

Rewiring the Northwest's Energy Infrastructure

Tugrul Daim, Portland State University: “Up until now, the energy industry has changed very slowly. But as technology companies insert themselves, change could happen much faster. When you put the power of consumer choice in people’s hands that can really accelerate change.”

Nan McKay, former Chair of the Puget Sound Action Team: “We have a generational imperative to reimagine our infrastructure systems. We’ve got to break through institutional silos and find innovative solutions that connect systems for the greatest community-wide benefit for the long-term.”

Rachel Shimshak, Executive Director, Renewable Northwest: “You can’t think in stovepipes anymore – you have to think integrated. It’s more challenging and you have a lot of moving parts. But I think ultimately it’ll be a lot more stable. People have to get out of their silos and think about how all these things work together.”

Scott Bolton, Vice President of External Affairs at PacifiCorp (on vehicle electrification by 2040): “A prudent view would be there’ll be a pretty moderate adoption, maybe 25-40%, but who knows? Tech adoption and consumer pickup has been extremely dynamic – it’s not unimaginable that we could be at nearly 100% adoption by 2040.”

Terry Oliver, Chief Innovation Officer, Bonneville Power Administration: “Fundamentally we’ve got the pieces in place to go carbon-free, starting with a huge hydro system that provides some reasonable flexibility. Our wind resource is perhaps 30% built out – there’s still a great deal of wind potential and the very best areas haven’t been tapped because they don’t yet have transmission. We’ve only barely begun to adopt solar photovoltaic.”

Pratima Rangarajan, General Manager, Product Development and Marketing for Energy Storage, General Electric: “The next step for us is to scale. If we look at wind, when they went through a 5X (five-fold) drop in cost during the scale-up period, the number of annual installed megawatts went up 50X. Solar was even faster. It was a 6X drop in cost with about a 70X increase in solar. I would even posit that energy storage will be faster than the two of them.”

Patrick Mazza, Principal, MROC: “The smart grid will be the energy backbone for the low carbon world. It will use digital technology to connect devices from solar panels and wind turbines to electric vehicles and smart building controls. The smart grid will provide connective tissue that lets a range of energy devices ‘talk’ to each other and balance each other’s operations. It will optimize the entire power system from generation to delivery to end use. But we still need to overcome obstacles.”

Angus Duncan, President, Bonneville Environmental Foundation: “The efficiency we’ve captured over the last 30 years is now double the amount we generate annually from the Grand Coulee dam – and its cost is one-third the cost of power from a new fossil-fuel power plant.”