

WRITTEN TESTIMONY OF PAUL LAU
CEO, SACRAMENTO MUNICIPAL UTILITY DISTRICT
AT THE HOUSE SELECT COMMITTEE ON THE CLIMATE CRISIS
HEARING ON
“MAKING THE CASE FOR CLIMATE ACTION: CREATING NEW JOBS AND
CATALYZING ECONOMIC GROWTH”

APRIL 20, 2021

Chair Castor, Ranking Member Graves, and Members of the Committee, thank you for holding this important hearing on the economic development opportunities of climate action and for the opportunity to testify. SMUD supports the important work of this Committee in identifying and advancing key recommendations from its 2020 Congressional Action Plan for a Clean Energy Economy, and in continuing to work towards meaningful policy changes that will unleash the benefits of climate action.

My name is Paul Lau and I am the CEO of the Sacramento Municipal Utility District, or SMUD. SMUD is the nation's sixth-largest community-owned utility, operating on a not-for-profit basis to supply electricity to California's capital region since 1946. Today, SMUD serves a population of 1.5 million throughout a service territory of 900 square miles situated in the Sacramento Valley of Northern California.

We appreciate the opportunity to share our experience creating jobs and economic growth through climate action. SMUD welcomes the chance to serve as a resource for members of the Select Committee who may wish to learn more about our work keeping the lights on 24 hours-a-day, 365 days-a-year for residents and businesses in Sacramento, California while laser-focused on keeping our rates affordable and our operations environmentally sustainable with every decision we make.

SMUD powers the region's industries and homes using a generation mix that today is roughly 50% natural gas, 20% hydropower, and 30% other renewable energy (solar, wind, distributed energy). We are governed by a seven-member Board comprised of, and elected by, voters within Sacramento County. Our business model and local governance mean we are extraordinarily responsive to the wishes of our customers and local community. That's one reason why our customers consistently rank SMUD #1 in J.D. Power's customer satisfaction surveys. As a utility, reliable service, low rates, and environmental stewardship have long defined the three-pronged approach SMUD applies in serving our customers.

The devastating effects of climate change continue to impact our region. Northern California wildfires that made national news in recent years burned in counties surrounding Sacramento. SMUD implements robust vegetation management, inspection and maintenance, facility hardening and situational awareness programs that help minimize the risk that a wildfire could spread through our service territory or damage our equipment, facilities and other assets. Such proactive measures have helped our customers and our region avoid the sorts of catastrophic fires that are becoming more prevalent as our region logged some the hottest summers on record over the past few years.

Still, the American Lung Association's "2020 State of the Air" reported Sacramento ranked in the top 5 worst U.S. cities for ozone pollution. And four of the top five are in California. Children in our region are 30% more likely to suffer from childhood asthma. Like wildfires, we view this to be a statewide emergency.

That's why we have moved with urgency to reduce our carbon footprint. SMUD has consistently set and achieved goals that exceed California's environmental requirements, which are already among the most stringent in the nation. SMUD was the first large utility in the state to reach a 20% renewable portfolio standard in 2010, and our utility adopted a 33% renewable portfolio standard even before this became a mandate in California.

In 2018, our locally-elected Board adopted an Integrated Resource Plan to put SMUD on the path to net-zero emissions by 2040. But even as we geared up for that transition, our Board made the determination that it was not enough to meet the gravity of the climate crisis. So, last year they adopted a Climate Emergency Resolution to accelerate that goal to 2030. We know it won't be an easy road, but the stakes are too high to not do everything we can to reach zero as quickly as possible. It will take a coordinated approach to clean energy policy development, investment, and engaging customers and other stakeholders to take part.

Today, I am proud to announce that our Board is poised to approve an ambitious plan to surpass its own net zero goal and completely eliminate carbon emissions from SMUD's power supply by 2030. This would make SMUD the first large utility in the U.S. to reach absolute zero carbon emissions, leading the way in context of the Biden Administration's goal of achieving a clean power sector by 2035. We just concluded the public comment period on SMUD's technical plan to accomplish this, which involves deploying existing clean technology, innovation, retiring and retooling our natural gas plants, and closely managing financial impacts.

Getting to zero by 2030 will require SMUD to invest upwards of \$4.6 billion over the next 9 years. To put this context, SMUD's average annual revenue in the 3 years ending 2019 was roughly \$1.5 billion. Our zero carbon investments will impact all of SMUD's operations and engage our customers as part of the solution. We will increase our renewables and batteries by 3.5 times our current capacity, retire 25% of our fossil fueled generators and run the rest on clean fuels, and we will more than double our investments in energy efficiency and electrification. We'll continue to support our customers' investments in rooftop solar and batteries as well as focusing on new technologies like vehicle to grid or virtual power plants, because our customers are an important part of the solution to reach zero carbon emissions.

Importantly for me, as an engineer and a SMUD customer, as it is to all our customers, our 2030 Zero Carbon Plan seeks to eliminate carbon emissions from our power generation activities without compromising SMUD's world-class reliability or our commitment to affordability. To be precise on affordability, that means getting to zero by 2030 while maintaining rates among the lowest in California, on average 35% lower than our neighboring utility, which effectively keeps over \$800 million in our local economy. So, we see this as an investment not only in reliable and resilient clean technology and infrastructure, but also in jobs and a healthier, safer and more just future for generations to come.

As the state capital of California, Sacramento's largest employment sector has historically been federal, state and local government. However, our region's economy today is more broadly based. Government and transportation are the largest sectors of employment in the area followed by information technology and financial services, education and health services, leisure and hospitality and construction. The Sacramento region also recently updated its Comprehensive Economic Development Strategy with the U.S. Economic Development Administration, which identified the greatest growth potential in three industry sectors: food and agriculture, life sciences, and future mobility.

SMUD's customer base is among the most socio-economically diverse in the country. The population we serve is approximately 62% Caucasian, 23% Hispanic/Latinx, 17% Asian, 11% African American, 6% multi-racial and 1% Native American. Currently, the per capita income in Sacramento is roughly \$32,000, median income is \$67,000, with approximately 12.5% of our population living below the poverty line.

As a community partner for nearly 75 years, SMUD is paying particular attention to ensure the benefits of our zero-carbon future are felt across all our communities. We do not want to just "bring others along." That is why we have already held nearly a dozen community listening sessions on our 2030 Zero Carbon Plan and are continuing to seek feedback from local stakeholders. SMUD will continue to engage with our diverse communities as we implement our plan so that they are all part of the solution. As we aggressively decarbonize our power supply, we are striving to empower our communities to work with SMUD to develop place-based strategies, to make Sacramento communities more livable, resilient, and prepared to take advantage of a low-carbon future. We understand from experience that this can only be achieved by recognizing Sacramento is one of the most diverse cities in the nation and that we need to develop strategies respecting and building upon our local, unique qualities.

SMUD's Sustainable Communities program, launched in 2018, builds on the decades-long work we have done to support under-resourced communities. We have identified areas in our region that are in particular need of assistance through a Resource Priorities Map, developed from analysis of current data indicating neighborhoods most likely to be under-resourced or in distress due to lack of community development, income, housing, employment opportunities, and transportation. SMUD partners with policy makers, transit leaders, technology companies, health care providers and other community-based organizations to maximize our impact and collaboration with community members to help all our communities – from rural to suburban to urban – to be part of a zero-carbon future.

To this end, SMUD has invested more than \$5 million with 130 local organizations to execute projects aligned with the four pillars of our Sustainable Communities program: social wellbeing, healthy environment, prosperous economy and economic wellbeing. These partnerships have allowed SMUD to establish relationships locally and create a pipeline to ensure that all communities are included in our zero-carbon future. One such partnership is with Habitat for Humanity - Greater Sacramento, through which we have brought solar and new energy solutions to hundreds of new and existing homes for low-income families, and which will continue over the next few years. By adding electric vehicle (EV) charging at many Habitat homes through our partnership, SMUD is fostering the transition from fossil-fueled based to electric transportation in our lower income neighborhoods.

SMUD is focusing our community outreach to improve equity in recruitment and remove barriers many communities face in pursuing zero-carbon careers. SMUD is helping local partners implement a workforce development program known as Energy Careers Pathways, which trains participants in basic installation of electrical, solar, and EV charging equipment. By the end of 2021, the program will have 125 graduates with a large number of participants hired to perform green energy jobs. SMUD also provides staff to assist the California Conservation Corps in running its energy lab which employs and trains young adults in electrical certifications

and EV fast-charging infrastructure. Similarly, SMUD’s energy “Barons” program provides training to individuals in utility trades to develop their community energy management skills for next-generation facilities management. These programs have translated into career training and zero carbon related job placement for over 200 participants, which SMUD sees as essential to ensure we have a workforce skilled to perform work needed to achieve Zero Carbon by 2030.

SMUD’s education outreach and workforce pipeline efforts aim to engage students from kindergarten through college in energy-related topics and STEM disciplines. Through partnerships with universities and junior colleges, we support a range of STEM education programs and activities including a leadership program for students at California State University, Sacramento. We offer paid internships for high school and college students, and our STEM-focused college scholarships come with paid internships at SMUD.

Through the California Mobility Center, a public-private consortium led by SMUD, we are seeking to establish Sacramento as a center of electric mobility innovation. The California Mobility Center, which began operations this year, fosters clean, e-mobility technologies and solutions that can scale and become engines of economic growth. E-mobility includes on- and off-highway vehicles and refueling and charging infrastructure supporting autonomous, electric, connected, and shared/smart mobility.

Recently, the Center was awarded approximately \$1.4 million in Coronavirus Aid, Relief and Economic Security (CARES) Act Grant funds from the City of Sacramento and a \$600,000 grant from the California Workforce Development Board to provide workforce training to residents seeking advanced manufacturing careers. The funds have been shared with La Familia, the Greater Sacramento Urban League, Asian Resources, and the Sacramento Valley Manufacturing Association and other community training partners to develop workforce training programs supporting jobs in advanced manufacturing and mobility industries. Since the program’s startup last year, over 350 participants received job-readiness or technical training in manufacturing trades, more than 50 secured internships with local companies, and over 30 participants have been placed in jobs. Many of the students trained in the Energy Career Pathways program and the California Mobility Center are being placed in union careers. Representatives of trade unions are brought in as part of these trainings to evaluate student projects and to perform onsite interviews.

Workforce training is critical to begin now because demand for skilled employees in the e-mobility sector is only going to rise. A recent economic assessment estimates that from 2022-2027 the California Mobility Center and the companies it draws to the Sacramento region could generate \$2.5 billion in economic activity. The California Mobility Center’s operations during that five-year span could directly and indirectly support approximately 8,500 new jobs and generate over \$900 million in total annual labor income.

Among these new jobs, the assessment projects that the Mobility Center and its service provider partners would directly employ approximately 130 individuals at an average wage of \$75,000. Expanding client companies are expected to add about 1,900 new jobs over the five-year period. With continued support of partners, an estimated 3,150 trainees and interns will gain job skills development through Mobility Center programs. Through the multiplier effect, an additional

3,400 indirect and induced jobs and \$455.5 million in labor income could be supported at other local businesses in Greater Sacramento. The actual level of job and economic impact will depend on the number of companies that the Mobility Center is able to assist and the extent to which the new jobs created are in the Sacramento Region, but these numbers represent the expected scenario. The additional jobs and labor income at other local businesses stem from indirect and induced impacts of supplier demand created by the Mobility Center and its clients and consumer demand created by their employees.

Beyond creation of new jobs, the partnerships SMUD is developing through the California Mobility Center is helping us realize the direct benefits of emissions reduction and indirect benefits of lowering fleet operating costs (contributing to lower rates for our customers). At SMUD, we have electrified our light duty vehicle fleet 100% and implemented advanced technologies to reduce idle time and eliminate emissions from our heavier duty fleet. Currently, 13% of our fleet of nearly 1,000 vehicle and construction equipment includes an electric drive or hybrid feature, and we are aiming to accelerate this progress significantly through 2030. This year, we have partnered with a start-up, Zeus Electric Chassis, LLC – which established an operational presence in Sacramento based on its collaboration with the Mobility Center – to acquire five all-electric class 5 work trucks that will replace diesel engines in our fleet. Our investment in all-electric class 5 vehicles is SMUD’s first in this medium duty class of vehicles and the only direct purchase option available from the market today. We will continue to track the market and advance fleet electrification in medium and heavy-duty vehicles classes in the future. SMUD expects to see and acquire all-electric bucket trucks in the next few years and there may be options for alternative fuel cell technology before 2030 as the market develops and heavy duty lower- or zero-emissions equipment options mature.

Looking prospectively, SMUD will be identifying new skills needed and partner with community organizations to develop upskill or entry-level training programs to support new zero carbon technologies. We expect to develop customized strategies to attract and retain residents from under-resourced communities to these stable, economically mobile careers.

We believe our carbon reduction actions will help counteract the effects of climate change, but it is much more than that, with even wider-reaching direct impacts on the health and wellbeing of the Sacramento region’s 1.5 million residents today and for generations to come.

SMUD has a long track record of working collaboratively with a wide range of partners and industries to deliver environmental, economic and social benefits for the Sacramento Region. In the early 2010s, SMUD successfully installed smart meters across our entire service area as part of the SmartSacramento smart grid effort. The heavy upfront investment was offset by a \$127.5 million Department of Energy grant, more than 60% of the total smart-grid grant allotment in California. SmartSacramento revolutionized the California capital region’s power grid, enabling digital enhancements in home and businesses and on SMUD’s grid to make our power supply more efficient, resilient, and secure. Importantly, this smart grid technology facilitated integration of increased renewable energy sources, electric vehicles, rooftop solar and other distributed energy resources, making it possible to even contemplate our zero-carbon goal.

As we move forward in our pursuit of zero carbon emissions, our approach maximizes local investment in renewable energy, with a direct impact on and improving air quality and health outcomes. It drives inclusive economic development, creates jobs, and spawns innovation. By taking a leadership role in addressing climate change, we hope to make Sacramento an example to follow and a region where climate-conscious businesses seek to establish roots. For SMUD, and me personally, what we are doing to get to zero by 2030 is not political; it is simply the right thing to do.

Again, thank you for your consideration of this important topic and please do not hesitate to call on SMUD as a resource as this Select Committee continues its work exploring and developing climate policy solutions. I look forward to addressing any questions you may have.