

Exhibit to Agenda Item #2

Accept SMUD's **2030 Zero Carbon Plan** with the clarifications made in response to public comments.

Special Board of Directors Meeting

Wednesday, April 28, 2021, scheduled to begin at 5:30 p.m.

Virtual Meeting (online)

Why take action toward zero carbon

SMUD, and regional agencies recognize that we're facing a climate crisis and must act.

American Lung Association gives the region an "F" for air quality.*

Rising temperatures have an adverse impact on the economy.

Local childhood asthma rates are about **30%** higher than the national average.**

Regional air quality is a serious concern.

Opportunity for collaboration to strengthen our regional economy.

Jobs and inclusive community development.

Reduce droughts, wildfires and severe weather.

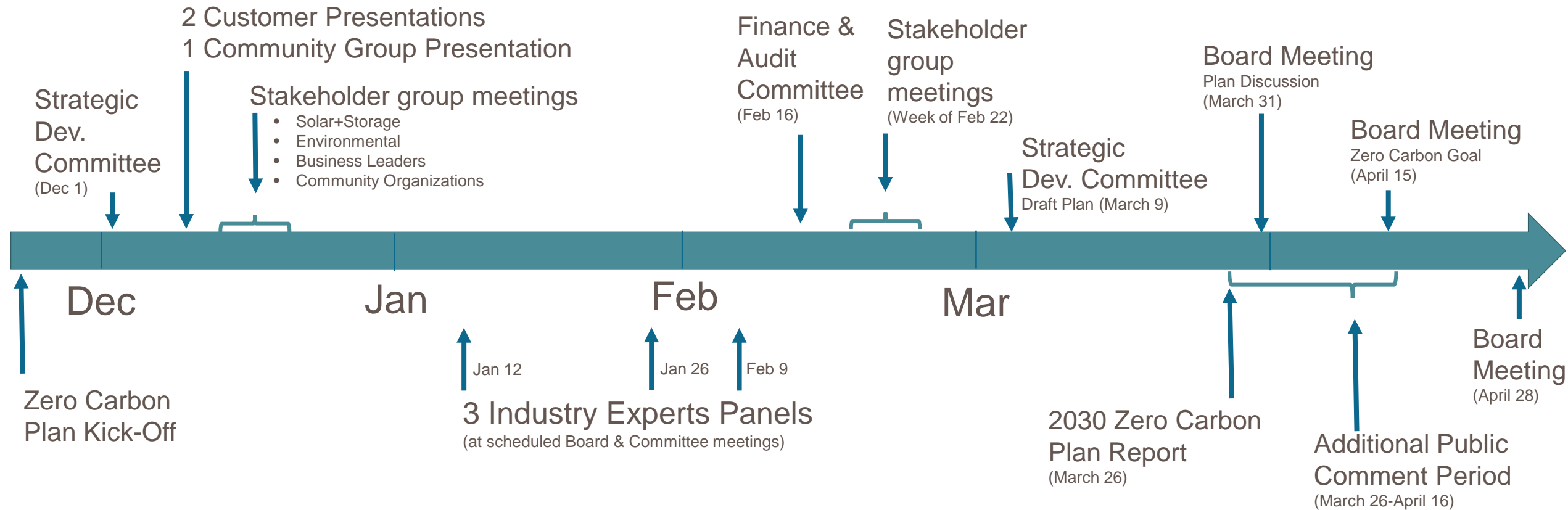
Improved health and regional air quality.

Attract innovation and investments to the region.

Address environmental inequities.



The development of the 2030 Zero Carbon Plan





Extensive outreach & engagement



7 stakeholder workshops

- 270 attendees (Dec. 2020 & Feb. 2021)



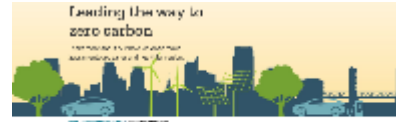
3 Customer & Community meetings

- 400 customers
- 336 surveys completed (Dec. 2020)



3 expert panel discussions @ Board Committee meetings

- 11 experts



Our 2030 Clean Energy Vision

smud.org/ZeroCarbon & ZeroCarbon@smud.org

- FAQs
- Meeting recordings
- Opt-in for updates
 - Video
- Email for feedback



Listserv notification emails

- Proactively customer notification of upcoming zero carbon meetings



Presentations

- External presentations by Board members, CEO & other key staff



CEO communications

- Video blogs
- All hands employee meeting
- Workgroup meetings



Employee resources

- SharePoint site
- Talking points
- 2 Brown bag learning sessions
- 15+ Intranet news stories & updates



Innovation leadership

- Innovation Leadership Team
- Call for employees' innovative ideas
- Centralized hub for idea vetting



Tailored workgroup presentations

- Project team leads @ staff roundtables
 - Q&A session



7 Board & Committee meetings

(Dec. 2020 – March 2021)



3-week public comment period

on draft 2030 Zero Carbon Plan



Flexible pathway to zero carbon





Summary of Public Comments

48 public comments received during March 26 – April 16

Our Community	<ul style="list-style-type: none">• 9 comments encouraging education, outreach, marketing, and highlighting value of partnerships• 11 comments asked us to continue prioritizing equity
Technology, SMUD Standards, or Programmatic Suggestions	<ul style="list-style-type: none">• 12 comments proposed technologies or changes to SMUD standards or programs
Reliability and Cost	<ul style="list-style-type: none">• 4 comments stressed need to maintain reliability and highlighted risks of wildfires and risks to resilience of the system• 11 comments expressed concern over cost impacts and potential impact on rates
Electrification	<ul style="list-style-type: none">• 15 comments encouraging acceleration of electrification goals and requesting equipment to be included in plan
Solar and Storage	<ul style="list-style-type: none">• 14 comments on solar resources, mainly requesting continued strong support for rooftop solar as part of the Plan• 4 comments specifically mentioned VNEM as a solution for some customers, especially low income and multi-family residences• 6 comments encouraged storage to play a larger role in the Plan
Thermal Resources, Retooling, and Retirement	<ul style="list-style-type: none">• 9 comments requested clarity on our natural gas generation repurposing and plant retirements• 10 comments focused on clean fuels, requesting clarity on use of biofuels and recommending limited or transitional use, and expressing support for green hydrogen



Public comments



350
sacramento



"We at 350 Sacramento and the undersigned signatories are excited to support SMUD's 2030 Carbon Zero Plan's expansion of new renewables, storage capacity, distributive resources, and emerging technologies. The Plan represents a monumental effort for SMUD and an inspiring example for the electric utility industry nationally."



"The Sierra Club is very supportive of SMUD's efforts; we are especially pleased with the SMUD goal of zero carbon as opposed to net zero carbon. ...We look forward to working with you in implementing an aggressive zero-carbon plan that meets the moment this climate crisis demands, and maintains affordability and reliability."

"We applaud SMUD's leadership to accelerate the elimination of greenhouse gas emissions from your power portfolio. This leadership is exactly the type of bold accountability and direction that we need to achieve our goal for carbon neutrality."



Mayor's office

"The Sacramento Climate Coalition, a group representing 34 organizations in the Greater Sacramento area, would like to applaud, once again, SMUD's commitment to preserving the planet as we know it for our children and grandchildren. Your leadership in this area is outstanding. Thank you."



"The Coalition for Clean Air appreciates your commitment to reaching zero carbon by 2030. This is a thoughtful plan, combining a strong **commitment to decarbonization with the practical necessity of keeping costs low for customers.**"

National Fuel Cell
Research Center
(at UC Irvine)

"The NFCRC greatly appreciates the bold vision laid out by SMUD to reach zero carbon emissions in our power supply by 2030."



Clarifications for the 2030 Zero Carbon Plan

Flexibility is key – our 2030 Zero Carbon Plan is a living plan that will be updated and adjusted regularly

Clarifications:

1. Study and prioritize retirement of McClellan in 2024 and Campbell in 2025

- Detailed reliability studies to confirm feasibility and priority of retirements at target dates

2. Eliminate the use of fossil fuels as soon as possible but no later than 2030.

- Intent to retire all thermal plants as soon as possible or repurpose for clean fuels such as green hydrogen
- Pursue biofuels as transitional fuel until long term clean fuel options identified
- Research green hydrogen, long duration storage, VPPs and other technologies that reduce or eliminate the need for our thermal plants



Clarifications for the 2030 Zero Carbon Plan - Continued

Clarifications:

3. Study the potential retirement of Carson, Procter&Gamble and Cosumnes prior to executing re-tooling strategy

- Detailed reliability and economic analysis to determine all feasible, reliable and cost-effective resources available that could reduce or eliminate the need for the plants

4. The 2030 Zero Carbon Plan is flexible and will consider a variety of technologies

- Examples: Concentrating solar power, large scale thermal storage, microgrids and fuel cells
- As implementation progresses, the timing, size, location and types of resources selected will become clear.

5. Maximize the value of SMUD's existing hydro facilities in the Upper American River Project (UARP).

- Examine pumped-storage within existing facilities and optimize operations



Clarifications for the 2030 Zero Carbon Plan - Continued

Clarifications:

6. Behind-the-meter resources and virtual net metering

- Rooftop solar and storage are very important in the Plan along with other distributed resources
- Tariffs play an important role in customer investment decisions and are considered in our normal rate setting process
- VNEM program for low income customers will be discussed during the next rate process



Collaborate for an inclusive zero carbon economy



Policy-makers & regulators

- Support beneficial climate policy and legislation
- Remove barriers for electrification
- Support funding for zero carbon innovation
- Collaborate and generate support for grants and regional investments in zero carbon
- Help attract zero carbon investments
- Share SMUD goals with constituents



Private sector

- Catalyze regional innovation
- Create an international hub for new investment in the Sacramento region
- Explore co-development, test technology and seek funding
- Participate in programs to help manage energy and find clean business solutions
- Install EV charging for employees and fleets



Community & the region

- Align priorities and resources for maximum impact
- Create a vibrant ecosystem to attract business investment
- Advance inclusive economic development
- Develop inclusive workforce of the future



Customers

- Go electric with SMUD incentives and rebates
- Invest in rooftop solar + storage
- Participate in clean energy programs such as Greenergy and Shade Trees
- Participate in SMUD's future zero carbon workshops, pilots and programs
- Weatherization, energy efficiency & electrification offerings for income-qualified customers



What customers can do today

Go electric



Rebates up to \$3,000

- Electric vehicles
- Induction cooking
- Heat pump water heaters
- Heat pump HVAC
- All-electric buildings (smud.org/Rebates)

Rooftop solar + storage



Solar education & evaluation for your home and battery storage incentives.

Greenenergy



SMUD will meet up to 100% of your electricity needs with renewable and carbon-free energy.

SMUDEnergyStore.com



Shop for energy-saving home upgrades at SMUD. See if you qualify for instant online rebates on smart thermostats and more.

Free Shade Trees



Improve air quality and cool your home with free shade trees in partnership with the Sacramento Tree Foundation.

Income-qualified offerings



- Discount rates
- Weatherization
- Energy efficiency
- Electrification
- Payment arrangements
- Home energy assistance program

- Access free educational classes and videos for students, teachers, residents & businesses.
- Access rebates, financing & integrated design solutions for businesses.

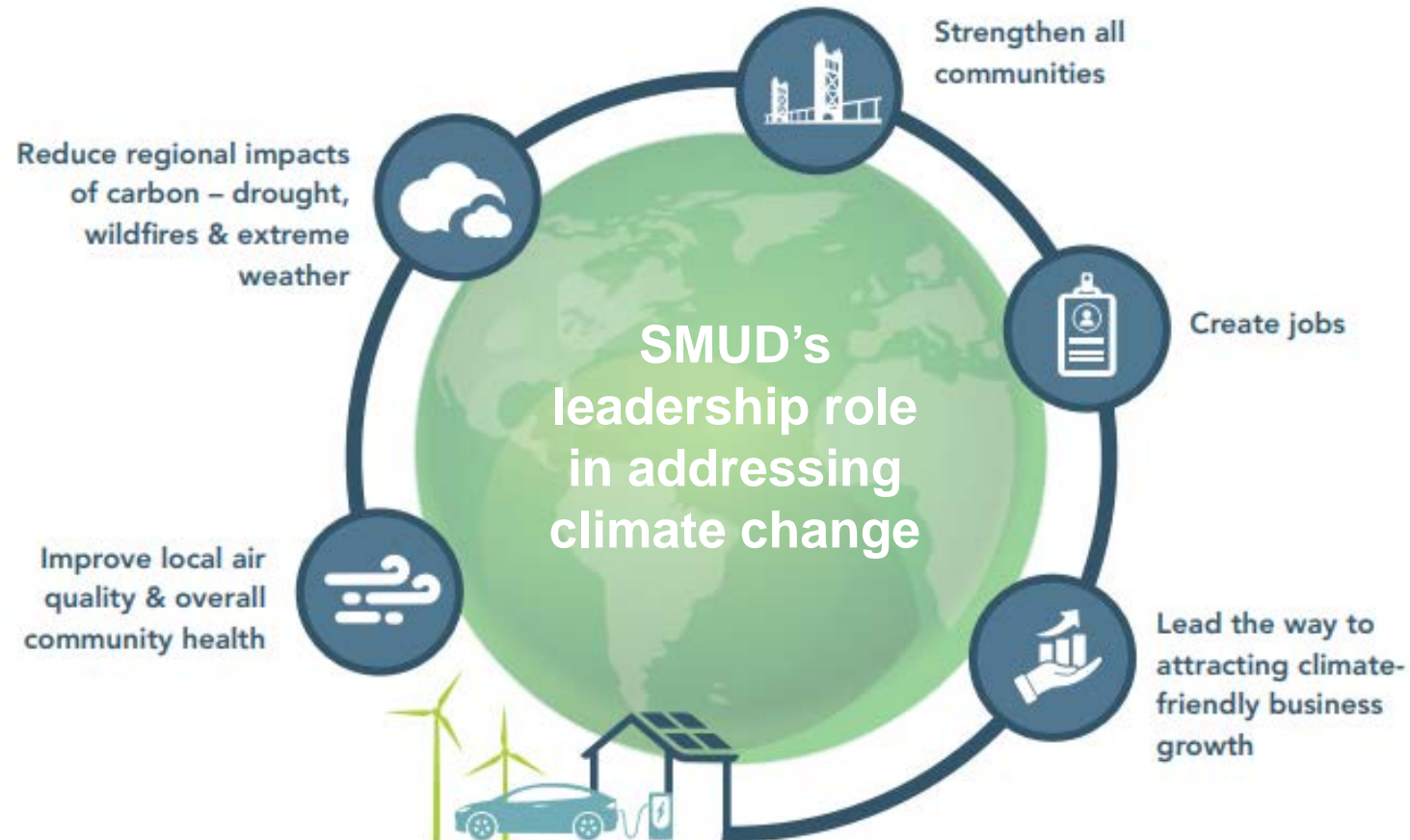
- Use SMUD's tools and tips to reduce energy use during peak times when energy costs the most.
- Manage your energy usage through MyAccount on smud.org or the SMUD mobile app.

+ more at smud.org

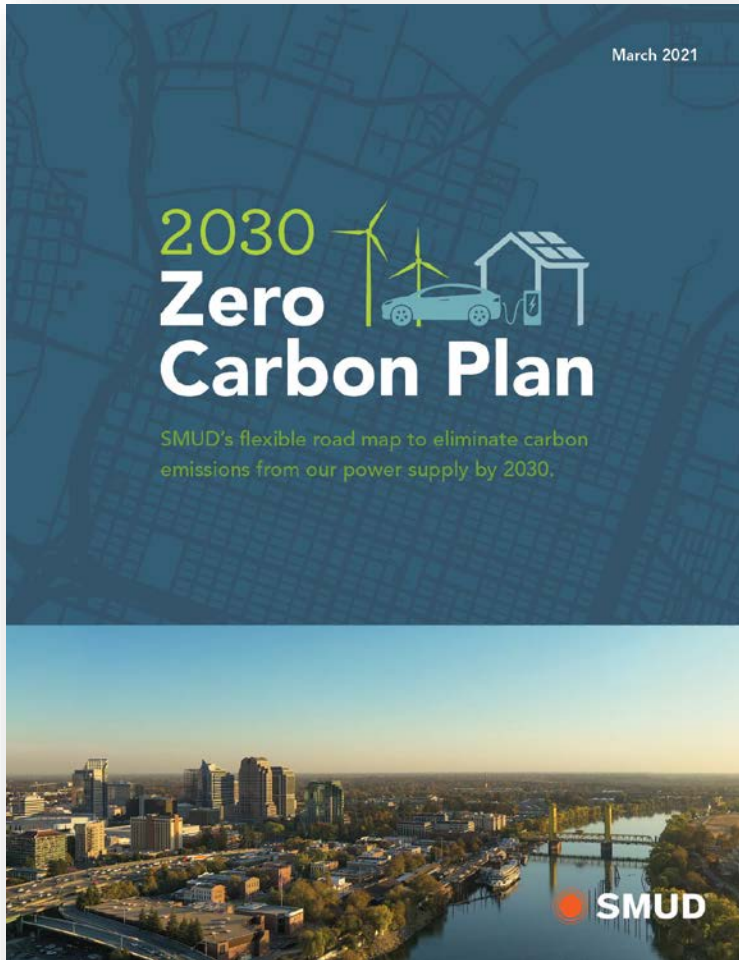


Zero carbon: Broad and inclusive benefits

Together, we can transform into a model clean region.



Next steps



- **Implementation starts immediately including continued public information, meetings and outreach**
- **Annual update and adjustment of the Plan**
 - The Plan is a living document that will be adjusted based on new information and results as we progress to 2030

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Questions?

