

Leading the Largest Public Power Utility

Conversation with Los Angeles Department of Water and Power
General Manager Marty Adams,
with PUF's Steve Mitnick and Guidehouse's Chris Rogers



The Los Angeles Department of Water and Power exists to support the growth and vitality of the City of Los Angeles, and as the nation's largest municipal utility, overall serves some four million residents. LADWP provides over eight thousand megawatts of electric capacity and serves an average of four hundred thirty-five million gallons of water per day.

This large public power utility has been operating in California for more than one hundred years.

Now, with the big job of moving forward to a clean energy future, LADWP is changing with the times.

Public Utilities Fortnightly's Steve Mitnick and Guidehouse's Chris Rogers caught up with the busy General Manager of this important municipal utility, to find out how he is successfully guiding the transition. LADWP's Marty Adams has much optimism for the future.

PUF's Steve Mitnick: How do you see the current state of the utilities industry nationally and LADWP's role in that national movement?

Marty Adams: If you look at the goals set by the former Mayor Eric Garcetti, the Green New Deal, you'll see that they are in line with, and in many cases, take the lead on environmental goals nationally. By 2050, we aim to have a zero-carbon grid, zero-carbon transportation, zero-carbon buildings, zero waste, and zero wasted water.

We've developed a series of targets to mark and measure our progress in this effort. I expect our new Mayor, Karen Bass, will either reaffirm some or all, or make some of her own complementary changes to these goals.

When you look at California legislation about going green, what's coming out of the Biden administration, you'll see that at the center of that discussion is the utilities industry. When it comes to climate change and how we produce energy, and how we take care of our precious water resources, it's clear that the global discussion falls squarely on the shoulders of local and regional utilities.

I think for the most part we've been ahead of the curve and in some cases, we find ourselves trailblazing in some of these areas. The city's commitment to go green is a big lift, to be eighty percent carbon free by 2030, and shooting for one hundred percent by 2035.

We had our LA 100 study completed in partnership with U.S. DOE's National Renewable Energy Laboratory, and it validated what our engineers had said all along. We need local generation for reliability but there are concerns over gas.

That's put us in the driver's seat of leading the hydrogen revolution. We find ourselves at the forefront of new technology, something that doesn't work commercially at scale yet.

But we're doing it with people who are smart and who truly believe in making a positive impact for future generations. There are the manufacturers and the federal government-funded hydrogen hubs, but we in the utilities are front and center when it comes to future implementation.

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to one hundred percent green hydrogen.

We're working toward the same at our Scattergood Generating Station in L.A., which may be the first urban hydrogen power plant. I've got four in-basin power plants that all need to get off gas and three have cooling deadlines. We must do something different because we cannot power the city on batteries.

Speaking of batteries, they will play a crucial role and help us manage our solar resources, but studies show that when bat-

teries discharge on the first day that you need them, they're not going to charge up the next day unless they're fired by gas.

We know we need local generation and developing a robust hydrogen economy in Southern California will also help us decarbonize the ports. That will help with transportation, particularly heavy trucking.

It may even end up impacting the aviation industry, and hopefully also drive hydrogen locomotives and shipping. I believe what we're doing in L.A. will spur other cities and power producing utilities around us to transition as hydrogen becomes available.

Chris Rogers: Marty, what are you seeing as the greatest challenges facing the industry and LADWP over say the next three years or so?

Marty Adams: Our main challenge is to maintain our reliability and provide a cost-effective service to our customers. So, while we're taking on the challenges of becoming greener and becoming a more sustainable, water-wise city, we also have to continue with the basics of our core mission and maintain the same level of service and affordability.

Utilities need a bigger seat at the table to be able to provide our perspective. New goals and standards are being mandated about which fuels can and can't be used.



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A lot of that is done without input from utilities, which ultimately have to implement these new rules, new infrastructure, and technology. We have experience and a unique perspective that can inform the discussion in a meaningful way.

On the water side, there are rules, regulations, and laws that make it difficult to change how we supply water and where and how we can access different supplies and water rights in order

going to be us preaching to the choir?

We have to be able to engage with communities who have a different take on how the environment should be used. Some don't want to burn hydrogen or mine lithium and for others, building solar panels and wind turbines is tantamount to pollution when it comes to their desert view.

We must understand that some things are necessary for us to

to rebalance our sources of supply. As the climate changes, we will need to be nimbler and more flexible in the way we approach these important issues.

Water agencies usually don't have a lot of say. They'll sue and they'll fight, but they're kind of quiet organizations at the end of the day.

It's tough taking the backseat role, while at the same time trying to manage resources that are changing. To illustrate that point, we went from extreme drought to now managing the excess water from the historic snow runoff, all in less than a year.

Messaging and education are also going to be huge factors. It's easy to say let's go green, everybody put up solar panels and wind turbines or go buy batteries. Those technologies have an important role, but what's left out of the discussion is what it will take to make this new greener grid function properly with the reliability we've all come to expect.

We're using words like dispatchable energy, or duck curve. You lose everybody with those esoteric, industry-speak terms. Trying to take something that's complex and put it in a language that people understand, is a challenge.

How do we communicate the need? In the renewable world, it's all about storage. You have batteries you can store in, but you have to push power into a battery and out of a battery.

There's enough energy from the sun every day, right now. We just can't get it all the time and put it in the right place. I always say if L.A. was in the middle of the country, we'd be a hundred percent solar, right now.

But it doesn't work that way, so we must store. That becomes the challenge. How do you talk about this in a way that's not just

live in the second-largest city in the country. Communication is going to be a huge challenge. Add to this a large portion of our customer base for whom English is their second language, some are low income and may not be able to readily afford or participate in the green energy future.

In L.A. about forty percent of the people are at poverty level. Others may have different preconceived ideas of water and energy issues stemming from experiences in their home countries. So, we are developing new programs and engaging and doing a lot of outreach in a wide variety of languages. So far, the results have been positive.

Other challenges have to do with how we develop new resources and the messaging around this. I saw a science magazine recently and it said NASA scientists are talking about worldwide water shortages.

I thought to myself, there is no worldwide water shortage. There's the same amount of water as day one. What we don't have is enough water of the right quality at the right location, at a price we're willing to pay.

There's a shortage of fresh water that we want to use in California based on our current systems. We're on the coast, so by definition, there cannot be a water shortage in California. There's a shortage of willpower and money, but there's not a shortage of water.

Diesel is expensive. But it's also expensive because we have so many protections against environmental impacts. There're trade-offs.

People ask, why not desalination? What's going on? Well, that's going to be a lengthy conversation. If you want to water your lawn three days a week, you must realize that with desal water it just might cost you three times what it costs now.

That's because it's an energy-intensive process. We not only have to produce the water, but we also must pump it back uphill and those costs are going to be passed on to the customer.

Right now, we don't pay for that because it's coming down the mountains by gravity. At the same time, we're trying to go green, so the energy aspects of desalination would make that effort more difficult.

It also becomes a challenge when you have two utilities in the same building doing things that don't help or conflict with each other. Here at LADWP, we have the Water System and the Power System. Each side has its own mandates to deal with and so this also becomes an issue.

One of the other challenges that hits us is human resources. There are plenty of utility jobs, but it's no secret in the power world that there's a shortage of electrical line workers. That's not getting fixed anytime soon.

People are paid a premium because we want to make sure we retain them, but then somebody else pays more to steal your people. Then you pay more to steal their people. I've talked to

my counterparts, including those from IOUs. I said, this can't continue. We can't afford it.

Bringing people into skilled crafts is critical for the survival of the country. Someone's got to get their hands dirty and work. We need more people doing that, and we're losing a lot of people with experience.

The salary competition is huge. How do you retain people? Even in the engineering world it'll get tighter as people have different ideas of what going to work looks like.

It becomes difficult to be successful in the utility industry if you're going to be working from home. You must actually be on the ground seeing it, doing and experiencing it, in order to build proficiency and experience.

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The human resource challenge is going to be felt throughout the utility world, particularly on the power side. It's already felt there.

The other issue is aging infrastructure. We're all dealing with different infrastructure challenges overlaid on top of a changing resource mix. Am I bringing my water from northern California or from somewhere along the coast? Am I doing recycled water? With those demands, am I changing

my voltage to accommodate electrification? What am I doing with my power grid?

Meanwhile, time is ticking on old infrastructure. You must figure out how to upgrade that and hopefully not spend the money twice. Ideally, you spend the money one time while addressing both of those issues.

The problem is you don't know all the answers yet. It's a challenge looking at how to deal with aging infrastructure, but in a way that complements and anticipates the future.

PUF: You're the general manager of LADWP. That's a big job. How do you prioritize?

Marty Adams: It's a challenge because there're so many things that are critically important. You're sitting in your office and everything that comes through has a rush tag on it. We're running a seven billion dollar-plus a year agency.

We have a lot of business functions. We need to be looking at our rates and our rate structure. That of course impacts our bond rating, which impacts our borrowing. We do a tremendous amount of borrowing every year.

There's the business function, which is challenging, especially in a political environment. If you're at the PUC, you can say, "Here's what I need." Go through the hearings. In L.A., we're much more tied to local politics about rates.

As I mentioned earlier, a significant portion of our customer base is low income. It's a challenge to say, "We need to get all this work done, and it's going to cost a lot of money. We're sorry you can't afford to pay for it."

There's a big push for equity right now for everybody paying their fair share, and how do we ensure that? Our rate structures are not perfectly set up for that. It's tied to some charter rules, city transfer, Prop 218, Prop 26.

Case in point, a lot of people put solar on the roofs because they want to help the environment, but most people want to save money. They are not paying as much for electricity anymore and therefore not paying into the infrastructure that supplies them power when the sun's not shining or in the middle of the night or when they're charging their cars or batteries.

As more people become energy independent, less people are paying for all the infrastructure. You end up with a disproportionate burden on those who can't afford a photovoltaic system.

One of our big strategies is making sure, as we move forward, that all these pieces are tied together, and in a fair way. We have strategies on going green in an affordable way, and then there's an overarching strategy of making sure it's fair. We're trying to make sure we're not financially breaking the backs of people who are supporting the system.

Water reliability factors into this too. In developing resources, we're doing a lot of stormwater capture that is cost effective; on the other hand, wastewater cleanup is not so cheap, but it's cheaper than desalinization.

As we build those resources, the question becomes do we spread that cost across all our customers? Do we spread costs across all people or only those who want or can afford that nice green yard?

It's tough, because as a public utility, you don't deal with haves and have-nots. You try to treat everyone the same. But then someone says, "If I can afford to buy more, will you sell me more?" Are we fully burdening them with the cost of that or not? This is an issue for us strategically, in how do we do this in a way that makes sense?

One of the first strategies and priorities is reliability. LADWP has excellent reliability. We have one of the best leak records from lost water nationally. That's a core value and we will not sacrifice reliability as we move to the future.

We must maintain a certain amount of infrastructure work. We have to do things that will ensure that customers have power when they need it. One of the fastest ways to lose customer buy-in is for us to have a brownout or a blackout.

During the energy shortages in the state, we helped out by

putting excess energy onto the grid to help the rest of the state. We are fully resourced. We don't have rolling blackouts here.

Last year, the governor asked people not to charge electric vehicles at night because of energy shortage. Talk about losing credibility fast. If you do that at the local level, you're going to lose the public's faith and trust. Keeping our service levels up is a huge priority.

Part of our strategy is building new transmission, while at the same time we're maintaining or upgrading the distribution infrastructure we already have. That becomes a big piece of our

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strategic mission, not losing any ground while we continue to make gains going forward.

Chris Rogers: Are you optimistic about how the industry will perform over the next ten years?

Marty Adams: I am very optimistic. In the utility industry and here at LADWP we have professionals who are dedicated and have a tremendous amount of knowledge.

There are competing ideas, but we know how to get to where people want us to go. We know what carbon-free looks like and utilities are situ-

ated to answer questions and meet that challenge.

Innovators are working on fixing those challenges for us because they're flexible and entrepreneurial. Not much like utilities that aren't always fast enough but want to make sure we don't slow down progress.

We're working a lot with private industry because they're a critical part of developing new technologies and methods. We need solar and wind developers, but at the end of the day, we need reliable public utilities that are well-funded to do their jobs.

At the same time, we must be vigilant against someone trying to take advantage of utility infrastructure for their own profit or trying to transfer infrastructure costs on to somebody else. We still have to look out for our customers and do our due diligence in evaluating the next big thing.

We're paid to be risk averse, especially in the water quality world. We're not in it for the money and therefore can't spend our efforts on experimental, untried sources and methods.

Ultimately, when things don't go right in an economic

downturn, a pandemic or natural disaster, our customers will look to us for essential, life-sustaining services. That will never change and so we have to continue to be a strong foundation of our civic establishment.

We know that our political leadership and our constituents want a cleaner, sustainable world. I believe the future is bright

Patriot of His Country and Industry

(Cont. from p. 4)

magazine of their own, as a platform for discussion and debate. So, with the endorsement again of NARUC, Public Utilities Fortnightly began publication.

To honor this great man, Owen Young, and to honor the Owen Youngs of our day, Public Utilities Fortnightly recognizes an extraordinary individual of the utilities industry from time to time with its highest honor, the Owen Young Award. To date, only two individuals have been given this honor.

In the June 2017 issue of Public Utilities Fortnightly, we gave the Owen Young Award to David Owens, after he retired from serving as Executive Vice President at the Edison Electric Institute. And then in the January 2020 issue, we gave the Owen Young Award to Sue Kelly, after she retired from serving as President at the American Public Power Association. Both Owens and Kelly had careers of enormous positive impact.

Almost three and a half years have passed since we last bestowed this honor. But now it is timely to recognize a very special third awardee. With this, the June 2023 issue of Public Utilities Fortnightly, we give the Owen Young Award to Tom Fanning, after he has retired, a few days ago, on the twenty-fourth of May, from serving as CEO of Southern Company.

I've known Fanning for thirty years, from the days when he was a rising star managing Southern Company's strategy team. Even then, his boundless energy and passion was evident to anybody around him, matched by his quant mindset and urgency to act. He oftentimes spoke of organizations playing offense as well as defense, as if he was the West Point quarterback he almost became in his youth but for an untimely injury.

When I think of Fanning's accomplishments, I'm hard-pressed

and we'll reach these goals, but as utilities, we want to make sure we get there in a carefully planned and measured way with reliability and redundancy.

When we get to this bright future, I want to make sure we stay there and that we are able to bring all our customers along with us. **PUF**

to order them in importance to Southern Company stakeholders, the utilities industry, and the country. Was his leadership in jump-starting the industry's coming together on cybersecurity the most impactful? Or was it his persistence against the odds in keeping alive the nation's next generation of nuclear? Or engineering the industry's most dramatic decrease of carbon dioxide emissions? Or popularizing that greater diversity of a utility's workforce made it more productive and ultimately more powerful financially? Or standing up for the qualities of the vertically integrated electric utility model?

Much like Owen Young a hundred years before him, Fanning has again and again proven to be a patriot of his country and industry. Indeed, perhaps Fanning also personifies a second hero in the history of our industry, Alvin Ward Vogtle.

Readers will recognize the name Vogtle because Southern Company's nuclear plant is named to honor him, including the two 1,215 megawatt units completed in the late nineteen eighties and the two 1,117 megawatt units now being completed. Though few readers will know that before Vogtle became chairman of Southern Company, he was a World War II fighter pilot who after thirty-five missions in North Africa ran out of fuel while taking enemy fire over Algeria and was taken to prison camps in Germany. On his fifth attempt to escape the camps, Vogtle did make it to freedom in Switzerland, the story that inspired the book and movie of the same name, "The Great Escape." Vogtle's character was portrayed in the movie by none other than the Hollywood star, Steve McQueen.

It seems so fitting that Fanning sat in the same chair of leadership at Southern Company as did Vogtle, and that among Fanning's many accomplishments, he saw to it that Plant Vogtle will generate twice as much clean around-the-clock power for the people of the southeastern United States, and for decades to come. Owen Young. David Owens. Sue Kelly. Alvin Vogtle. Tom Fanning. That's quite a hall of fame. **PUF**

Senior Advisor to the President, John Podesta, on the Administration's position on passing bipartisan permitting reform:

"We've got to get that clean energy where it's needed by accelerating the deployment of transmission. And making permitting more efficient and predictable for interstate transmission projects. A key part of this is allowing projects to allocate project cost to customers that benefit from the new transmission... Congress should direct FERC to set a minimum level of transfer capability between regional grids. And should require the consideration of multiple benefits, including economic, operational, and environmental benefits when making transmission decisions. Congress should cut duplicative and burdensome reviews. Often environmental reviews and permitting processes are done sequentially, which can cause unnecessary delay. Congress should address areas of overlap, including by allowing transmission projects to rely on analysis and corridor-wide programmatic environmental reviews."