of the program. In the United States, Europe, China, India, and many other parts of the world, when people consider policies to reduce carbon dioxide emissions to help address climate change, priority attention is frequently given to the electric power sector, partly because of its standing as the first or second largest source of emissions in many countries and partly because frequently it presents low-hanging fruit, that is low cost abatement opportunities.

Today I'm delighted to host for this conversation an economist who has spent some three decades studying the electricity sector and making important contributions to the design of new institutions and appropriate regulations. I'm referring to Karen Palmer, who is a senior fellow at Resources for the Future in Washington D.C. where she directs the Future of Power Initiative. Karen continues to carry out important research and serves regularly on a host of government panels, and she was recently the president of the Association of Environmental and Resource Economists. Welcome, Karen.

Karen Palmer: Thanks, Rob. It's great to join you on the podcast.

Rob Stavins: Before we talk about your research and your current thinking about environmental and energy policy, let's go back to how you came to be where you are. Where did you grow up?

Karen Palmer: So, I grew up in the state of Maine. My dad was a United Methodist minister and we moved around a fair amount. Was born on the coast in Damariscotta. Spent some time in Arustic County where they used to grow a lot of potatoes, and ended up going to high school in Brunswick, Maine, which is where Bowdoin College is.

Rob Stavins: Yes. That all sounds wonderful. We go up to Maine, in fact, very soon. We go up to Maine where we rent a house on the quiet side of Mount Desert Island each summer.
Karen Palmer: Sounds wonderful.

Rob Stavins: I envy you having grown up there. What does that tell us in terms of primary school?

Karen Palmer: I went to primary school in a number of different locations, really Bangor and Houlton, Maine.

Rob Stavins: And then high school was where?

Karen Palmer: High school started in Houlton, Maine where we got off for potato harvest a bit in the fall, and then finished high school in Brunswick, Maine.

Rob Stavins: I think you're the first person I've ever spoken with in my life who got off of school for potato harvest. But I guess that would be in Maine and in Idaho that might happen.

Karen Palmer: I imagine so, yeah.

Rob Stavins: College then, you came down to my neck of the woods.

Karen Palmer: That's right. I went to Brandeis University.

Rob Stavins: How did that come to be? Frankly, for someone who is the daughter of a Methodist minister, it's a little surprising to me that you went to Brandeis.

Karen Palmer: Our family's always been very ecumenically minded, and I was really intrigued by going to a fairly new institution that was founded by... as to be a Jewish founded institution. It just seemed like a way to explore new ideas and meet people who had very different backgrounds from myself. That was part of what drew me there.

Rob Stavins: That's really interesting. Speaking of interesting, what was your interest when you did your BA in economics? Were you already getting interested in energy and environment, or did that come later?

Karen Palmer: That actually came later. I worked with Anne Carter, who was a professor, who actually was on the board of Resources for the Future when I came here, but I did not know that at the time. She was somebody who was like a mathematical economist who did a lot of work using input/output techniques. I did a mini honors thesis on studying the effects of tourism on the Maine economy.

It was more kind of economic growth and regional economics that I was interested in when I was in college. And then in grad school, I still didn't really move to environment, but I went to grad school at Boston College and that's where I focused on industrial organization and regulated industries and also public finance.
Rob Stavins: I see. Now, before you even went to graduate school, you worked, did you not, after you graduated Brandeis?

Karen Palmer: That's right. Anne Carter had worked a lot as a consultant to Data Resources Incorporated or DRI as it was known at the time. They were probably most famous for doing macroeconomic forecasting, but there was a group that took the macroeconomic forecasts and disaggregated them to implications for various sectors in the economy. I worked with that group, the inter-industry group, for four years after college.

Rob Stavins: Now, DRI is not an institution nowadays that a lot of our listeners will be familiar with, but in its day, it was exceptionally prominent in Lexington, Massachusetts as I recall.

Karen Palmer: That's right. It was founded by Otto Eckstein from Harvard. And yes, they did a lot of work both for government and industry producing forecasts and using largely their macroeconomic models to inform thinking about various issues. I will say that I think they made a lot of their money back, this was before personal computers, providing access to mainframe computers that were located in Lexington and providing access to data.

A lot of people used that information to do their own analyses, but we did regularly produce forecasts both with a macro model and the inter-industry model. Matter of fact, on a quarterly basis we would do those forecasts.

Rob Stavins: Now, it was founded by Otto Eckstein and Donald Marron in 1969, and then sold to McGraw-Hill 10 years later, 1979, which is just before you got there. You arrived there in 1981, is that right?

Karen Palmer: That's right, yes.

Rob Stavins: And you stayed there quite a while.

Karen Palmer: Yeah, for four years. About I guess midway through my third year, I started realizing that you couldn't make a career of doing this kind of economic analysis without further training. I had set out to apply to graduate school at the end of college and then delayed that, but I started taking classes at Boston College in their graduate program and ended up transitioning that into being a full-time student there.

Rob Stavins: I see. You've already mentioned Boston College and doing your PhD there in your general area. What was your dissertation topic and who were your advisors?

Karen Palmer: I worked with Frank Gollop and Stephen Polasky and Peter Gottschalk, but Frank was my main advisor. I was piggybacking on some consulting really that he was doing with the phone companies, looking at pricing within regulated industry.
The title of my dissertation was “A New Test for Cross-subsidies in Regulated Industries with Application to a Local Telecommunications Monopoly.”

That’s a real mouthful there, but basically looking at pricing structures. People at the time were familiar with the fact that long distance services tend to subsidize local service for telephone customers. But another question that remains in the ether was the extent to which business services subsidized residential services, and that was the question that I looked at in my research.

Rob Stavins: Now, I mean, generically, there are a lot of points at which that kind of work for telecommunications connects with studies and issues in the electricity sector.

Karen Palmer: Of course, the telecommunications sector has evolved quite a bit since we’ve moved to cell phones and the like. But the idea of natural monopolies and having to regulate them to get reasonable prices and to cover costs spanned both the telecommunications industry and the electric industry. I think that’s part of why Resources for the Future ended up being a good place for me to come, because they were interested in folks who were doing work beyond the industries that RFF was focusing on.

Rob Stavins: How did it happen then that you went to RFF? Was it through the usual process at the ASSA meetings and being interviewed and then the fly backs and all that? Or was there a more direct connection? How did it all come about it?

Karen Palmer: Indeed, it was through the traditional job market. I will say that I was married at the time and my husband had his own remodeling business in the Boston area, so I primarily focused my job search in Massachusetts. But I was very intrigued by the mission at RFF and the flexibility to a certain extent.

When I got the offer, I managed to convince my husband that, well, Resources for the Future, they do academic quality research for different audiences, but they have similar expectations in terms of publications as I would have at a university. I think I’m not closing any doors, so why don’t we go to Washington for three years and then we’ll come back to the Boston area?

Rob Stavins: But that didn’t quite happen.

Karen Palmer: That did not happen. That did not happen. I came here in the fall of 1989, so in October it will be 34 years.

Rob Stavins: Wow. Wow. You and I share something that we're lifers at the first institution we went to after receiving our PhD.

Karen Palmer: Yes, indeed.

Rob Stavins: I came here and have not left. Was Bob Fri president of RFF when you joined, or was it Paul Portney?
Karen Palmer: Bob Fri was president. That's right.

Rob Stavins: I see. You've been there for a number of presidents.

Karen Palmer: That's correct.

Rob Stavins: Can you recite them all?

Karen Palmer: Okay, yeah, I think so. It was Bob Fri, and then Paul Portney was president, and then Phil Sharp, and now Richard Newall. Three decades.

Rob Stavins: It's just four.

Karen Palmer: Four presidents, yeah.

Rob Stavins: Yeah, that shows how long they each have stayed, in fact. Let's turn to your work in the world of environmental and energy economics research. Now, I assume, given that you just said about this more than 30 years since receipt of your PhD, that you've seen some really significant changes in the world of energy and environmental economics over that period. Are there particular changes in the world of energy and environmental economic research that stand out to you?

Karen Palmer: In terms of energy and electricity specifically, I was fortunate to be at RFF and involved in research during the liberation revolution or the restructuring of the electricity sector, and that's been really interesting to follow. I mean, I came here because the overlaps in terms of regulation in my prior research in graduate school and what happens in electricity and also to a certain extent natural gas were evident, but things were definitely changing in both natural gas and electricity sector early during my time here. One of the first projects that I worked on was...

Well, it was a few years in, I guess I should say. But as the electricity sector started to introduce more competition in terms of who was going to actually deliver electricity, it became clear that there are a lot of challenges in terms of policy and pricing and how markets function that remained open and could use some informing. So, we wrote a book, myself and several of my colleagues, although the primary authors on that book I would say we myself and my colleague, Tim Brennan, called “A Shock to the System,” that was a guide to the various policy debates that surrounded restructuring.

Rob Stavins: We're thinking back 30 years and changes in the profession. If I think about it more broadly, what about changes you've seen of the role of women in the economics profession?

Karen Palmer: Oh, well, in the economics profession, it's definitely changed. I think economics has a lot of issues still to tackle on that front, but there definitely are a lot more
women in economics and also women working more generally on policy issues in electricity and energy. I can say that when I first came to RFF and would go to either policy or meetings of the Energy Economics Association, there would be very, very few women, and now there are a lot more. And indeed, a lot of the economists winning awards from those associations are women increasingly.

Rob Stavins: In your graduating class or the PhD in 1990, what percentage of the class were women approximately?

Karen Palmer: Oh, good question. I think at Boston College, maybe 40 percent.

Rob Stavins: Oh, that's very high for that time.

Karen Palmer: I think it was higher.

Rob Stavins: Because I graduated [with my] PhD two years earlier in 1988. I would say at Harvard, of 30 PhD students in my class, I’d say two to four were women. Nowadays, the PhD class, both public policy, the program I chair at the Kennedy School, but also economics, ranges from 50/50 to 60/40 something in there, 65/35, something like that most of the time. So, before we turn to the policy world, which I do want to get to, I want to ask you one more question about your research and your writing.

I hesitate to do this because I know it's asking you to identify your favorite child, but if you had to identify one research publication of yours, solo authored or co-authored, doesn't matter, and it could be scholarly work or it could have been something for the National Academy of Sciences, what would be the one product that you're most proud of and more importantly why?

Karen Palmer: I thought a lot about this because I've heard you ask other folks this question, and I'm going to deviate a little bit and talk about a paper that my co-authors and I actually never submitted to a journal. One of these things we kick ourselves for, but it is often cited.

Rob Stavins: That's even better.

Karen Palmer: It's a 2001 RFF Discussion Paper that I co-authored with Dallas Burtraw and also my former colleagues, Anthony Paul and Ranjit Bharvirkar. The title of the paper is “The Effect of Allowance Allocation on the Cost of Carbon Emissions Trading.” I like the paper because it really focuses on the intersection between cap-and-trade policy design and the electric power sector.

In the paper, what we do is we compare the efficiency consequences of using different approaches, including an auction and a couple of free allocation approaches to distributing allowances in a program that regulates the electricity sector primarily. The reason that allocation matters so much for electricity is because in a substantial amount of the country, despite this discussion we had
about restructuring and the innovation of markets, electricity prices are set through regulation.

And that means that if you get allowances for free, the opportunity cost of using those allowances isn't really passed through in prices to consumers, whereas it would be if the markets aren't regulated and they function like markets. It draws a distinction between using auctions and using free allocation that's important to the efficiency of these programs.

Rob Stavins: This was a big issue when I was working on the development of the SO2 allowance trading program in the George H. W. Bush White House because this was in the middle of the restructuring of the industry and looking at the differences there would be in terms of those who were under the old system and then those electric utilities getting allowances who were under the new system. It was a time of a lot of very rapid change.

Karen Palmer: That's right, yeah.

Rob Stavins: What are the percentages now actually either by electricity generation or something else of the restructuring compared with the old system operating under a state regulatory commission determining what the prices can be?

Karen Palmer: I think it's still the case that the majority of customers, something like 60%, purchase their electricity under rate of return regulation.

Rob Stavins: That's interesting.

Karen Palmer: When we wrote our restructuring primers, we anticipated a world where there would be sweeping change, but it's been modest by those standards.

Rob Stavins: That's interesting. Speaking of that and thinking about US policy, bring it up to the present. What's your assessment of the current administration's energy policy or for that matter, its climate change policy?

Karen Palmer: The climate change policy, which as you know focuses largely on using subsidies in the form of tax credits to encourage clean electricity. But that's true in terms of legislation, but there's also other activities going on. I mean, the fact that they weren't able to fully price carbon doesn't mean that there's not going to be efforts to address emissions from emitting sources, which aren't really targeted under the subsidies directly.

But we are about to see the third try at regulating, or we have seen the proposed form of the third try at using the Clean Air Act to regulate emissions from existing and new fossil fuel generators. There's not only the carrot, but there is a bit of a stick. But going beyond the federal level, I think there's a lot of activity happening in the states on both fronts, again, in terms of subsidizing
clean sources of power, but also imposing increasingly prices on power producers. As economists, we like carbon pricing because it's efficient.

We often pose this dichotomy between, well, we either price carbon or we subsidize clean energy. I think that's kind of a false dichotomy, and that policies are going to build both ways from both ends.

Rob Stavins: Now, something we've seen change, at least in my mind it's changed, it's evolved relatively rapidly, is that when I first started working out in California on climate change policy at a time that Dallas Burtraw certainly was as well, and perhaps yourself, that was where I first heard the phrase “environmental justice” and politically was quite important early on there.

But at that point in time, I didn't hear about it a lot in Washington DC. The world has changed since then and now, both in the policy world nationally and in the scholarly world in terms of research, environmental justice and just transition, particularly in the context of climate change policy but not exclusively, have become very prominent. What's your reaction to that increased attention?

Karen Palmer: Oh, I think it's really important in terms of both making progress on the climate issues and also taking actions to rectify past injustices and finding ways to make these two efforts work together. I think the recognition that undertaking actions to reduce emissions of carbon can also help to reduce emissions of other air pollutants that affect local air quality is important in finding ways to do those jointly is a good thing.

It's going to require probably some tweaks and things in places where they're using cap-and-trade, for example, to address concerns, but I don't think it's impossible to marry the two.

Rob Stavins: Does the Future of Power Initiative that you are directing at RFF, does that include attention to environmental justice and just transition issues?

Karen Palmer: RFF certainly works on environmental justice and just transition issues. I think our plans, well, starting now and going into the coming year, will include more focus also on energy justice related issues. As we look to decarbonize the economy more broadly, the costs of electricity are going to play an important role in terms of people's incentives to adopt or to do things that will likely be necessary to get rid of fossil fuel use in buildings like adopting heat pumps and electrifying other energy end uses such as vehicles.

Keeping electricity prices low in general or the role that electricity prices will play in general will be part of that. But also, there are important upfront costs associated with doing these things and adopting these new technologies, which really substitute more capital costs and less energy costs. Because not only are they electrified, but they're often extremely efficient. Finding ways to make that work across the board for all types of consumers, including low-income
consumers and historically disadvantaged communities, is going to be an important part of the policy puzzle.

Rob Stavins: Finally, are there some research gaps? Are there some areas, some questions, some issues in the broad area of energy and environmental economics and policy perhaps within the electricity sector studies or elsewhere that you think are just not receiving sufficient attention or that have some low-hanging fruit, a little bit of research could have tremendous gains?

Karen Palmer: Well, I think this question about electrification is an important one and really understanding what motivates consumers. For better or worse, a lot of places... Change has to happen broadly across the economy. A lot of consumers are skeptical of climate change; a lot of voters are skeptical of climate change. I think understanding ways to convince the broad populace that moving towards electrified appliances and vehicles and other things, maybe even electric bikes, is going to involve some nuance, and I think research on that front could be important.

I also think that we've been really frustrated in terms of getting carbon pricing to work nationally, but I think it is an important part of moving towards a decarbonized economy. If that work is happening at the states, then understanding ways to link those various state programs together is going to be an important policy challenge for sure and research that can inform that would be helpful.

Rob Stavins: That's a great place to bring this conversation to a conclusion. Listen, thank you very much, Karen, for having taken time to join us today.

Karen Palmer: Thanks so much to you, Rob. It's been a delight talking to you.

Rob Stavins: My guest today has been Karen Palmer, senior fellow at Resources for the Future. Please join us again for the next episode of Environmental Insights: Conversations on Policy and Practice from the Harvard Environmental Economics Program. I'm your host, Rob Stavins. Thanks for listening.

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