

SACRAMENTO MUNICIPAL UTILITY DISTRICT

SMUD BOARD OF DIRECTORS

SPECIAL VIRTUAL MEETING

Held

Tuesday, August 31, 2021

Beginning at 5:30 p.m.

REPORTER'S TRANSCRIPT OF

PUBLIC HEARING

ON PROPOSED RATE ACTION

Chief Executive Officer and General Manager's
Report and Recommendation on Rates and
Services, June 17, 2021, Volumes 1 and 2;
and
Chief Executive and General Manager's Report
and Recommendation on Open Access
Transmission Tariff, Volume 1, June 17, 2021.

Reported remotely by CHERYL L. KYLE, CSR No. 7014

SCRIBE REPORTING & LEGAL COPYING
2207 J Street
Sacramento, CA 95816
916-492-1010

Page 2

1 VIRTUAL ATTENDANCE

2 SMUD Board of Directors:

3 NANCY BUI-THOMPSON, President, Ward 2
 4 BRANDON ROSE, Vice President, Ward 1
 5 GREGG FISHMAN, Ward 3
 6 ROSANNA HERBER, Ward 4
 7 ROB KERTH, Ward 5
 8 DAVE TAMAYO, Ward 6
 9 HEIDI SANBORN, Ward 7

10 SMUD Executive Staff:

11 PAUL LAU, CEO and General Manager
 12 LAURA LEWIS, Chief Legal & Government Affairs
 13 Officer and General Counsel
 14 JENNIFER DAVIDSON, CFO

15 SMUD STAFF:

16 ALCIDES HERNANDEZ, Manager, Revenue Strategy
 17 ERIC POFF, Director, Substations,
 18 Telecommunications & Metering Assets
 19 RHONDA STALEY-BROOKS, Manager, Community
 20 Development Outreach & Education
 21 ANDREW MEDITZ, Senior Attorney, Legal
 22 Department
 23 JOSUE (SWAY) GARCIA, (Technical Support)
 24 TONI STELLING, (Meeting Support)

25 Also In Attendance:

SMUD staff
 Members of the public

--oOo--

Page 3

1 INDEX REGARDING PUBLIC COMMENT

2 --oOo--

3 LIVE PUBLIC COMMENTS:

4 Alex Morris	Al Rich
5 Leah Miller	Fatima Malik
6 Frank Lindh	Lola Pudinski
7 Jan Smutny-Jones	Johan van Ravenhorst
8 Beth Hassett	Patrick Sterns
9 Nancy Rader	Mo Kashmiri
10 Patrick Bean	Alan Escarda
11 Bryan Dove	Chiwah Slater
12 Azizza Davis Goines	Steve Uhler
13 Luis Sanchez	Sara Long
14 Faith Galati	Steve Letendre
15 Pastor Mark Meeks	Paul Sullivan
16 Darrick Lam	Benjamin Davis
17 Tracy Jackson	Jonathan Gemma
18 Michael Lynch	Jennifer Tanner
19 Jeff Owen	Kathleen Nicholson
20 Jeff Spies	Keith Umamoto
21 Evan Schmidt	Marcy Winograd
22 Ed Murray	Karina Gonzalez
23 Michael Zaro	Subhash Kale

24 COMMENTS READ DIGITALLY:

25 Severin Borenstein	Megan Shumway
Lee Miller	Tom Wiechert
Sean Frame	Jane Lamborn
Rick Codina	Ed Smeloff
John Briggs	Robin Durston

26 NAMES CALLED BUT NOT PRESENT:

27 Meghan Nutting	Vincent Battaglia
28 Steve Berlin	David Mueller
29 XiMarie (Marie) Chen	David Salzmann
30 John Lindwall	Steve Sedio
31 Debbra Jacobs-Robinson	Janna West-Heiss

--oOo--

Page 4

1 (Meeting called to order at 5:30 p.m.)

2 --oOo--

3 (Board business conducted, not transcribed.)

4 --oOo--

5 BOARD PRESIDENT BUI-THOMPSON: Now, on to

6 the public rate hearing.

7 Item 2 is to hold a public hearing on the

8 Chief Executive Officer and General Manager's Report

9 and Recommendation on Rates and Services, Volumes 1

10 and 2, dated June 17th; and the Chief Executive and

11 General Manager's Report and Recommendation on Open

12 Access Transmission Tariff, Volume 1, dated

13 June 17th.

14 The chief legal officer will now provide

15 an overview of the public rate process. The public

16 hearing will be transcribed by a court reporter and

17 under the rate ordinance.

18 Members of the public that have not

19 submitted a request for additional time at least ten

20 days in advance of today's meeting will have up to

21 three minutes to provide non-duplicative testimony

22 on the Chief Executive Officer and General Manager's

23 Report.

24 Laura, would you like me to continue

25 reading the rest?

Page 5

1 SMUD GENERAL COUNSEL LEWIS: Yes. When

2 you're finished, I can provide the overview.

3 BOARD PRESIDENT BUI-THOMPSON: Okay,

4 great.

5 I would ask speakers to confine your

6 comments to the rate report itself. If you have

7 comments on other SMUD matters, you'll have the

8 opportunity to speak during the Statements of the

9 Public portion of the agenda. Additionally, we've

10 received over 40 requests to provide public comments

11 this evening. In order to assure an efficient

12 meeting, please do not repeat comments made by other

13 speakers, instead reference your agreement with the

14 comments and add any further new points that you'd

15 like to make. We appreciate your cooperation.

16 Laura, did you have additional comments

17 before we open the public hearing?

18 SMUD GENERAL COUNSEL LEWIS: Yes.

19 I just wanted to provide some

20 clarification on the process tonight because it is a

21 little bit unusual.

22 Tonight, as you know, the board will be

23 holding a public hearing on the CEO and General

24 Manager's Report and Recommendation on Rates and

25 Services.

Page 6

1 The board will not be adopting a final
 2 rate resolution tonight. Instead, after the hearing
 3 closes, the board will discuss or introduce the
 4 draft rate resolution provided by staff or an
 5 alternative rate resolution.

6 The board's introduction of the rate
 7 resolution tonight or any alternate triggers a
 8 public comment period that will run for ten days.
 9 This is all pursuant to our Rate Ordinance 15-1.
 10 Then, at the September 16th meeting, staff will be
 11 requesting that the board adopt a final rate
 12 resolution. So this is a two-step process.

13 BOARD PRESIDENT BUI-THOMPSON: Great.
 14 Thank you.

15 Okay. At this time I'd like to open the
 16 public hearing. Before taking public comment, we
 17 will have several presentations.

18 Our first step is our CFO, Jennifer
 19 Davidson.

20 SMUD CFO DAVIDSON: Thank you very much,
 21 President Bui-Thompson.

22 So we have about 30 minutes, probably a
 23 little bit more, of presentation tonight. We'll be
 24 presenting by four speakers, and you'll be hearing
 25 the proposals and also about the public outreach

Page 7

1 process and the comments received. And so -- next
 2 slide, please.

3 Tonight, we'll talk about SMUD's approach
 4 to this rate proposal, which we actually are quite
 5 proud of because we think it is both
 6 transformational and industry-leading, and, more
 7 important, they are a direct support -- direct
 8 support with SMUD's carbonization goals.

9 SMUD has the most ambitious carbon goals
 10 of any large utility in the nation. You're going to
 11 be hearing details about the proposed rate changes
 12 listed here. But one item I wanted to call out are
 13 the programs that are being proposed along with the
 14 rates. Typically, programs are not paired with
 15 rates the way we have. This new approach where
 16 we've paired the two is important because programs
 17 are flexible, unlike rates. This means that we are
 18 going to be able to adjust our programs and our
 19 incentives as we need to to stay on track with our
 20 zero carbon road map and goals. Next slide, please.

21 So you're going to see tonight's
 22 presentation includes a lot of discussion about our
 23 proposed solar-and-storage rate. It is a
 24 significant change, and there is a lot of interest
 25 in this proposal. So I'd like to provide some

Page 8

1 context to help frame the conversation.

2 I would like you to understand that this
 3 change is essential and, second, how we work with
 4 the solar and storage industry to hear their
 5 concerns. We worked to collaborate to develop a new
 6 rate structure that ensures we continue to support
 7 the solar-and-storage industry in a way that is fair
 8 and equitable to all customers, solar and non-solar.

9 But bottom line is this: SMUD supports
 10 our customers going solar. Even better, we want and
 11 need our customers to invest in solar paired with
 12 storage. Together, solar and storage will help us
 13 decarbonize our power supply reliably. And that
 14 storage adds the important benefit of flexibility,
 15 and this is the key which creates the benefit to the
 16 grid for everyone.

17 So if you'll allow me, I'm going to talk
 18 about a few numbers which really show all the
 19 changes and -- (inaudible). Today, we pay our solar
 20 customers about 13 cents per kWh for that excess
 21 solar they sell back to SMUD.

22 Independent experts have valued that
 23 energy closer to 7 cents. And then for context,
 24 we've just completed a deal to buy solar from local
 25 utility-scale for about 3.5 cents. That means that

Page 9

1 we can buy local solar power for a quarter of what
 2 we are paying rooftop solar.

3 So now if you go back to 1998, rooftop
 4 solar systems were a lot more expensive, actually
 5 three times more expensive than today. And in order
 6 to get customers to invest in these expensive solar
 7 systems, SMUD was required to pay customers a higher
 8 rate by state policy, and that was called Net Energy
 9 Metering. That was put in place in 1998 as a
 10 temporary measure to incentivize the adoption of
 11 solar energy, and it worked.

12 Today, as I mentioned, prices have
 13 plummeted, and the solar industry is a mature
 14 industry. And that successful transition was helped
 15 by SMUD and all SMUD customers.

16 Some of our customers made investments in
 17 solar systems, and we want to recognize the
 18 importance of these investment pioneers, and that is
 19 why we propose that existing solar customers can
 20 stay on the existing legacy NEM rate through
 21 December 31st, 2030.

22 Now, during the public comment, you're
 23 likely going to hear assertions that these changes
 24 are going to make investing in rooftop solar
 25 unattractive and it is going to kill the solar

Page 10

1 industry in the SMUD service territory.
 2 But we are confident, and we've got data
 3 to show, that this is not going to be the case. And
 4 that is because our approach is both unique and
 5 industry-leading. First of all, as I mentioned,
 6 it's holistic. We are going to be pairing rates
 7 with programs. And, second, I think it's important
 8 to note that SMUD is community-owned, and we are
 9 not-for-profit, and we are a value-based
 10 organization. We do what's right for all customers,
 11 the full community, which often requires balancing
 12 the many asks. And we kept this in mind as we put
 13 our proposal together.
 14 We need to rebalance NEM compensation, and
 15 we'll be able to take some of that money and invest
 16 in other carbon-reduction activities like storage
 17 and electrification. But we are approaching this
 18 change in a way that won't irreparably harm the
 19 solar industry. That is in no one's interest. But
 20 the other items are needed. We must keep rate lows
 21 because low rates are key to electrification, and,
 22 moreover, affordability is so critical to any of our
 23 customers.
 24 We know that business models are changing
 25 and technology's changed, and the change we really

Page 11

1 want to accelerate right now is the adoption of
 2 storage. We are complementing the new rates with a
 3 program to help transform -- just like we
 4 transformed solar -- to transform to solar and
 5 storage, \$25 million in incentives to encourage
 6 that.
 7 So utilities need electricity to run the
 8 grid safely, reliably, and efficiently. That's why
 9 solar paired with batteries is so important.
 10 Pairing batteries with solar benefits the customer
 11 who purchases the system but also the grid and all
 12 customers. Next slide, please.
 13 While our official rate process kicked off
 14 on May 18, before that, there was an extensive two
 15 years of collaboration with the solar industry, our
 16 solar customers, other stakeholders. And since
 17 May 18, there has been extensive public outreach,
 18 and we've held two public workshops. Tonight's
 19 meeting will result in the resolution our board will
 20 ultimately vote on on September 16th.
 21 And I do want to acknowledge that we have
 22 had some customers express concern about this
 23 proposal, and I understand some of them are here
 24 tonight. But I also think it's important to realize
 25 and note that the last two months we have had

Page 12

1 extensive outreach throughout our community, across
 2 our community, and the feedback was mostly "thank
 3 you" or no feedback at all, which we translate to
 4 mean that we have got it about right.
 5 No proposal is going to make everyone
 6 happy, especially one that involves a change to our
 7 solar rate. But the fact that so few of our
 8 customers out of the more than 600,000 in our
 9 community during our last two months of outreach
 10 cited -- they did not cite any concerns. And that
 11 lack of feedback tells us that we believe that we
 12 have shaped a proposal that, while not perfect --
 13 because no compromise will -- never be perfect, but
 14 it offers something for everyone. And you're going
 15 to see later in the presentation that our outreach
 16 was extensive.
 17 So at this point -- (inaudible phrase) --
 18 as the introduction, but before I turn it over, I
 19 would like to thank the many people who have been
 20 helping us with this. It's been a collaborative
 21 effort. It's been extensive. We've had the
 22 Technical Working Group. There's been a lot of
 23 investment of people's time, their expertise, and I
 24 just really wanted to sincerely appreciate the
 25 partnership.

Page 13

1 And with your input, we believe we have a
 2 solution that supports the solar and storage
 3 industry through a major and necessary transition.
 4 We believe it's also fair to all customers and helps
 5 support keeping our rates affordable. It supports
 6 the carbonization and a resilient power supply for
 7 the Sacramento region.
 8 So with that, I'm going to turn it over to
 9 Alcides Hernandez. Thank you.
 10 SMUD STAFF ALCIDES HERNANDEZ: Thank you,
 11 Jennifer.
 12 Good evening to the board and members of
 13 the public. My name is Alcides Hernandez. I'm here
 14 tonight to provide more details on the rate
 15 recommendations. Next slide, please. Thank you.
 16 These are the proposed changes to SMUD
 17 rates. First, we are recommending two rate
 18 increases: the 1.5 percent effective March 1 of
 19 2022 and a 2 percent rate increase effective
 20 January 1st of 2023. This applies to all our
 21 customers. We're committed to keeping rates within
 22 rate of inflation, and this rate proposal does that
 23 through 2030.
 24 Second, we are recommending a new
 25 solar-and-storage rate to be effective January 1st

Page 14

1 of 2022. And as Jennifer mentioned, we are
 2 recommending in this proposal that all existing --
 3 we call them Net Energy Metering 1.0 existing
 4 customers be allowed to stay on the legacy rate
 5 through 2030. This is a very important part of our
 6 recommendation. Eric Poff will later provide more
 7 details about this as part of the recommendation.
 8 Third, we are recommending an optional
 9 residential Critical Peak Pricing rate effective in
 10 the summer of 2022. This will be June 1st. Our
 11 goal is to enroll up to 30,000 residential customers
 12 on this new optional rate.
 13 Fourth, we have other miscellaneous rate
 14 changes that include Open Access Transmission Tariff
 15 updates, to delay to the commercial rate restructure
 16 and new rates nomenclature, plus minor language
 17 changes to certain tariffs and rules. We also have
 18 information on items related to certain programs and
 19 fees. Eric Poff will cover those items at the next
 20 part of the presentation. Next slide, please.
 21 Why are these rate increases required?
 22 This proposed adjustments are needed because, like
 23 many other businesses, it costs for SMUD to provide
 24 services going out, and there are several factors
 25 for that. Those include wildfire prevention and

Page 15

1 mitigation, infrastructure improvements to maintain
 2 high reliability, clean energy compliance
 3 requirements and mandates, increased operating costs
 4 including material and labor costs. Next slide,
 5 please.
 6 Now, I'm going to provide you here with an
 7 illustration of how these proposed rate increases
 8 will be reflected on customer bills. This slide is
 9 a comparison by type of customers from those
 10 proposed changes in Year 2022 and 2023. There are
 11 several numbers here, and I just want to walk you
 12 through some of them to illustrate that.
 13 For example, the first row we highlighted
 14 in orange displays the average residential customer
 15 bill currently at about \$126.44 at 750 kilowatt
 16 hours per month. So the estimated monthly impact
 17 for that average customer in 2022 is estimated to be
 18 \$1.91 with an additional \$2.57 in Year 2023.
 19 As you see on the table, we are also
 20 providing illustrations of our commercial customers.
 21 For example, you see after the orange line, the
 22 small commercial, the range is from 20 to 299 kW.
 23 Just to give you a perspective, those could be a
 24 small gas station, a coffee shop, a restaurant.
 25 Those will see an average monthly impact of about

Page 16

1 \$44 in the first year, in 2022, and \$59 in the
 2 second year, in 2023.
 3 For the rest of the commercial customers,
 4 their average bill impact varies depending on their
 5 size, as you see in this slide. This covers the
 6 bill impact portion of the recommendation. The next
 7 slide, please.
 8 Now, this chart is a very important chart.
 9 It displays the average -- (inaudible) for kWh.
 10 This is a typical benchmark used to compare utility
 11 rates. I want to note that not only are our rates
 12 among the lowest in California, as you can see by
 13 the orange bar at the bottom, but we're also one of
 14 the cleanest utilities in the nation, and we are
 15 comitted to eliminating 100 percent of greenhouse
 16 gas emissions from our power supply by 2030.
 17 In the chart, as I mentioned earlier,
 18 you'll see SMUD is highlighted in orange -- in the
 19 orange part toward the bottom to illustrate that
 20 we're one of the lowest. And just to give you a
 21 perspective, those lower rates translate into about
 22 \$800 million per year in electric bills that our
 23 customers save compared to Pacific Gas & Electric.
 24 The next slide, please.
 25 Now, the next slides are part of the

Page 17

1 second part of the recommendation, the new
 2 solar-and-storage rate. Eric Poff will provide the
 3 details of that recommendation.
 4 SMUD STAFF ERIC POFF: Thank you, Alcides.
 5 My name is Eric Poff. I am the director
 6 for Substations, Metering and Telecommunications.
 7 And I just want to start by saying I've
 8 been working on this rate design with the rates team
 9 for the last two years, and I just want to say what
 10 a privilege it has been working with them, and I
 11 feel very honored to be able to present this to the
 12 board this evening. So why don't we go ahead and
 13 get started.
 14 And before we kind of jump into the actual
 15 solar-and-storage rate, I think it's important to
 16 talk about where we've been and where we're going.
 17 And where we've been is Net Energy Metering 1.0, and
 18 over the last 23 years or so we have invested
 19 \$250 million into the solar industry to bring it
 20 from its early, nascent days into the thriving
 21 industry it is today. Over those 20-plus years, we
 22 have adopted 36,000 solar customers and 300
 23 solar-and-storage customers.
 24 So you're going to hear quite a bit this
 25 evening about this \$25 million, and there's really

Page 18

1 two purposes behind this. The first purpose is,
 2 obviously, we want to encourage our customers to
 3 adopt solar with storage, and really this ties back
 4 into our 2030 Zero Carbon Plan. We think by
 5 partnering with them, we can really unlock the full
 6 value of the storage unit and help us achieve
 7 meeting those evening peak loads without having to
 8 dispatch our traditional gas-fired power plant.
 9 But the second purpose is really to
 10 transition the business model for the solar
 11 industry. Currently built on subsidies, we want to
 12 transition this business model to a sustainable
 13 business model while it's providing great benefits
 14 for all of our customers.
 15 So we think we can take that current
 16 300 solar-and-storage customer number and take it to
 17 30,000 solar-and-storage customers by 2030 and
 18 double the amount of solar-only customers. And,
 19 again, these are just targets. If we exceed them,
 20 that's great. These aren't like cap limits or
 21 anything like that. All right. Next slide, please.
 22 So just one more quick slide here on kind
 23 of where we've been and comparing that to the
 24 proposal, the new proposal rate. Again, this --
 25 we've helped transform the market. We've invested a

Page 19

1 quarter billion dollars into the rooftop solar
 2 industry since 1998. And that's when, as Jennifer
 3 mentioned, the state mandate went into effect. We
 4 met that state mandate back in 2017, and over these
 5 literally past four years, we have been evaluating
 6 how best to go from NEM 1.0 to the new
 7 solar-and-storage rate.
 8 So why are we doing this at all? Why is
 9 SMUD taking this on? Well, it is -- it really comes
 10 down to -- one piece of it is subsidies, right? And
 11 one piece of that subsidy is we are currently paying
 12 a two-X multiplier for that value of solar. As
 13 Jennifer mentioned, we are paying 13 cents, and our
 14 Value of Solar Study comes in that -- where we
 15 should be paying 7.4 cents. And this creates a
 16 caution for those non-solar customers and especially
 17 for our under-resourced customers.
 18 And so just a little bit more on the past:
 19 We are kind of behind the curve. If you look at our
 20 neighbors, Turlock and Modesto and Roseville, they
 21 all transitioned away from NEM 1.0 three, four years
 22 ago. And if you look -- you know, the CPUC is
 23 currently holding our NEM 3.0 proceeding. So this
 24 is where we think -- this is the right time for the
 25 change.

Page 20

1 So real quick, on the right I would say
 2 that \$25 million investment is truly this idea of
 3 instead of it just benefitting some customers, we
 4 are going to bring environmental benefits,
 5 resiliency, just a tremendous amount of grid
 6 benefits by partnering with our customers that adopt
 7 solar and storage. Next slide, please.
 8 So I really like this slide because it
 9 really talks in outline about the last two years in
 10 detail, and I'll go through this quickly. But this
 11 was a journey that started back in October 2019 with
 12 our Technical Working Group that was made up of
 13 20 different stakeholders; over half of them were
 14 from the solar industry and environmental industry.
 15 And we locked ourselves in a room for over 40 hours
 16 over four months, and we came out with an agreement
 17 of 24 value components that would go into the Value
 18 of Solar Study.
 19 We put out a competitive bid. E3 was the
 20 successful bidder for that, and they took six months
 21 and did a completely independent Value of Solar
 22 Study based on the inputs from the Technical Working
 23 Group. And they came back with a range -- and this
 24 is really important. They came back with a range
 25 between the value of solar within SMUD's service

Page 21

1 territories between 3 cents and 7.4 cents.
 2 Staff is recommending the absolute maximum
 3 value of the value of solar of 7.4 cents as the
 4 export compensation rate.
 5 Back in July, the board made some
 6 significant changes to Strategic Direction 2 or what
 7 we call SD2. If you're on the phone not knowing
 8 what that is, that is the board's guidance to staff
 9 on how to do rate design. And if you look at those
 10 revisions, you can draw a direct line back to the
 11 solar-and-storage rate proposal.
 12 And then, obviously, the 2030 Zero Carbon
 13 Plan, think of the solar-and-storage rate as that
 14 vehicle. It's not going to get us all the way
 15 there, but it is very much designed to help us
 16 achieve our 2030 Zero Carbon Plan.
 17 Then, finally, in October 2020, the board
 18 did, I thought, something really interesting. They
 19 came to staff, and they said, "Staff, go meet with
 20 the solar industry and come up with a win-win
 21 solution." So let's talk about that a little bit
 22 more. Next slide.
 23 I remember this really specifically. This
 24 is when Paul just became our CEO. This was one of
 25 his earlier tasks, if not his first. And he spent

Page 22

1 40 hours of his time as our new CEO, and he met with
 2 each one of these ten different organizations here
 3 you see on this slide. And he said, "Please sit
 4 down with my staff and do the hard work, roll up
 5 your sleeves, and come up with a win-win solution."
 6 Now, I would love to tell you that all ten
 7 of these folks said, "Yes, let's do that." Well,
 8 that's not true. Over half of them did. And for
 9 them, we want to thank them for spending over
 10 630 hours with staff to develop this win-win
 11 solution we're going to go over tonight. Next
 12 slide.
 13 So, okay, you spent 630 hours. What were
 14 you all doing? So this is kind of -- I really like
 15 this slide because it talks about the compromise.
 16 You know, tapping back to 2019, SMUD recommended a
 17 grid access charge. Our current solar sizing limit
 18 is 100 percent of usage: no storage incentive, no
 19 virtual solar.
 20 So what we heard from the industry was no
 21 grid access charge, no sizing limits, no changes to
 22 self-consumption, we want a VNEM program. That's
 23 Virtual Net Energy Metering, if you're not familiar
 24 with that term.
 25 So what came out of it is in the green

Page 23

1 box. This proposal does not have a grid access
 2 charge. We have increased our solar sizing limit to
 3 110 percent. That \$25 million of incentives really
 4 taps back to that, you know, no changes to
 5 self-consumption but really increasing the amount of
 6 self-consumption that is happening at that
 7 behind-the-meter resident because of the storage
 8 unit. And we're very excited to talk about our VNEM
 9 program that's specifically targeted to our
 10 under-resourced community. Next slide.
 11 So this is really important. If we have
 12 anybody on the phone tonight that's listening that's
 13 a current SMUD NEM 1.0 customer, we are recommending
 14 to the board that all existing solar customers get
 15 those continued NEM 1.0 benefits through 2030,
 16 really foundational; it's really key.
 17 Now, the new solar storage rate, we are
 18 recommending an effective date, January 1st, 2022,
 19 to all customers interconnecting on or after that
 20 date would go on to the solar-and-storage rate.
 21 And, again, I can't say this enough: It is to
 22 accelerate that storage adoption curve. Instead of
 23 having to wait several years down the road where we
 24 think there's going to be mass adoption of storage,
 25 we want that mass adoption storage now, in 2022.

Page 24

1 And, again, we are very excited about partnering
 2 with those customers that adopt storage and
 3 unblocking of all that value that the storage unit
 4 has.
 5 So let's go into some of the nuts and
 6 bolts. I mentioned the 7.4 cents. That's going to
 7 be the export compensation rate no matter what time
 8 of day or what season it is. We are committed to
 9 re-looking at this every four years. And we're
 10 putting parameters around this that the rate is not
 11 going to be impacted by plus or minus 30 percent,
 12 and we're really going to be looking at what is
 13 happening in the market to drive those decisions.
 14 And staff is going to implement an
 15 interconnection fee for most residential customers.
 16 That will be \$475 and really -- and that will be
 17 effective January 1st, 2022, and this has got no
 18 revenue basis to it. It is all direct recovery to
 19 have that SMUD employee roll out to the house or
 20 that engineer to review the designs and to get the
 21 person interconnected in our system. All of those
 22 hours roll up to \$475. Next slide.
 23 So let's talk about that 7.4 cents. It is
 24 really -- think of it as a value stat. When we
 25 think about our behind-the-meter rooftop solar

Page 25

1 customers helping us displace some of that thermal
 2 generation, those traditional gas-fired power
 3 plants, well, there is a voided cost associated with
 4 that. SMUD doesn't have to buy gas. It doesn't
 5 have to provide carbon allowances. It doesn't have
 6 to make capacity payments. So all of that is in the
 7 7.4 cents per kilowatt.
 8 So one thing in particular that's a little
 9 unique is that we are recognized -- the unique
 10 indirect benefit of having to go out and disturb
 11 land for a utility-sized solar. So that indirect
 12 benefit is also rolled into that 7.4 cent number.
 13 Next slide.
 14 As Jennifer mentioned, we did hear some
 15 concerns, and so we wanted to take these head-on.
 16 And we put them into -- let's call them categories
 17 or themes I think is a better word. So four
 18 different themes that we heard. And this is from
 19 both, you know, the solar industry and from
 20 customers.
 21 And so this one came up quite a bit, and
 22 so let's go into these. And staff, we were very
 23 committed when we were trying to address these
 24 concerns to just answer with data and kind of leave
 25 the conjecture out of it. So these are very much --

Page 26

1 supposed to be data-driven answers, so.
 2 The one concern we had was the NEM 1.0
 3 rate, the recommendation that it was going to go
 4 through 2030 isn't long enough. We had customers
 5 saying that needs to go on for 15 years, 20 years.
 6 We had one customer say 40 years, right? So they're
 7 concerned that 2030 is not long enough.
 8 So we took this perspective when we kind
 9 of said, okay, what does the data say? We thought
 10 about that last solar customer that interconnects,
 11 let's say, December 31st of 2021, what would their
 12 payback look like at the end, on December 31st,
 13 2030. And when we ran the numbers and the averages,
 14 it came out that 95 percent of that system would be
 15 paid off by this 12/31/2030 date.
 16 So you can think about the remaining other
 17 36,000 solar customers, their systems for a vast
 18 majority of them are going to be paid off by that
 19 time.
 20 So a lot of numbers here on subsidies.
 21 You can read through these. I just want to pull out
 22 one number to kind of -- hopefully you remember and
 23 it kind of sticks. And that number is \$10 million.
 24 So the idea of extending beyond the staff
 25 recommendation of 2030, it has a price tag, and that

Page 27

1 price tag is \$10 million per year for every year we
 2 extend the existing 36,000 NEM customers, so just
 3 want to make sure everybody understands that. And
 4 we are -- again, from staff's perspective, we are
 5 looking at this as a fairness and equity issue.
 6 These are just the facts. These are the numbers,
 7 right, 36,000 residential solar customers. Out of
 8 that, only 2,000 of them are from under-resourced
 9 communities or EAPR customers. And SMUD, with its
 10 valuable relationship with grid alternatives, has
 11 funded, you know, 125 of those as well. So next
 12 slide.
 13 So payback period, I would say this was
 14 the most prominent concern. If I had to rank and
 15 file these, I would put this one first. So we heard
 16 this from the solar industry: Customers won't
 17 install solar with a longer payback period.
 18 Okay. So we said let's go back at our
 19 data, SMUD. And we said we've got great data. You
 20 know, the bars, as you can see here, are the number
 21 of customers that installed solar systems over the
 22 years. And then on the top line chart there, you
 23 can see the payback of -- what the payback period
 24 was during those years.
 25 And so we looked at our own

Page 28

1 solar-and-storage solution, and our customer is
 2 going to take our incentives and become Virtual
 3 Power Plant partners with us and unlock all of that
 4 value of the storage unit; that payback period is
 5 about 12 years. So we said, well, gosh, back in
 6 2016, 2015, 2014 -- this chart goes way far left; we
 7 tried to keep it so everybody can see it --
 8 thousands and thousands and thousands of customers
 9 interconnected with a 12-year or greater payback
 10 period.
 11 But there's also a little bit -- you know,
 12 a trend here that I would also point out on this
 13 graph. It's sloping down, and that can be directly
 14 tied back towards lowering PV costs. So you can
 15 kind of imagine, right, '22, '23, as PV and storage
 16 continues to lower; that 12-year payback on the new
 17 solar-and-storage rate will become 11 years and
 18 10 years as time goes on. All right. Next slide.
 19 So we heard this one as well; so I'd
 20 probably say this is the second most prominent
 21 concern we've heard from solar industry, is that if
 22 you reduce the rate of -- for excess solar, is it
 23 going to harm the solar industry?
 24 So, again, we were committed to
 25 data-driven, you know, research. We reached out to

Page 29

1 Modesto. We reached out to Roseville, and we'll get
 2 into those charts in a little bit. We said, "What
 3 happened, Modesto, when you implemented your NEM
 4 2.0?" And so they gave us the graph and very
 5 thankful if anybody is listening from Modesto.
 6 So they implemented NEM 2.0 back in 2017.
 7 They had a 7.6 cent per kilowatt export
 8 compensation. Our recommendation is 7.4. They did
 9 not have a glide path. We are not recommending a
 10 glide path. And you can see a steady increase in
 11 solar installation. And if you take a look at 2021,
 12 that's just the year-to-date number, January through
 13 July, like, if that trend continues through the rest
 14 of the year, that could be their best year ever, so.
 15 And a couple of other things I'll just say
 16 just as a quick point of contrast, you know, Modesto
 17 is not recommending \$25 million of storage
 18 incentives. Modesto is not recommending virtual
 19 solar. So those are other, I think, tailwinds, I
 20 would say, in our recommendations. Next slide.
 21 Okay. Same thing, Roseville, they
 22 implemented their successor rate 2018, and they had
 23 a 5.98 cent export compensation rate and no glide
 24 path, like we're recommending no glide path, and you
 25 can see a definite steady increase of solar

Page 30

1 installs. And look at that year-to-date number in
 2 2021: 1,157 installs from January to July. They
 3 are going to have their best year ever pre-successor
 4 rate or post-successor rate, right?
 5 And, again, I'll contrast with, you know,
 6 Roseville did not implement, you know, storage
 7 incentives; they're not implementing virtual
 8 storage. And I will also add their interconnection
 9 fee is about 40 percent higher than what staff
 10 recommends. Next slide.
 11 So we heard this concern too -- and,
 12 again, you know, that battery storage is not ready
 13 for mass adoption. There are concerns that we are
 14 going to do all of this incentivized storage, and
 15 the storage units aren't going to be there.
 16 So we did our best research we could
 17 here -- and, again, not to call out Tesla, but it's
 18 hard not to, you know, call on one of the largest --
 19 world's largest battery manufacturers. So we were
 20 listening to Tesla's Q2 2021 earnings call, and they
 21 are targeting a production of one million Powerwalls
 22 per year by the end of 2022. To put that in
 23 perspective, there are only 200,000 storage units in
 24 the world. So that's like a five-X multiplier. So,
 25 yes, there is global demand for storage units. We

Page 31

1 recognize that. Tesla and other battery
 2 manufacturers are increasing storage production
 3 because of this global demand, so. Next slide.
 4 So, real quick, I'll finish up on these
 5 kind of comparisons again. I talked about these two
 6 charts back in May, but I thought we would bring
 7 them out one more time. Internal rate of return,
 8 you know, don't worry about that financial
 9 instrument. Think about this as, you know, you have
 10 a CD or your returns on your investments, you know,
 11 stock investments. So that's kind of what this
 12 represents.
 13 And we recognize that under NEM 1.0 solar
 14 only, over the life of the unit has an investment of
 15 9.9 percent, a really good return. So we did that
 16 same analysis for solar and storage -- and, again,
 17 taking advantage of our incentives, become a VPP,
 18 you know, Virtual Power Plant, partners with us, and
 19 that rate of return for the life of the system came
 20 back at 8.7 percent. We fully recognize it is not
 21 as high as 9.9 percent, and you can see that play
 22 out with a couple of additional years of a payback
 23 period.
 24 But there is some contrast here that, you
 25 know, there's not the level of subsidies involved

Page 32

1 under NEM 1.0, and there's this customer-wide
 2 benefit of storage and really helping us achieve the
 3 2030 Zero Carbon Goal.
 4 And let's took a quick chart look here on
 5 the right. So we think customers that are willing
 6 to adopt these technologies, solar and storage, and
 7 join us as Virtual Power Plant partners, we can
 8 remove one metric ton out of that average household
 9 usage. That -- if we hit our, you know -- if what
 10 we are forecasting, the 30,000 customers, if we hit
 11 that, that would be equivalent to removing 7500
 12 gasoline cars off the road. Next slide.
 13 So, real quick, want to support -- want to
 14 really thank a few of our public supporters, the
 15 first being NRDC, Natural Resources Defense Council,
 16 for publicly supporting this innovative solution.
 17 And I really like Mohit, what he put here, is that:
 18 We engaged in a transparent, stakeholder-driven
 19 process to develop the solution. You know, he
 20 refers to this, a little bit later in the paragraph,
 21 as generous because we are not including any fixed
 22 charges for solar customers. And unlike what's
 23 happening at the CPUC, that process is still going,
 24 we don't know what's going to happen for sure, but
 25 they are looking at fixed charges so that non-solar

Page 33

1 customers are -- don't have to pay any undue rate
 2 increase. Next slide.
 3 We also want to do a big thank you to
 4 Environmental Defense Fund for also publicly
 5 supporting this rate design. It is leveraging --
 6 step in the right direction, Michael refers to it,
 7 and really -- (inaudible phrase) help achieves our
 8 zero carbon plan. Next slide.
 9 Okay. So I'm not going to read all of
 10 this for time's sake, and it's actually going to get
 11 read into the public record after this, but we are
 12 very, very proud of this public endorsement from
 13 Severin Borenstein. For those who are in the rate
 14 design world, he needs no introduction. He's truly
 15 one of the thought leaders in rate design. And if
 16 you're not familiar with Severin Borenstein, he's
 17 the business administration and public policy
 18 professor at the Haas School of Business and faculty
 19 director of the Energy Institute of Haas.
 20 So he called out a couple of things here
 21 that I would like to just call out. And he, again,
 22 refers to this as we are being optimistic in our
 23 evaluation of distributed energy resources, but he
 24 also refers to SMUD as a leader in this area, and he
 25 really thinks that the Critical Peak Pricing is a

Page 34

1 really good move to address the times when the grid
 2 is most stressed. Next slide.
 3 So let's talk a little bit more about that
 4 Critical Peak Pricing and some other minor
 5 miscellaneous rate changes. So I want to emphasize,
 6 totally optional, residential Critical Peak Pricing
 7 rate, customers who have a smart thermostat,
 8 customers who have solar and storage, storage-only,
 9 solar-only all can participate, completely optional.
 10 And what we are doing is we are providing
 11 a discount on off-peak and mid-peak hours for
 12 customers that opt into this rate. And then if you
 13 are on this rate, if SMUD declares a Critical Peak
 14 Pricing event, there will be a premium for energy.
 15 And it's a purposeful price signal to encourage
 16 those customers with a smart thermostat to conserve
 17 energy and don't use as much energy; and for those
 18 customers with storage, to dispatch their storage
 19 unit to maximize the return on investment for the
 20 storage unit.
 21 So we are going to be implementing this
 22 during -- only during summertimes, June through
 23 September. The events will be anywhere between one
 24 to four hours, and we are committed to not having
 25 more than 50 hours per summer. Next slide.

Page 35

1 So not much to talk about on this one.
 2 Open Access Transmission Tariff update, it does not
 3 impact any SMUD residential and commercial retail
 4 customers. This is part of the official rate
 5 recommendation and required to be part of the dec.,
 6 so. Next slide.
 7 All right. Real quick, I want to talk
 8 about new programs that support -- and I really want
 9 to emphasize what Jennifer said earlier about the
 10 beauty of programs being able to react to what's
 11 really happening in the market.
 12 So the board, Paul, the executive team --
 13 I call it the gas pedal and the brake pedal. If
 14 we're not seeing what we want to see and meeting our
 15 milestones for adoption, you know, these programs
 16 can be adjusted to try to accelerate growth. Next
 17 slide.
 18 So \$25 million, again, this program that
 19 I've mentioned more than once, this is a little bit
 20 more of a granular fashion. We recognize that we
 21 want to give customers options. Not everybody is
 22 going to want to be at that, you know, Virtual Power
 23 Plant level.
 24 So the first one is the \$500, and this is
 25 for that customer that wants storage, but they

Page 36

1 really want to just use it on their own. They want
 2 to reduce their peak, and so we're incentivizing
 3 that. That's a win-win. They're lowering their
 4 peak, which is going to lower our peak, so win-win
 5 solution there.
 6 I already talked about Critical Peak
 7 Pricing, and we're going to provide up to \$1500 to
 8 help reduce those initial costs for storage for
 9 customers willing to adopt storage and go on
 10 Critical Peak Pricing.
 11 But this piece, again, is the \$2500, and
 12 this is what we really want our customers to
 13 gravitate to and become Virtual Power Plant partners
 14 with us. It's really important to identify not only
 15 is it the highest incentive, but there is going to
 16 be ongoing payments for customers to participate in
 17 this program. Think of it as like a capacity
 18 payment for the customers. So we're really excited
 19 about rolling this out.
 20 And I do want to share one little side
 21 story here. You know, we look at Austin Energy as
 22 being leaders and innovative thinking in rate
 23 design. And, unprompted, they reached out to us,
 24 and they said we heard the buzz about SMUD's
 25 leadership in this area, and we want to learn more

Page 37

1 about your rate design and storage program. So that
 2 was very rewarding for us, to have somebody like
 3 Austin Energy that we look at as a sister utility as
 4 being -- you know, always thinking about green
 5 renewables and forward-thinking to reach out to us
 6 to learn about our leadership in this area. Next
 7 slide.
 8 Okay, last slide. The Virtual Solar
 9 Program -- and, again, this is -- I mentioned this
 10 earlier. These types of technologies have not been
 11 as prominent in under-resourced communities as they
 12 have been in other communities. And this is SMUD's
 13 commitment to ensure that our under-resourced
 14 multi-family dwelling communities have access to
 15 these technologies.
 16 So if you're not familiar with Virtual
 17 Solar, often referred to as VNEM in the industry, it
 18 works like this from a super-high level: If you
 19 have on-site solar at their multi-family dwelling
 20 community, SMUD is going to buy all of that energy
 21 that it produces, and it's going to turn around and
 22 provide a bill credit for all of those customers
 23 that live in those multi-family dwellings. And then
 24 those bill credits will be on top of or in addition
 25 to any EAPR or med rate discount that they're

Page 38

1 already getting. Okay. Next slide.
 2 And now I want to turn it over to Rhonda
 3 for the public outreach process.
 4 SMUD STAFF RHONDA STALEY-BROOKS: ...
 5 you, Eric.
 6 Good evening, all. My name is Rhonda
 7 Staley-Brooks, and I'm the manager of Community
 8 Relations, Outreach, and Events for SMUD. And I am
 9 here to share the strategy used for our outreach,
 10 share how many customers we reached, and provide the
 11 feedback that we received. Next slide.
 12 So as you can see here from this slide,
 13 SMUD uses a variety of tools to outreach directly to
 14 our customers, members of the community, and other
 15 stakeholders. We always offer to meet them where
 16 they are at. We recognize many of our external
 17 partners' meeting schedules have been put on pause
 18 or altered during the pandemic.
 19 So when a meeting wasn't available, we
 20 provided our stakeholders with extensive resources
 21 to share with their constituents. We gave them fact
 22 sheets, plug-and-play content for their newsletter,
 23 and other materials to reach the widest possible
 24 number of people with information about the proposed
 25 rate changes.

Page 39

1 In addition to the personal outreach we
 2 made to a range of people and organizations, we cast
 3 a very wide net to make sure our customers and other
 4 stakeholders were aware of the rate action. This
 5 includes press releases and social media posts,
 6 extensive information on our website, and also
 7 public notices. We translate our materials into
 8 multiple languages, and we trained our staff on the
 9 key aspects of the rate proposal so that they can
 10 answer questions from customers and others. Next
 11 slide.
 12 So on this slide it shows the extensive
 13 public outreach during the rate action to reach as
 14 many people as possible to let them know about the
 15 proposed changes and invite feedback and questions.
 16 We sent more than 256,000 emails to our customers,
 17 community organizations, and leaders, and to those
 18 who subscribe to our LISTSERVs.
 19 We called or emailed more than 1200
 20 community and business organizations with
 21 information about our rate proposal and offered to
 22 meet them and their constituents. We provided fact
 23 sheets and other information to more than 300
 24 community and business partners to share, and we
 25 presented to 49 community organizations and

Page 40

1 neighborhood associations and expect to complete 55
 2 by the end of the rate action. Finally, we shared
 3 this information packet and offered to meet with 55
 4 elected officials. Next slide.
 5 So what did we hear from our customers and
 6 stakeholders in these meetings? All of our teams
 7 from rates sustainable communities, residential
 8 assistance, SAAs and outreach made many personal
 9 calls because organizations we have historically met
 10 with provided feedback that this rate action isn't
 11 significant enough to warrant a meeting with their
 12 constituents.
 13 It wasn't unusual for us to hold a meeting
 14 where there weren't any questions, but there was
 15 appreciation for SMUD's partnership and proactive
 16 outreach to make sure our customers were aware of
 17 the proposed changes.
 18 As Jennifer mentioned, we received
 19 significantly less feedback from our customers than
 20 we did during the 2019 rate action when we
 21 originally proposed a grid access charge for solar
 22 customers. We had about 340 people attend our
 23 community meetings or our public workshops. We
 24 received 47 calls and emails from customers about
 25 the proposed rate changes prior to this dec. being

Page 41

1 turned in. And since Friday, we have addressed an
 2 additional 44 emails from the solar industry.
 3 Comments at rate workshops and community
 4 meetings were varied and covered a wide range of
 5 topics. So I'm going to tell you some of the things
 6 that we heard.
 7 There were questions that came out that
 8 were tied to the pandemic, specifically the impact
 9 of rate increases on those already unable to pay
 10 their bills.
 11 Questions and comments about the proposed
 12 solar-and-storage rate mirrored the concerns shared
 13 by the solar industry, which Eric addressed earlier.
 14 They were moderated in many cases when customer
 15 learned that they can stay on the current rate
 16 through 2030.
 17 We received a lot of questions about how
 18 to participate in the new programs, such as VNEM,
 19 and questions about whether we can expand VNEM
 20 beyond under-resourced communities.
 21 A lot of questions around what is CPP and
 22 how does it work and how can I participate. And
 23 others were just appreciative that we were making
 24 changes to the Net Energy Metering. Overall, our
 25 community and public meetings were very positive or

<p style="text-align: right;">Page 42</p> <p>1 neutral with very little concern about the proposed 2 rate increases. Next slide. 3 So here is our upcoming schedule. So the 4 final vote will be on September 16th, but there's 5 still time to provide your feedback. So you can get 6 more information about the rate information on 7 SMUD.org\RateInfo. You can also email your 8 questions and concerns, or, if you're a commercial 9 or residential, you can reach out to us via phone. 10 All of the information, especially tips on energy 11 management, can be found on SMUD.org. Next slide. 12 So this is our presentation for tonight. 13 We have a lot of subject matter experts on the phone 14 to take the questions. And I'll return it back to 15 you, President Bui-Thompson. 16 BOARD PRESIDENT BUI-THOMPSON: Great. 17 Thank you so much. I appreciate all of the 18 presentations. I don't think people realize how 19 many presentations we've done. 20 So I think at this time we've received 21 requests for additional time to provide alternative 22 rate proposals. We have Mr. Graham that will 23 propose an alternative, and he has five minutes to 24 present his comments. 25 PUBLIC MEMBER MARK GRAHAM: Just one</p>	<p style="text-align: right;">Page 44</p> <p>1 the timer off-line. We'll give you -- if someone 2 could give him a minute warning to wrap up in a 3 minute, that would be great. 4 PUBLIC MEMBER MARK GRAHAM: Can you 5 display the timer? 6 BOARD PRESIDENT BUI-THOMPSON: Not and 7 your slides at the same time. Would you like the 8 timer or your slides? 9 PUBLIC MEMBER MARK GRAHAM: Well, the 10 board needs to see my slides. 11 BOARD PRESIDENT BUI-THOMPSON: Okay. 12 Let's start the timer, and we will give you a 13 one-minute warning when you have one minute left. 14 PUBLIC MEMBER MARK GRAHAM: Okay. 15 All right. Madam Board President, board 16 members, staff, my name is Mark Graham. I live in 17 Elk Grove. Next slide, please. 18 President Bui-Thompson, you should have 19 given me a total of ten minutes to address the board 20 tonight on the proposed rates and my alternatives, 21 just as Board President Dave Tamayo gave me a total 22 of ten minutes at the 2019 rate hearing as 23 authorized by Ordinance 15-1. 24 I wrote to the board on June 18 and 25 August 15 and explained most or all of this and</p>
<p style="text-align: right;">Page 43</p> <p>1 second here. Can you hear me? 2 BOARD PRESIDENT BUI-THOMPSON: Yeah, I can 3 hear you. I think they're trying to fiddle with the 4 timer. 5 It should be five minutes, correct? 6 PUBLIC MEMBER MARK GRAHAM: It should be 7 five minutes; that's true. 8 BOARD PRESIDENT BUI-THOMPSON: It looks 9 like someone is trying to change the timer; waiting 10 for that. 11 Is someone working on the timer, or are we 12 going to time separately what's on the screen? 13 You had slides, Mr. Graham, correct? 14 PUBLIC MEMBER MARK GRAHAM: True. I sent 15 them to you and -- 16 BOARD PRESIDENT BUI-THOMPSON: Yeah, I 17 think we saw them -- (inaudible). 18 So I guess we'll run the timer separately, 19 whoever is responsible for timing. 20 SMUD STAFF JOSUE SWAY GARCIA: Correct. 21 We are running the timer separately. 22 BOARD PRESIDENT BUI-THOMPSON: Okay. So 23 we'll get to his first slide. Do you want to get to 24 his first slide? 25 Okay. You can start, and we will start</p>	<p style="text-align: right;">Page 45</p> <p>1 again yesterday. Directors, if you haven't read my 2 emails, please read them ASAP from start to finish. 3 Please ask me questions at the end of my 4 presentation. 5 Here is the issue: The board should 6 discuss this issue tonight and the legal basis. The 7 current SMUD rates are taxes as defined by the 8 California Constitution, Article XIII C. This is 9 because of a fudge factor known as a scalar -- 10 that's S-C-A-L-A-R -- of 9.2 percent that SMUD added 11 to its overall marginal cost when it created the 12 original time-of-day rates. Think of the scalar as 13 gravy, but it is forbidden gravy; it is 14 unconstitutional gravy. That fudge factor is still 15 baked into SMUD's rates. 16 The CEO and General Manager has proposed 17 that you extend and increase these rates for the 18 next two years. SMUD may not do this without board 19 approval. Next slide, please. I'm asking the 20 board -- next slide, please, the third slide. Thank 21 you. 22 I'm asking the board to have a board 23 discussion tonight about the legal basis for the 24 SMUD scalar and identify a California law or court 25 opinion that supports and authorizes SMUD adding a</p>

Page 46

1 9.2 percent scalar, or any significant scalar, into
 2 its rates. Direct your staff to identify that legal
 3 authority tonight.
 4 At the 2019 rate hearing, staff provided a
 5 couple of irrelevant excuses to divert the board's
 6 attention away from the main issue. All of you were
 7 here, all of you, and none of you noticed and spoke
 8 up. You need to say to staff, "That does not
 9 matter. That is irrelevant. What is the legal
 10 basis in statute or case law for SMUD inserting its
 11 fudge factor into our rates?" And repeat the
 12 question until staff gives you a relevant and
 13 truthful answer.
 14 Just because utilities in other states use
 15 scalars does not mean that SMUD can use them. That
 16 does not matter. It is irrelevant. Just because
 17 the Public Utilities Commission lets the
 18 investor-owned utilities use scalars does not mean
 19 you can do it. That is irrelevant, and it does not
 20 matter.
 21 Staff's other irrelevant diversion in 2019
 22 was this: Ms. Jennifer Davidson told the board that
 23 the proposed rates were based on your embedded
 24 costs. That was a false statement. SMUD does not
 25 have any records that talk about embedded costs, but

Page 47

1 it doesn't matter what you call it. Whether you
 2 call it marginal costs or embedded costs, the
 3 requirement of Article XIII C is the same, and that
 4 is you need to have voter approval when your rates
 5 exceed your reasonable cost of service. Next slide,
 6 please.
 7 This is the voter approval requirement.
 8 You're not planning to have any voter approval or
 9 any vote. Next slide, please.
 10 This explains why the current rates are
 11 taxes. And when you pay a tax and you extend and
 12 increase it, that violates Article XIII C.
 13 I should note, the System Infrastructure
 14 Fixed Charge is also attached because it also has
 15 the scalar built into it.
 16 Every director should read the 2020 Rate
 17 Costing Study dated March 31, 2020, from cover to
 18 cover. Directors, please get your copy of the study
 19 and read it by Friday night, this Friday. You need
 20 to be familiar with it. It is not a rate design
 21 study, and it does not cost justify the proposed
 22 rates. Next slide, please.
 23 This is part of the California
 24 Constitution on -- that you may not impose, extend,
 25 or increase a special tax without two-thirds

Page 48

1 approval of the voters. Next slide, please.
 2 This is what it means to extend or
 3 increase a tax for California law --
 4 SMUD STAFF JOSUE SWAY GARCIA: Mr. Graham,
 5 one minute is left on the timer.
 6 PUBLIC MEMBER MARK GRAHAM: I beg your
 7 pardon?
 8 SMUD STAFF JOSUE SWAY GARCIA: One minute
 9 for the timer.
 10 PUBLIC MEMBER MARK GRAHAM: All right.
 11 Next slide, please.
 12 And, again, the last -- the 11th slide is
 13 my alternative recommendation, and you have that,
 14 and that is for you to back the scalar, plus all of
 15 the increases that have been added to it, out of the
 16 rates, and then do your 1.5 and 2 percent increase.
 17 On Slide Number 9 -- next slide, please --
 18 there's only been one rate design study on the time
 19 of use rates, and that is the 2018 Residential
 20 Time-of-Use (RT02) Design Study. Please read that
 21 cover to cover. That design study proves that the
 22 original Time-of-Use rates exceeded SMUD's marginal
 23 cost of providing electricity by 9.2 percent.
 24 What you need to do, Board, is acknowledge
 25 that that -- that time-of-use rate design study and

Page 49

1 the fact that it shows your original time-of-day
 2 rates were 9.2 percent over your costs, and identify
 3 a court order or court opinion tonight at this
 4 meeting that authorizes SMUD to put a scalar, a
 5 fudge factor, into your rates. I'm talking about
 6 tonight at this meeting or at the absolute latest
 7 prior to when the board votes on the proposed rates
 8 in September. Next slide, please.
 9 SMUD STAFF JOSUE SWAY GARCIA: We are at
 10 five minutes, Mr. Graham.
 11 PUBLIC MEMBER MARK GRAHAM: All right.
 12 Thank you, Board.
 13 BOARD PRESIDENT BUI-THOMPSON: Great,
 14 thank you.
 15 At this time we will take comments from
 16 the public on the CEO and General Manager reports.
 17 So we have the list, right, Laura?
 18 SMUD GENERAL COUNSEL LEWIS: Yes.
 19 And I couldn't find the feature to raise
 20 my hand, but I would like to just briefly respond to
 21 Mr. Graham's claims that we're in violation of
 22 Prop. 26 if I could --
 23 BOARD PRESIDENT BUI-THOMPSON: Sure.
 24 SMUD GENERAL COUNSEL LEWIS: -- just for
 25 the record.

Page 50

1 So just as a way of background, Prop. 26
2 does allow SMUD to charge rates that do not exceed
3 our cost of service. And our cost to serve are
4 based both on our marginal costs as well as our
5 embedded costs.
6 Our marginal costs are determined by what
7 we call a rate costing study that Mr. Graham
8 referred to, and that marginal cost is basically the
9 cost to add a single new customer to our system.
10 And we determine marginal cost by looking at our
11 marginal cost components, and these are costs that
12 SMUD incurs to generate, transmit, and deliver
13 electricity to each new customer.
14 However, not all of our costs are marginal
15 costs. We incur some costs that are independent of
16 generation and delivery and don't change based on
17 the number of customers. A great example would be
18 our wildfire mitigation costs. And as you know,
19 it's become a significant cost for SMUD in recent
20 years. Adding one customer won't on its own affect
21 how much we spend on wildfire mitigation. That's
22 why it's not captured in the marginal cost
23 calculation that Mr. Graham refers to. This
24 combined cost, again, is often referred to as our
25 embedded cost.

Page 51

1 The scalar that Mr. Graham refers to --
2 essentially when SMUD recovers its costs, we -- we
3 have a revenue requirement, and that's basically how
4 much money we need to cover our expected costs as
5 reflected in our budget. Again, it includes both
6 the marginal costs components and other non-marginal
7 costs or embedded costs such as, again, wildfire
8 mitigation.
9 And so to ensure that we can pay our
10 non-marginal costs that are not captured in the
11 marginal costs study, we apply a scalar to cover the
12 non-marginal costs and match our revenues with our
13 expenses. And so use of this scalar is very common
14 with utilities and is an acceptable way of rate
15 making. So that's all to say that we are quite
16 confident that we have complied with Prop. 26.
17 And I would just add that Mr. Graham has a
18 pending lawsuit where he's made these same
19 allegations, and we are similarly defending
20 ourselves there as well.
21 So hopefully I captured that. I'm sure
22 Jennifer Davidson will correct me because she's
23 really the expert on this, but that's, in a
24 nutshell, what the scalar is and why it's justified
25 under Prop. 26.

Page 52

1 BOARD PRESIDENT BUI-THOMPSON: Okay.
2 Thanks, Laura. I appreciate that.
3 Brandon, Director Rose, has a question or
4 a hand up or a comment.
5 SMUD BOARD DIRECTOR ROSE: Yes.
6 Just briefly, Laura, can I clarify -- and
7 I believe this is in the rates resolution as --
8 that's currently drafted and proposed -- that this
9 alternative wouldn't meet -- essentially wouldn't
10 meet our revenue requirements and the primary reason
11 that we would reject his proposed alternative. Is
12 my understanding correct?
13 SMUD GENERAL COUNSEL LEWIS: That is
14 correct.
15 SMUD BOARD DIRECTOR ROSE: Thank you.
16 SMUD GENERAL COUNSEL LEWIS: Okay. If
17 there's no more questions, President Bui-Thompson, I
18 can start. Again, we have quite a few speakers
19 lined up, and I think the way we'll handle this is I
20 will announce the first three speakers and continue
21 to do that so people are prepared and know when
22 they're going to be up for comment. Does that work?
23 BOARD PRESIDENT BUI-THOMPSON: Yeah. If
24 you can just kind of tell them in groups, yeah. So
25 let's just announce the first, actually, like --

Page 53

1 yeah, let's do a little bit more. Let's do the
2 first crop of five --
3 SMUD GENERAL COUNSEL LEWIS: Okay.
4 BOARD PRESIDENT BUI-THOMPSON: -- so that
5 they all are -- they can do the math on the time.
6 And then we'll just do it in groups of five so we
7 can have people plan accordingly.
8 SMUD GENERAL COUNSEL LEWIS: So the first
9 five: Mr. Steve Uhler, Alex Morris, Leah Miller,
10 Frank Lindh, and Jan Smutny-Jones.
11 So Mr. Uhler is first.
12 SMUD STAFF JOSUE SWAY GARCIA: And
13 Mr. Uhler is not in attendance, so next would be
14 Alex Morris.
15 PUBLIC MEMBER ALEX MORRIS: Hi. Can you
16 hear me okay?
17 SMUD GENERAL COUNSEL LEWIS: Yes.
18 PUBLIC MEMBER ALEX MORRIS: Thank you.
19 Please, go ahead.
20 My name is Alex Morris, and I am the
21 executive director of the California Energy Storage
22 Alliance. We are a nonprofit trade association that
23 serves as the voice of the energy storage energy in
24 California, and our mission is to ensure every
25 storage is smartly -- ensure energy storage is

Page 54

1 smartly considered and valued in California energy's
 2 toolkit helping to achieve clean-energy goals.
 3 And I'm here to support SMUD's proposal,
 4 which was very well stakeholder'd, technically
 5 studied, and aligned with SMUD's goals of smartly
 6 achieving clean-energy goals and a zero carbon plan.
 7 And I also want to say as a major energy
 8 storage association and stakeholder in utility
 9 regulatory and energy industry policy processes all
 10 around the state and federally, I want to
 11 acknowledge that SMUD staff, especially Eric Poff,
 12 was particularly accommodating in facilitating good
 13 public process on these issues. And I appreciate
 14 how he and the executive leadership time all --
 15 executive leadership team made time to listen to
 16 CESA and other stakeholders and to think creatively
 17 about finding win-win solutions.
 18 I'd like to make a few supporting points
 19 and then also had a few points about what CESA and
 20 SMUD stakeholders should look for as we proceed.
 21 So first and most importantly, adding
 22 storage to the grid is critical, not only is storage
 23 there when you need it -- and we know we will need
 24 it in a solar-heavy grid -- but it also helps
 25 customers have choice and control over their energy

Page 55

1 usage in ways that protect them from grid charges
 2 and can provide value back to the grid. And the
 3 analysis started to highlight how storage additions
 4 are useful and cost-effective for the energy storage
 5 system, so I was really happy to see that.
 6 I also like how SMUD is planning and is
 7 smartly laying out approaches for leveraging energy
 8 storage and distributed energy resources. And
 9 specifically, once a lot of customers have these
 10 storage devices, particularly when the sun sets, you
 11 will be able to use them or signal to them how they
 12 can provide value to the grid if customers are so
 13 willing.
 14 And I applaud that SMUD's analysis
 15 recognized the benefits of distributed storage and
 16 how it works in -- you know, in pair formation with
 17 solar where it can really help and capture a federal
 18 energy tax credit. So I just wanted to thank you
 19 guys for that.
 20 And as I look ahead and SMUD moves forward
 21 with some of these proposals or considers them, what
 22 we would like to continue to see is solutions that
 23 allow a dynamic market that provide market signals
 24 for adding storage to the grid, that properly value
 25 the attributes of solar and storage, and allow

Page 56

1 meaningful participation periods so -- and that
 2 would include reasonable regional grandfathering
 3 provisions to protect existing customers who've made
 4 investments.
 5 I also want to have ways to better value
 6 virtual power plants and look at distributed energy
 7 resource values.
 8 So thank you so much for hearing my
 9 remarks and good luck. And I want to thank again
 10 Eric and the board and Paul for all of their work in
 11 engaging with community members like me. Thank you.
 12 SMUD GENERAL COUNSEL LEWIS: Next up, we
 13 have Leah Miller.
 14 (Upcoming speakers' names announced.)
 15 PUBLIC MEMBER LEAH MILLER: This is Leah.
 16 Can you guys hear me?
 17 SMUD GENERAL COUNSEL LEWIS: Yes.
 18 PUBLIC MEMBER LEAH MILLER: Great.
 19 Good evening. President Bui-Thompson,
 20 SMUD board members and staff, my name is Leah
 21 Miller, and I'm the president and CEO of Habitat for
 22 Humanity of Greater Sacramento.
 23 Thank you so much for the opportunity to
 24 speak this evening on behalf of Habitat For Humanity
 25 of Greater Sacramento, the families we serve, as

Page 57

1 well as those in our underserved community.
 2 I'm quite proud to say that Habitat For
 3 Humanity has been a partner with SMUD for over
 4 30 years. Tonight, Habitat For Humanity of Greater
 5 Sacramento would like to express our strong support
 6 for SMUD's ongoing efforts to keep energy affordable
 7 for all income demographics in our community,
 8 particularly the commitment to keep energy
 9 affordable for Sacramento's most underserved
 10 households.
 11 On the matter of net metering, we find
 12 ourselves quite concerned for Sacramento's
 13 low-income households, many of which are living in
 14 situations that do not permit them, readily, access
 15 to the current benefits of solar technology.
 16 However, over the course of time, it's our
 17 concern that they may very well be the group of
 18 people that bear the brunt of additional costs of an
 19 aging electrical system. To keep our low-income
 20 neighbors safely housed and able to afford life's
 21 most basic necessities, it's very important that the
 22 cost of electric service be shared throughout our
 23 community.
 24 Any increases in the rates are always a
 25 concern for Sacramento's low-income residents.

Page 58

1 However, we understand the reasoning behind and are
 2 pleased that are you keeping those increases below
 3 the rate of inflation.
 4 In closing, I thank you for the
 5 opportunity to work together with SMUD through
 6 ongoing efforts to meet the carbon-reduction goals
 7 of the community and ensure affordable energy for
 8 all. Thanks so much.
 9 SMUD GENERAL COUNSEL LEWIS: Great. Next
 10 up, we have Frank Lindh.
 11 (Upcoming speakers' names announced.)
 12 PUBLIC MEMBER FRANK LINDH: President
 13 Bui-Thompson and members of the board, this is Frank
 14 Lindh. Thank you for the opportunity to speak to
 15 you this evening. I'm talking about Agenda Item 2,
 16 which is the staff proposal for a successor tariff
 17 for Net Energy Metering customers.
 18 I think staff has brought you a good set
 19 of recommendations, and I'll comment on those. But
 20 I wanted to mention that by way of background, I am
 21 the former general counsel of the California Public
 22 Utilities Commission, and the commission, of course,
 23 is the state agency that regulates the
 24 investor-owned electric utilities in California.
 25 And my tenure as general counsel of the commission

Page 59

1 really was the highlight of my professional life.
 2 During my years there at the commission,
 3 on more than one occasion, I heard our commissioners
 4 speak in public about their admiration for SMUD.
 5 And here's what I said when I spoke before the
 6 board's finance and audit committee on May 18th of
 7 this year:
 8 "SMUD has a track record of
 9 providing leadership in the drive
 10 for decreased emissions of
 11 greenhouse gases and other
 12 pollutants and for finding customer
 13 friendly solutions to the challenges
 14 of the industry."
 15 So I want to commend staff for their work
 16 in bringing forward this proposal tonight, and I
 17 think they should be commended not just for the
 18 content of the proposal but also for undertaking
 19 such an extensive and inclusive stakeholder process.
 20 So with respect to that energy metering
 21 and the staff proposal, here's my three points:
 22 First and foremost, in my mind, is that
 23 staff has been responsive to the need for greater
 24 equity among customers. The existing Net Energy
 25 Metering arrangements are lopsided in favoring

Page 60

1 customers who have rooftop solar or paired
 2 solar-plus-storage arrays, and these are generally
 3 wealthier customers. They enjoy subsidies at the
 4 expense of lower- and middle-income customers who
 5 cannot afford this technology.
 6 While the existing Net Energy Metering
 7 tariffs made sense when the solar industry was just
 8 getting started, the industry is now mature. And
 9 the subsidies, meanwhile, have grown in size over
 10 time, and so the social justice issue really is now
 11 at the forefront.
 12 Second, I hope you will approve staff's
 13 proposal to institute an interconnection fee for
 14 solar customers. A fee of this type is necessary,
 15 in my view, to cover the cost of SMUD's system.
 16 Third, staff is correct, I believe, to
 17 focus economic incentive on solar plus storage
 18 rather than on stand-alone rooftop storage. This is
 19 because solar plus storage provides significantly
 20 better benefits to the grids -- to the grid and
 21 reduction in emissions.
 22 For this reason -- for all these reasons,
 23 I respectfully urge you to adopt the staff
 24 recommendations regarding Net Energy Metering
 25 reform. Thank you again for the opportunity to

Page 61

1 address you tonight.
 2 SMUD GENERAL COUNSEL LEWIS: Thank you.
 3 Next up, Jan Smutny-Jones.
 4 (Upcoming speakers' names announced.)
 5 PUBLIC MEMBER JAN SMUTNY-JONES: Thank you
 6 very much, Chair Bui-Thompson and members of the
 7 board. I'm Jan Smutny-Jones. I'm a proud SMUD
 8 customer and over 40-year veteran of basically
 9 promoting solar energy. And in my professional
 10 life, I represent utility-scale solar along with
 11 some other technologies.
 12 I'm here to support the new
 13 solar-and-storage rate. I did serve on the Value of
 14 Storage Technical Committee, which was a very open
 15 and interesting process.
 16 The current rate, as you heard, is -- NEM
 17 rate is 13 cents. SMUD's latest utility scale solar
 18 is around 3 cents. There's no economic
 19 justification for this. The physics of converting
 20 sunlight to electricity is the same whether the
 21 solar panel was sitting on a roof or out in some
 22 disturbed land somewhere.
 23 I just want to point out that the NEM rate
 24 is not related to the overall drop in solar prices
 25 over the past decade. So the NEM rate has gone up

Page 62

1 while the cost of solar has come down. And,
 2 moreover, you've heard, I think, some of the social
 3 inequities that are caused by the current rate
 4 structure.
 5 I'll point out that the .4 cents addition
 6 for land use is troubling given the fact that
 7 there's no evidence that SMUD is actually purchasing
 8 utility-scale solar that has disturbed land and,
 9 actually, quite the contrary.
 10 That said, the 7.4 cents, while it is
 11 above wholesale rate is -- may create a source of
 12 local capacity for all ratepayers, including
 13 nonparticipants. In other words, all customers may
 14 benefit from this capacity.
 15 This is very important because California
 16 is awash in solar in the middle a spring or summer
 17 day, but it's times like these, when the sun goes
 18 down, what's called net peak, that is -- can be
 19 really problematic and will become more problematic
 20 in the future. So having the ability to convert to
 21 solar in midday to a usable product that benefits
 22 all customers in the net peak is very important.
 23 Net Energy Metering was created a long
 24 time ago to nurture rooftop solar. It worked, and
 25 it's time to move that business model along to the

Page 63

1 modern world where we've got solar and storage and
 2 moving our technologies forward.
 3 SMUD is not the guarantor of any specific
 4 business model. The world has shifted and moved on,
 5 and I think what staff is proposing here is
 6 responsive to the concerns that were expressed by
 7 the solar industry. You know, SMUD has been doing a
 8 great job of providing reliable, affordable
 9 electricity to all customers that is designed to
 10 lower our carbon footprint.
 11 I would encourage you to support the
 12 proposal, and I appreciate your service on this
 13 board. Thank you.
 14 SMUD GENERAL COUNSEL LEWIS: Thank you.
 15 Next up, Beth Hassett.
 16 (Upcoming speakers' names announced.)
 17 PUBLIC MEMBER BETH HASSETT: Hello. I'm
 18 Beth Hassett, the CEO of WEAVE, and we've been a
 19 proud partner of SMUD's for more than 26 years.
 20 And, in fact, we just partnered with SMUD
 21 to bring electric chargers and electricity to nine
 22 homes that will serve as permanent supportive
 23 housing for victims of domestic violence and their
 24 families. These are not families that have the
 25 luxury of opting to put solar on their roofs.

Page 64

1 They're people who are going to be living in these
 2 homes on vouchers and -- housing vouchers, and they
 3 are just trying to meet their basic needs. And one
 4 of those basic needs is electricity that they'll be
 5 paying for themselves proudly. And it's important
 6 that it's -- it's a basic necessity that they can
 7 get and affordably.
 8 We at WEAVE wish to express our strong
 9 support for SMUD's ongoing efforts to keep energy
 10 affordable for people of all demographics. All of
 11 the communities we serve deserve to have access to
 12 power that they can afford within their income
 13 brackets, and that means many of Sacramento's most
 14 underserved and most vulnerable households.
 15 And to keep our low-income neighbors
 16 safely housed and able to afford life's basics, it's
 17 important that the cost of electric service be
 18 shared equitably throughout the community.
 19 So we at WEAVE are proud to support
 20 staff's recommendation. Thank you.
 21 SMUD GENERAL COUNSEL LEWIS: Thank you.
 22 Next up, Nancy Rader.
 23 (Upcoming speakers' names announced.)
 24 PUBLIC MEMBER NANCY RADER: Good evening.
 25 My name is Nancy Rader. I'm the executive director

Page 65

1 of the California Wind Energy Association.
 2 CWEA is supportive of staff's thoughtful
 3 proposal both to reform rooftop solar rates and to
 4 encourage customers to adopt storage paired with
 5 solar to promote system liability. Thought the
 6 presentation tonight was very informative and very
 7 compelling.
 8 If we're going to green our energy system,
 9 it's essential that we keep electricity rates as low
 10 as possible for everyone to encourage customers to
 11 shift away from fossil fuels toward electric
 12 vehicles and electric heating and appliances.
 13 The cost of installing rooftop solar has
 14 fallen by two-thirds over the last 20 or 30 years
 15 while the rates paid for rooftop solar has inched
 16 up. So it's entirely reasonable to lower the
 17 overpayment and foster greater competition in an
 18 industry that is by now very well-established.
 19 I can tell you that competition is fierce
 20 in the wholesale market for utility-scale wind,
 21 solar, and storage, the power prices in the range of
 22 3 to 5 cents per kilowatt hour. So the much higher
 23 proposed rate above 7 cents for rooftop solar, plus
 24 the storage incentives, seem more than generous to
 25 us. And, in fact, the proposal only reduces the

Page 66

1 cost shift from solar customers to non-solar
 2 customers. It does not eliminate the cost shift.
 3 So customers without solar will continue to
 4 subsidize generally more affluent solar customers.
 5 In fact, staff noted tonight that the
 6 remaining cost shift under its proposal just to
 7 transition existing NEM numbers is still
 8 \$91 million. The board might want to inquire of
 9 staff what the remaining cost shift will be for new
 10 customers under its proposal.
 11 As staff noted, NRDC and energy expert
 12 Professor Severin Borenstein commented that staff's
 13 proposal is still too generous to the solar industry
 14 and solar customers. If anything, alternate
 15 proposals should further trim the cost shift. Thank
 16 you.
 17 SMUD GENERAL COUNSEL LEWIS: Thank you.
 18 Next up, Patrick Bean.
 19 (Upcoming speakers' names announced.)
 20 PUBLIC MEMBER PATRICK BEAN: Thank you.
 21 Good evening, President Bui-Thompson, members of the
 22 board, and SMUD staff. I'm Patrick Bean, the global
 23 charging and energy policy lead at Tesla, and I'm
 24 here speaking on behalf of Tesla.
 25 Tesla's mission is to accelerate the

Page 67

1 world's transition to sustainable energy through the
 2 manufacture and sale of electric vehicles, rooftop
 3 solar PV systems, and battery energy storage.
 4 I'd like to begin by thanking SMUD's staff
 5 for their hard work for this proposal over a long
 6 two-year process and their willingness to take
 7 feedback and corrective thinking to develop an
 8 innovative proposal.
 9 The new proposal -- the new rate proposal
 10 is a forward-looking approach that challenges DER
 11 providers, like Tesla, to advance the functionality
 12 of behind-the-meter resources in order to increase
 13 customers' contributions to grid reliability and
 14 SMUD's climate goals.
 15 In particular, we appreciate the inclusion
 16 of storage rebates, Critical Peak Pricing with the
 17 ability to export at full retail during Critical
 18 Peak events, and the development of Virtual Power
 19 Plant aggregations. These features will work to
 20 help accelerate the development of distributed
 21 energy storage to meet the critical evening peak
 22 hours and to help SMUD retire natural gas-powered
 23 plants.
 24 We're also glad to see the proposal does
 25 not include a fixed charge for solar storage

Page 68

1 customers, which would have harmed the economics of
 2 self-generation without reducing greenhouse gas
 3 emissions or helping SMUD reach its climate goals.
 4 In closing, we'd like to thank SMUD's
 5 staff and the board for the opportunity to provide
 6 feedback on this process. Thank you.
 7 SMUD GENERAL COUNSEL LEWIS: Thank you.
 8 Next up, we have Bryan Dove.
 9 (Upcoming speakers' names announced.)
 10 PUBLIC MEMBER BRYAN DOVE: Hello. This is
 11 Bryan Dove. I'm the director of the asset
 12 management with Mutual Housing California. And
 13 we've been -- SMUD has been an amazing partner over
 14 the years as we've been developing and operating
 15 affordable housing throughout the Sacramento region
 16 through the Shine Program, the Sustainable
 17 Communities Program -- (inaudible) design services,
 18 electric vehicle charging, infrastructure. We were
 19 also one of the first early adopters of solar.
 20 About 20 years ago, we installed solar panels in a
 21 multi-family property that benefitted the
 22 residents -- the tenants of that community.
 23 So the low-income households living in our
 24 communities and other disadvantaged communities
 25 often don't get the benefits of low carbon and the

Page 69

1 solar initiatives. So we strongly support the 2030
 2 Zero Carbon Plan, the Virtual Net Metering option
 3 for affordable housing, along with the SolarShares
 4 Program and the solar-and-storage rate and incentive
 5 programs. All of these programs will help the
 6 low-income households living in our community as
 7 well as throughout the Sacramento region.
 8 With regard to the rate increases, it's
 9 always a concern for low-income families, but we
 10 understand the need to increase the rates. Most of
 11 our other expenses operating our apartment
 12 communities are increasing at a higher rate than
 13 inflation, our insurance rates, other utilities,
 14 vendors and so on.
 15 So we're grateful that the rate proposal
 16 is less than the inflation rate. And thank you.
 17 SMUD GENERAL COUNSEL LEWIS: Thank you.
 18 Next up is Azizza Davis Goines.
 19 (Upcoming speakers' names announced.)
 20 PUBLIC MEMBER AZIZZA DAVIS GOINES: ...
 21 you so much for this opportunity. My name is
 22 Azizza Davis Goines, and I am the president and CEO
 23 for the Sacramento Black Chamber of Commerce and the
 24 executive director for the Sacramento Black Chamber
 25 of Commerce Foundation.

Page 70

1 And I want to begin by thanking you for
 2 this opportunity to speak before you this evening on
 3 subjects that are affecting not only our minority
 4 business owners but our community of color at large,
 5 who, by the way, no matter the label, are no longer
 6 minority communities.
 7 It was just about a year ago that I first
 8 addressed you all with the concerns that I felt
 9 needed to be heard and addressed. I remember it
 10 clearly because I left Sacramento to work in an area
 11 of California that was not completely covered in
 12 raging fire, smoke, ash, and evacuations that became
 13 so prominent in every decision-making process we
 14 were making at that time. As much as has changed,
 15 there is still a lot that remains the same.
 16 Briefly, for those that did not hear me
 17 last year, I want you to know that my soapbox
 18 remains pretty much the same, is that we need to
 19 find alignment with education and equity in every
 20 part of the energy footprint.
 21 We still need answers. Where in the line
 22 of priorities does equity kick in and planning and
 23 implementation of those constructs begin to become
 24 more than just afterthoughts?
 25 I've heard the good talk and agreement

Page 71

1 that the good work needs to happen. But where is
 2 the process, and how do we take your words back to
 3 our small businesses and overall affected
 4 communities and say: This is how we do it?
 5 The plans that SMUD has and are almost
 6 destined to be implemented are here and will be
 7 discussed this evening, and have been discussed this
 8 evening, at length. But many still have not been
 9 shared with our business communities or our
 10 communities at large in a way that feels inclusive,
 11 in ways that will almost feel that there are plans
 12 in place that address the majority minority's needs
 13 being taken into full consideration before they're
 14 implemented.
 15 I still have little concrete information
 16 that I can take back to our apartment renters on how
 17 this 2030 plan will benefit them and, even more,
 18 what is the 2030 plan? There was an event not long
 19 ago that was supposed to tout what the community was
 20 doing for us, and none of "us" were there at the
 21 event.
 22 We still have work to do, but please know
 23 that Sacramento Black Chamber of Commerce is with
 24 SMUD, and we want to be with the solar industry as
 25 we move forward in making these plans effective and

Page 72

1 workable for all of our communities. Let's be more
 2 inclusive. It's still a really important thing for
 3 it to happen in our communities. Thanks for your
 4 time.
 5 SMUD GENERAL COUNSEL LEWIS: Thank you.
 6 Next up, Luis Sanchez.
 7 (Upcoming speakers' names announced.)
 8 PUBLIC MEMBER LUIS SANCHEZ: Yes, thank
 9 you. Good evening. I'm Luis Sanchez. I'm the CEO
 10 of Community Resource Project, known as CRP. We're
 11 a local nonprofit administering the light HEAP
 12 program and doing weatherization with energy
 13 efficiency measures to low-income communities.
 14 We've been a strong partner with SMUD over
 15 many years providing utility payment assistance to
 16 eligible SMUD customers, and we wish to express our
 17 strong support for SMUD's ongoing efforts to keep
 18 energy affordable for all income levels in our
 19 communities, especially our residents in underserved
 20 communities.
 21 On your rate proposal increase, we
 22 understand the need to meet rising costs that are
 23 affecting everyone. And we caution SMUD to be
 24 mindful of our low-income households whose incomes
 25 do not always keep pace with pricing costs of living

Page 73

1 and what an impact of 1.5 percent to 2 percent
 2 increase would have on them.
 3 We have SMUD clients with bills ranging
 4 from \$200 to \$3,000 currently, the average bill
 5 being about \$486, and these individuals struggle to
 6 make their utility payments. We see SMUD clients
 7 having to choose between not paying their utility
 8 bill, instead choosing to purchase food or necessary
 9 medicine. Choosing not to run their air conditioner
 10 because of higher energy cost or not running their
 11 heater in the winter for the same reasons are real
 12 choices that they are faced with.
 13 Regarding the Critical Peak Pricing rate,
 14 again, SMUD should keep in mind our communities with
 15 most vulnerable individuals who are dependent on
 16 their medical devices to keep them safe and alive.
 17 If they cannot avail themselves of the benefits the
 18 CPP rate would provide, SMUD should consider other
 19 options for these customers.
 20 We applaud SMUD for their Virtual Net
 21 Metering efforts to assist affordable housing
 22 developments to adopt solar. And considering the
 23 current affordable housing storage, there are other
 24 low-income families who reside in multi-family units
 25 not designated as affordable, and they should be

Page 74

1 allowed to benefit from the VNEM as well. We look
 2 forward to continuing discussion around this
 3 initiative.
 4 Ultimately, we encourage SMUD to keep our
 5 low-income residents safely housed and able to
 6 afford their most basic necessities so that it is
 7 important that the cost of electric service be
 8 shared throughout your communities.
 9 I want to thank you tonight for this
 10 opportunity to address you. Thank you.
 11 SMUD GENERAL COUNSEL LEWIS: Thank you.
 12 Next up is Faith Galati.
 13 (Upcoming speakers' names announced.)
 14 SMUD STAFF JOSUE SWAY GARCIA: Faith, your
 15 microphone has been activated.
 16 PUBLIC MEMBER FAITH GALATI: All right.
 17 Thank you very much. President Bui-Thompson,
 18 members of the board and staff, hello. My name is
 19 Faith Galati, and I'm executive director of
 20 Breakthrough Sacramento.
 21 Breakthrough is a year-round tuition-free
 22 college preparatory program that leads motivated
 23 under-resourced youth on a path to success and
 24 college. We're also a pre-professional training
 25 program for diverse students who aspire to become

Page 75

1 educators.
 2 In the education field, I feel compelled
 3 to share with our youth that prior to the
 4 19th Century, environment concerns were not a matter
 5 of individual concern, rather they elected the
 6 government to sort out and dictate actions.
 7 Fortunately, special-interest groups evolved to
 8 change government policies and promote
 9 environmentally friendly social values.
 10 You know, I want to share that I remember
 11 in the 1960s -- okay, late 1960s -- the media
 12 campaigns such as "Give a hoot, don't pollute;" and,
 13 sadly, Smokey Bear says, "Only you can prevent
 14 forest fires." I'm sure that makes a few of you
 15 smirk as we wheeze on smoke today.
 16 It was simple when I was younger, but
 17 today our youth grapple with what climate change
 18 means to their future. And I'm really pleased to
 19 share how SMUD takes part in helping us educate our
 20 youth about how they can affect their future.
 21 Breakthrough, with SMUD, has been working
 22 together for five years, and SMUD has been a
 23 critical partner for us in bringing energy and
 24 sustainability education to some of our most
 25 underserved students. Each summer our students

Page 76

1 participate in hands-on STEM experiments surrounding
 2 solar energy. They build solar-powered battery
 3 chargers, water pumps, fans, even mini-solar cars.
 4 They're challenged to find ways to apply what
 5 they've learn to their everyday life. And this past
 6 summer, the SMUD curriculum expanded to include wind
 7 power. Today, our students can share tips and
 8 techniques to reduce energy use and their family's
 9 energy bills. That's true community sharing and
 10 empowerment.
 11 Breakthrough is appreciative of SMUD's
 12 ongoing efforts to keep energy affordable for all
 13 income demographics of our community, particularly
 14 the commitment to keep energy affordable for
 15 Sacramento's most underserved households.
 16 Any increases in the rates are always a
 17 concern for Sacramento's low-income; however, we
 18 understand that the reasoning -- we understand the
 19 reasoning and are pleased that SMUD is keeping them
 20 below the rate of inflation. To keep our low-income
 21 neighbors safely housed and able to afford life's
 22 most basic necessities, it is important that the
 23 cost of electric service be shared throughout your
 24 community.
 25 I'm inspired by and I really respect

Page 77

1 SMUD's commitment to achieve a zero emissions by
 2 2030 and believe that it will take a whole community
 3 to get there.
 4 Thank you very much for this opportunity
 5 to speak on behalf of our under-resourced youth in
 6 Sacramento.
 7 SMUD GENERAL COUNSEL LEWIS: Thank you.
 8 Next up is Pastor Mark Meeks.
 9 (Upcoming speakers' names announced.)
 10 PUBLIC MEMBER PASTOR MARK MEEKS: ..
 11 name is Mark Meeks. I am privileged to serve as
 12 pastor of City Church of Sacramento, and we are
 13 located in the Oak Park community on the corner of
 14 4th Avenue and 39th Street. In addition to serving
 15 as pastor, I am a civil engineer only semiretired
 16 with over 30 years with the State of California and
 17 seven with Kaiser Hospitals right here in design and
 18 construction. And I only mention that to highlight
 19 my familiarity with and support of approaches to
 20 problems as well as opportunities that are both
 21 considered and thoughtful.
 22 And while this type of approach may not
 23 satisfy everybody at every turn, more often than not
 24 it is the best chance for having the best solution
 25 long-term. So, full disclosure, City Church has

Page 78

1 been a proud sustainable communities partner with
 2 SMUD for the last three years, and SMUD has been an
 3 invaluable partner in helping us breathe new life
 4 into a building that was abandoned, for all intents
 5 and purposes, for over 20 years.
 6 I appreciate the support SMUD has provided
 7 us to help decrease our energy costs with
 8 energy-efficient lighting, HVAC, and solar. And let
 9 me just say the dollars that we have saved, will
 10 save, on our energy bills are being reinvested back
 11 into our Oak Park community.
 12 I've shared this in other venues, and I'll
 13 share it now. A lot of people talk about saving
 14 lives and being catalysts for change in community.
 15 Let me just say this, with all honesty: That SMUD
 16 and specifically the sustainable-communities
 17 programs have saved lives. And I say this because
 18 of a modest investment that SMUD was able to provide
 19 City Church to install competent lighting which
 20 allowed us to partner with UC Davis Health and to
 21 host the first, and for, unfortunately, a long
 22 period of time, the only COVID vaccination clinic in
 23 all of Oak Park, a community of over 50,000 people.
 24 What SMUD has is -- and prayerfully will
 25 continue to do is create an equitable framework for

Page 79

1 all social and economic demographic groups for the
 2 Oak Parks as well as the Land Parks of our
 3 community. Energy affordability and fairness is
 4 essential, especially with something as promising
 5 and in vogue as solar energy and net metering. How
 6 SMUD approaches this and other issues goes beyond
 7 simple bottom lines. Dare I say, it must be more
 8 than just good business; it must be the right thing
 9 to do.
 10 Thank you, SMUD. In particular,
 11 Jose Bodipo-Memba and Shiloh Costello, I look
 12 forward to being an ongoing co-laborer with you in
 13 our community. Thank you so much.
 14 SMUD GENERAL COUNSEL LEWIS: Thank you.
 15 Next up is Darrick Lam.
 16 (Upcoming speakers' names announced.)
 17 PUBLIC MEMBER DARRICK LAM: Good evening,
 18 everyone. My name is Darrick Lam. I'm the
 19 president and CEO at ACC Senior Services.
 20 ACC Senior Services has been a proud
 21 partner with SMUD for the past 49 years. Since our
 22 incorporation in April of 1972, ACC has been
 23 providing health, social, and supportive services in
 24 Sacramento in the space of senior living such as
 25 skilled nursing, assisted living, memory care,

Page 80

1 independent living, transportation, lifelong
 2 learning and wellness programs, senior employment
 3 training, family caregiver support, senior safety
 4 collaborative, and also we manage the Meals on
 5 Wheels by ACC.
 6 ACC would like to express our strong
 7 support for SMUD's ongoing effort to keep energy
 8 affordable for all income demographics of our
 9 community, particularly their commitment to keep
 10 energy affordable for Sacramento's most underserved
 11 households.
 12 Having served tens of thousands of seniors
 13 in the past 49 years, ACC Senior Services sense that
 14 any increases in their rates are always a concern
 15 for Sacramento's low-income. However, we understand
 16 the reasoning, which include wildfire mitigation and
 17 related vegetative management, repairs to aging
 18 infrastructure, increased operating costs, and also
 19 compliance with state regulations. We are also
 20 pleased that you are keeping them below the rate of
 21 inflation.
 22 And this is very similar to a time when an
 23 organization would have to adjust rates for
 24 private-pay residents at our skilled nursing,
 25 assisted living, and independent living to deal with

Page 81

1 the ever-increasing operating costs and to ensure
 2 that there's enough revenue to pay for competitive
 3 wages and provide incentives so that we can continue
 4 to retain a high-quality staff in the provision of
 5 services for all that dwells within ACC's family of
 6 services.
 7 On the matter of net metering, we find
 8 ourselves concerned for Sacramento's low-income
 9 households, many of which are living in situations
 10 that do not permit them to readily access the
 11 current benefits of solar technology; however, in
 12 time, they may be the very group that bears the
 13 additional cost of an aging electrical system,
 14 especially if no upgrades or repair is being done
 15 now.
 16 So to keep our low-income neighbors safely
 17 housed and able to afford life's most basic
 18 necessities, we feel it's pertinent that the cost of
 19 electric service be shared throughout our community.
 20 In closing, thanks to SMUD staff for
 21 putting together this proposal and allowing me to
 22 make my comments.
 23 SMUD GENERAL COUNSEL LEWIS: Thank you.
 24 Next up is Tracy Jackson.
 25 (Upcoming speakers' names announced.)

Page 82

1 PUBLIC MEMBER TRACY JACKSON: Thank you
 2 for having me. This is Tracy Jackson. And thank
 3 you to President Bui-Thompson, to the board, and to
 4 the staff. I appreciate you allowing me to take a
 5 few moments.
 6 My name is Tracy Jackson. I'm a business
 7 owner. I'm a mother and my husband being a teacher
 8 having to work from home last year. I have three
 9 daughters who are students who also had to work out
 10 of home last year, and I could just tell you how
 11 much I really appreciate the fact that I knew that
 12 SMUD was my utility provider through those
 13 situations, and I had a lot of confidence that
 14 things were going to work out, and they did. So
 15 thank you very much.
 16 I've been a SMUD customer since 2000.
 17 I've lived in other major districts for utilities,
 18 and SMUD, by far, is the one who I actually talk
 19 about and really appreciate. I'm also a solar
 20 customer. I've been a solar customer now for about
 21 ten years. This is my second home that I have solar
 22 because I had a great experience with the first one;
 23 I'd even say a little better than this one.
 24 I really appreciate the educational
 25 campaign that SMUD has done, and I've really

Page 83

1 appreciated the heads-up and the knowledge I get.
 2 When I got the letter last year, I remember -- I
 3 actually still have the letter that I got talking
 4 about this.
 5 On a sidenote, I'd like to say one thing I
 6 really appreciated is that you were no longer going
 7 to use the term "grandfathered," and that you talked
 8 about it in that letter. That made actually me
 9 really appreciate it.
 10 But I'm really happy about the things that
 11 are taking place, the communication. I think the
 12 increases are negligible, and I appreciate the fact
 13 that everyone is really concerned about our
 14 lower-income and -- you know, minority
 15 underrepresented groups or lower-income groups that,
 16 we're taking those things into consideration. So
 17 I'm actually in favor of the proposal that you have
 18 in place.
 19 Of course, I'm a little concerned about
 20 what kind of fees are going to be attached when you
 21 connect to the grid. But at the same time, I feel
 22 like most of them have been incredibly fair and
 23 transparent. So I really appreciate it, and I think
 24 that's really about it.
 25 Of course, I'm also -- my biggest concern

Page 84

1 now is fire danger, and I don't think that they're
 2 hypothetical concerns any longer. I think that
 3 these are the real concerns, and the steps that SMUD
 4 needs to take to make sure to reduce the possibility
 5 of fires in California and in our neighborhoods is
 6 really important.
 7 So, again, I'd like to express my support
 8 for the proposal that you have in place. And that's
 9 all I have for today. Thank you.
 10 SMUD GENERAL COUNSEL LEWIS: Thank you.
 11 Next up we have Michael Lynch.
 12 (Upcoming speakers' names announced.)
 13 PUBLIC MEMBER MICHAEL LYNCH: Hello. I'm
 14 Michael Lynch. Sorry for the background noise. I
 15 have two kids in the background playing karate.
 16 Thank you so much, Madam President and
 17 Board, for allowing me to speak. I serve as the
 18 cofounder and chief executive officer of Improve
 19 Your Tomorrow. At Improve Your Tomorrow, we help
 20 young men of color get to and through college. And
 21 SMUD has been a continuous strong partner with IYT
 22 since our inception in 2013. And on behalf of IYT,
 23 I'd like to express my strong support for SMUD's
 24 continued quest to bring energy equity to low-income
 25 communities of color, the same communities in which

Page 85

1 Improve Your Tomorrow serves of over 2,000 young
 2 people across Sacramento County.
 3 Two years ago through a SMUD community
 4 partnership, we launched a STEM camp to help young
 5 people get inspired about careers in technology.
 6 Over the course of eight weeks through a partnership
 7 with SMUD and Sac City, they had the opportunity to
 8 build new technological products and pitch those
 9 products to an audience in a Shark-Tank-style
 10 experience at the close of the session.
 11 SMUD was critical to be able to help to
 12 execute the camp, both through staff support, fiscal
 13 support, but really through bringing the
 14 technological expertise that our young people needed
 15 to get excited about a possible career in STEM.
 16 Through our current sustainable-
 17 communities partnership, SMUD is helping to close
 18 the mentoring gap, include, like, South Sacramento,
 19 by helping to fund a cohort of mentors who are
 20 working and serving in the community. COVID has
 21 only widened gross academic inequality across the
 22 county. And SMUD, recognizing the importance of a
 23 strong labor workforce that needs to be educated,
 24 has continuously invested in helping to make sure
 25 that more young people have access and opportunity

Page 86

1 to a better life.
 2 I'll close with a brief story on SMUD's
 3 impactful partnership. We have a young person who
 4 started in the program with us at IYT when he was a
 5 sophomore in high school. He had a 1.67 GPA. A
 6 couple of semesters later he was in mid 2s and got
 7 accepted to Sacramento State. Through his five
 8 years at Sacramento, he worked as a mentor, mentor
 9 fellow in South Sacramento, right back in the same
 10 community, in which he served helping to make sure
 11 other young men of color get to and through college.
 12 That young person recently graduated from Sac State
 13 and is involved in the professional world. And his
 14 experience was helped to be powered by SMUD and
 15 SMUD's continued partnership in the community to
 16 ensure that there's equal access to a better life.
 17 Thank you so much for your time.
 18 SMUD GENERAL COUNSEL LEWIS: Thank you so
 19 much.
 20 Next up, Jeff Owen.
 21 (Upcoming speakers' names announced.)
 22 PUBLIC MEMBER JEFF OWEN: Good evening,
 23 Members of the board. My name is Jeff Owen, and I'm
 24 the executive director of City Year of Sacramento.
 25 City Year is an AmeriCorps program focused on

Page 87

1 educational equity. We know that talent among
 2 students is equally distributed but opportunities
 3 are not.
 4 SMUD and City Year have been partners in
 5 supporting some of our region's most vulnerable
 6 communities using the Social, Emotional, and
 7 Academic Development framework to support and enrich
 8 students' experience in the classroom every day.
 9 This includes the use of SMUD's STEM curriculum to
 10 excite our students with lessons they otherwise
 11 might not have exposure or access to.
 12 In our experience, SMUD has been an --
 13 authentic in their inclusive and equity-based
 14 decision-making and care deeply about being strong
 15 community partners. We actively utilize SMUD's
 16 sustainable-communities map both in our strategic
 17 planning and in bringing awareness to the inequality
 18 of resources in our region. This resource has been
 19 a great addition to our training of the Americorps
 20 members and their understanding of the communities
 21 they will be working with throughout their year of
 22 service.
 23 City Year staff and Corps members were
 24 witnessing first-hand the disproportionate effect on
 25 vulnerable communities with issues like climate

Page 88

1 change. And I'm calling tonight to applaud SMUD and
 2 the leadership of the board in your efforts to get
 3 to zero carbon.
 4 While I'm not an expert on solar or
 5 electric services, I do know that with great change
 6 comes the need for great compromise. For example,
 7 we work in low-income communities. Many of the
 8 households are in living situations that do not
 9 allow them to take advantage of the current benefits
 10 of solar technology. At the same time, they may be
 11 the very group that bears the additional cost of
 12 improving electrical systems. We can no longer look
 13 to our communities who receive less in community
 14 investment to give more.
 15 I support SMUD in their effort and have
 16 seen firsthand their intentional approach to their
 17 work to understand and support our entire region but
 18 particular areas that have been traditionally
 19 overlooked.
 20 In reading the plan, Virtual Net Metering
 21 appears to benefit the households in the communities
 22 and cities they serve regardless of whether they
 23 have solar or not, in particular by keeping energy
 24 costs low. Getting to zero carbon by 2030 is
 25 ambitious, but it's also world-changing and should

Page 89

1 be recognized. The healthier the environment, the
 2 healthier our kids will be and the more time they'll
 3 spend at school.
 4 But, please, also continue to focus on
 5 equity in providing inclusive opportunities for our
 6 lower-income neighbors to take advantage of clean,
 7 affordable, and sustainable energy options.
 8 Thank you for your time and looking out
 9 for the best interest of our entire community.
 10 SMUD GENERAL COUNSEL LEWIS: Thank you.
 11 Next up, Jeff Spies.
 12 (Upcoming speakers' names announced.)
 13 PUBLIC MEMBER JEFF SPIES: Yes. Hello.
 14 Can you hear me?
 15 SMUD GENERAL COUNSEL LEWIS: Yes.
 16 PUBLIC MEMBER JEFF SPIES: Hi, Laura. I
 17 appreciate you pronouncing my last name correctly.
 18 You must know somebody from my family. My name is
 19 Jeff Spies, pronounced Spies (pronunciation) by
 20 most, and I'm president of a solar drafting company
 21 serving installers throughout California, including
 22 SMUD territory.
 23 I care about low-income communities in
 24 fairness, but I'm also committed to the critical
 25 necessity of a healthy solar industry, and I stand

Page 90

1 in firm opposition to the proposal put forth by SMUD
 2 staff.
 3 My reason for speaking today is ten years
 4 ago, I was contracted by APS, Arizona Public
 5 Service, the largest electric utility in Arizona
 6 with rates not dissimilar to SMUD, to develop a
 7 contractor-training program teaching realistic
 8 financial payback calculation for residential PV
 9 systems. This was for the APS-qualified solar
 10 installer training program. And I was chosen to
 11 teach this topic as I had a reputation for being a
 12 strong proponent of ethical financial projections by
 13 solar contractors.
 14 Having taught the subject for APS for
 15 several years and understanding the financial
 16 underpinnings of payback and the effect on solar
 17 adoption, I'm certain SMUD's staff proposal will not
 18 allow for growth for the solar-and-storage industry
 19 as presented by staff; in fact, it will contract the
 20 industry, and here is the four reasons why:
 21 You're going to have high interconnection
 22 fees, three times higher than PG&E, which will
 23 disincentivize residential customers from investing
 24 in a solar installation.
 25 And the incredibly modest battery

Page 91

1 incentive is really not an incentive. It provides
 2 only an average over the years it's active of \$850
 3 total incentive, which would result in an energy
 4 storage system payback for about 14 years when
 5 battery life is probably going to be 10 to 12 years.
 6 You would never get payback on the battery.
 7 The ridiculously low limit on the solar
 8 system size will make adding an EV, an electric
 9 vehicle, difficult because an EV will normally
 10 double the electric consumption of a typical home.
 11 And by only allowing 110 percent of last year's
 12 production for a solar system, prevents somebody
 13 from putting EV on where they can essentially fuel
 14 it with the solar system.
 15 And the fourth reason, the most impactful
 16 one, is the dramatically reduced then compensation
 17 for back-fed kilowatt hours extends the payback
 18 noticeably.
 19 The conclusion is that this proposal will
 20 lead to a decline in solar and storage during the
 21 time when additional distributed generation is so
 22 important for energy resiliency and our climate
 23 goals. Thank you very much for allowing me to
 24 speak.
 25 SMUD GENERAL COUNSEL LEWIS: Thank you.

Page 92

1 Next up, Evan Schmidt.
 2 (Upcoming speakers' names announced.)
 3 SMUD STAFF JOSUE SWAY GARCIA: And, Evan,
 4 your microphone has been activated if you can unmute
 5 when you're ready.
 6 PUBLIC MEMBER EVAN SCHMIDT: Good evening,
 7 President Bui-Thompson, Members of the board and
 8 SMUD staff. Thank you the time this evening. My
 9 name is Evan Schmidt, and I am the CEO of Valley
 10 Vision, a nonprofit and civic leadership
 11 organization operating in the Sacramento region for
 12 over 25 years.
 13 Valley Vision drives actionable research,
 14 collaboration, and catalytic action to advance
 15 economic prosperity, environmental sustainability,
 16 and social equity in communities across the region.
 17 We've also been actively partnering with SMUD for
 18 many years to support these goals and have greatly
 19 appreciated SMUD's partnership with Valley Vision
 20 and their leadership in the region.
 21 I'm calling to support SMUD's proposed
 22 rate increase. I highly commend the board and staff
 23 on SMUD's ambitious 2030 Zero Carbon vision. This
 24 vision aligns strongly with Valley Vision's
 25 commitment to livable and sustainable communities,

Page 93

1 reduced emissions, improve our local air quality,
 2 overall health, and create jobs.
 3 Further the plan provides important action
 4 that addresses climate change and helps put us on
 5 the road to a low-carbon economy. I believe that
 6 the modest rate change will support the goals of the
 7 2030 plan without creating an undue burden on
 8 customers.
 9 We are all faced with new challenges right
 10 now including the increased risk of wildfire and the
 11 transition to a low-carbon economy, which includes
 12 integration of new clean technologies. SMUD has
 13 come out as a leader in clean and affordable energy,
 14 and it's important that their rates keep up with
 15 inflation in order to address these changes.
 16 It's also important that we take action in
 17 ways that consider and address the underserved in
 18 our communities. Rate increases can cause concern
 19 about the ability of the under-resourced households
 20 in communities to afford basic needs.
 21 SMUD has a long history of creating
 22 safeguards to avoid undue impacts by these
 23 customers, and, in fact, I believe the rate change
 24 will address some existing inequities in the
 25 application of clean energy subsidies.

Page 94

1 Additionally, with the rate change keeping
2 below the rate of inflation and the relatively low
3 cost of SMUD's overall rates, I believe that the
4 rate increase is warranted and reasonable.
5 I appreciate SMUD's leadership in the
6 Sacramento community supporting clean energy,
7 sustainable communities, as well as a diverse array
8 of community initiatives, many community-based
9 organizations, and social equity goals throughout
10 their service area.
11 Valley Vision is closely aligned with and
12 supportive of SMUD's ambitious emission-reduction
13 goals and their actions to achieve those goals. For
14 these reasons I support SMUD's rate increase
15 proposal. Thank you for your time and consideration
16 this evening.
17 SMUD GENERAL COUNSEL LEWIS: Thank you.
18 Next up is Ed Murray.
19 (Upcoming speakers' names announced.)
20 PUBLIC MEMBER ED MURRAY: Thank you, Madam
21 President Bui, SMUD board and SMUD staff. I really
22 want to thank you for having public comment before
23 my bedtime as opposed to the last meeting we had.
24 My name is Ed Murray. I'm the president
25 of Aztec Solar in Rancho Cordova. I'm also the

Page 95

1 president of the California Solar & Storage
2 Association, or CALSSA, which represents 600
3 members: Solar companies, distributors, and
4 manufacturers. Aztec Solar installs solar electric,
5 water and pool heating.
6 I am disappointed that you are portraying
7 Aztec Solar on your slide as a collaborator in this
8 process. I want to go on record that Aztec Solar
9 does not agree with this proposal.
10 I have been a proponent of SMUD for many
11 years. When I have presented in Europe and Asia
12 regarding solar systems in the United States, I
13 proudly spoke with SMUD but now find myself at a
14 loss for words regarding SMUD. Once a
15 forward-thinking utility under David Freeman's
16 leadership, SMUD is now looked at as a utility which
17 is choosing one technology over others,
18 utility-scale versus rooftop solar.
19 I am shocked that the SMUD Board and
20 employees does not see that Rome is burning. Please
21 look outside your windows and see that the forest
22 fires are indicative of accelerated climate change.
23 Please, please, reconsider the proposal
24 before you. We are going to need all hands on deck
25 to mitigate climate change, including residential

Page 96

1 and commercial solar. Thank you.
2 SMUD GENERAL COUNSEL LEWIS: Thank you.
3 Next up, Megan Nutting.
4 (Upcoming speakers' names announced.)
5 SMUD STAFF JOSUE SWAY GARCIA: Thank you.
6 And, Laura, we do not have Megan Nutting in
7 attendance, along with Steve Berlin.
8 So I will be activating Michael Zaro's
9 microphone at this time.
10 SMUD GENERAL COUNSEL LEWIS: Okay.
11 (Upcoming speakers' names announced.)
12 SMUD STAFF JOSUE SWAY GARCIA: And,
13 Michael Zaro, your microphone has been activated,
14 just unmute when you are ready.
15 PUBLIC MEMBER MICHAEL ZARO: I'm a sales
16 rep for a sun power dealer.
17 In having sold mostly in PG&E territory
18 but also some in SMUD, I can tell you right now that
19 any impediment to selling in SMUD is really going to
20 push a lot of business out of your region. I've
21 seen that, despite what was presented earlier, with
22 regard to some of the other utilities that have done
23 away with or reduced their net metering like, for
24 example, Roseville.
25 It is extremely difficult to get customers

Page 97

1 motivated to make an investment in some of these
2 communities. So I can say with certainty that this
3 will absolutely drive customers away from solar and
4 SMUD. That's all I have. Thank you.
5 SMUD GENERAL COUNSEL LEWIS: Thank you.
6 Next up, Al Rich.
7 (Upcoming speakers' names announced.)
8 PUBLIC MEMBER AL RICH: Good evening,
9 President Bui-Thompson, SMUD board members and
10 staff. My name is Al Rich, president of ACR Solar
11 International in Carmichael.
12 I participated in NEM 2.0 collaborative
13 meetings late last year and early this year. I was
14 honored to participate with a very thoughtful SMUD
15 staff and feel a good deal of understanding was
16 reached particularly as to how marginal the SMUD
17 solar market sales process is and the need to do no
18 harm to the solar -- local solar industry.
19 Currently, even with SMUD's lower kilowatt
20 prices, most low-income homeowners can finance a
21 solar system and have a positive cash flow. That
22 will change when NEM 2.0's 7.4 cent export rate is
23 implemented.
24 While I disagree that 7.4 cents is a true
25 value of solar, it was discussed how important the

Page 98

1 glide path is to the 7.4 sent export rates until the
 2 solar industry can adjust to the increased
 3 solar-only return on investment and expedite a
 4 robust battery program in cooperation with SMUD
 5 staff. This is important to meet SMUD's significant
 6 and greatly appreciated 2030 Climate Emergency
 7 Resolution that the board and SMUD staff have worked
 8 so hard on.
 9 As the Prop. 26 issue entered the
 10 collaborative room, a compromise was discussed and,
 11 I thought, reached to have NEM 2.0 start date be
 12 January 1, 2023. I was disappointed to find the
 13 plan to start had moved to January 1, 2022. This
 14 early NEM 2.0 start date is too soon for the solar
 15 industry to adjust to.
 16 We hope that by January 1, 2023, the
 17 current battery supply shortage will be over and
 18 battery prices will be lower. We actually need
 19 until January 1, 2023, to adjust to the new
 20 marketing conditions and working with SMUD staff,
 21 home to solar industry's battery sales presentations
 22 to the customers.
 23 Thank you for being the progressive
 24 municipality utility you are and the opportunity to
 25 speak with you.

Page 99

1 SMUD GENERAL COUNSEL LEWIS: Thank you.
 2 Next up, Fatima Malik.
 3 (Upcoming speakers' names announced.)
 4 PUBLIC MEMBER FATIMA MALIK: Hi. Can you
 5 hear me?
 6 SMUD GENERAL COUNSEL LEWIS: Yes.
 7 PUBLIC MEMBER FATIMA MALIK: All right.
 8 So I actually had called in to talk about something
 9 totally different, but I really need to talk about
 10 everybody that you just had speak as members of the
 11 public comment. It really sounded like you just
 12 went through your entire grantee list of everyone
 13 that has a conflict of interest with SMUD.
 14 Specifically, I want to call out Valley Vision.
 15 That was a huge conflict of interest because Paul
 16 Lau is on their board.
 17 So I really think that I'm super
 18 disappointed in how this became a discussion about
 19 all of the partnerships you have and your grantees,
 20 and you're mixing the issue of solar with all of
 21 these other issues around serving low-income
 22 minority communities. You know, there are so many
 23 issues, but you're, like, commingling, combining.
 24 There is so much conflict of interest
 25 today and tonight that I'm super, super disappointed

Page 100

1 that I can't even talk about what I came to talk
 2 about because I really got to call out how you all
 3 just stacked all of the supporters, and they sounded
 4 like they had all the same script, and I'm just
 5 super concerned because the real issue is I think --
 6 I want to take you back to --
 7 I was actually going to talk to about how
 8 in 2019 there was a presentation done to the SMUD
 9 NEM working group December 12th, 2019, by
 10 Elena Seger (phonetic) by a group called PSE Healthy
 11 Energy.
 12 And I think the main thing that I want to
 13 talk about is that the reason why equity and access
 14 to solar and storage is so important is because we
 15 want to reduce the energy burden of people with
 16 low-income who spend more of their income on utility
 17 bills, right? They have less disposable income.
 18 The ultimate reason why people get solar
 19 is so they have more consistent bills. And so I
 20 want to talk about why I got solar plus so that I
 21 could be able to have a more consistent bill. And
 22 that is -- I think what I did not hear anybody talk
 23 about is, like, yes, obviously low-income
 24 communities are spending way too much money on their
 25 utility bills. And these one-time payments or --

Page 101

1 you know yes, I appreciate everything that SMUD does
 2 with energy assistance programs, but you really need
 3 to make this completely separate issues and
 4 arguments.
 5 The other thing is that if SMUD really
 6 wants to address equity, let me be clear, what you
 7 just laid out tonight is: Hashtag "Not Real
 8 Equity," okay? Because you've got to go back to the
 9 drawing board. 24 value components do not equal
 10 equity criteria, okay?
 11 And I don't see what the win-win here is
 12 because the reality -- I do agree with you is that
 13 the early adopters of solar have been the wealthy.
 14 And I'm going to ask SMUD to really think about --
 15 stop opportunity porting and figure out how to make
 16 this technology available to more people and not
 17 less. Thank you.
 18 SMUD GENERAL COUNSEL LEWIS: Thank you.
 19 Next up, Lola Pudinski.
 20 (Upcoming speakers' names announced.)
 21 PUBLIC MEMBER LOLA PUDINSKI: Hello?
 22 SMUD GENERAL COUNSEL LEWIS: Yes, we can
 23 hear you.
 24 PUBLIC MEMBER LOLA PUDINSKI: Good evening
 25 and thank you.

Page 102

1 Our state is on fire, and we need to do
 2 everything we can to combat climate change and reduce
 3 our use of fossil fuels. There are issues with the
 4 study SMUD is using to justify this proposal and,
 5 therefore, their new NEM rate.
 6 Most importantly, SMUD's solar study
 7 incorrectly claimed that SMUD pays solar users for
 8 simply using their own solar energy at home. This
 9 is incorrect.
 10 The study is also contradicted by mounting
 11 evidence and an analysis by the national grid
 12 modeling experts, Vibrant Clean Energy, which shows
 13 that rooftop solar reduces the cost of the
 14 electricity grid, can cut Californian's energy bills
 15 by 120 billion over the next 30 years, and reduce
 16 global warming pollution by about 4 million metric
 17 tons.
 18 Additionally, residential solar battery
 19 costs approximately \$8,500. That's for the Tesla
 20 Powerwall. The incentive is an average of \$850,
 21 which is nowhere close to making up for the gutted
 22 solar credit to make it economical to purchase a
 23 battery in addition to the cost of solar panel.
 24 This would make investing in rooftop solar
 25 uneconomical for the average working- and

Page 103

1 middle-class family. And it would make it
 2 impossible for low-income families to have solar,
 3 which they should have access to to help with their
 4 bills. Thank you.
 5 SMUD GENERAL COUNSEL LEWIS: Thank you.
 6 Next up is Marie Chen.
 7 (Upcoming speakers' names announced.)
 8 SMUD STAFF JOSUE SWAY GARCIA: Thank you.
 9 And, Laura, Marie Chen nor John Lindwall
 10 appeared. So next would be Johan van Ravenhorst.
 11 SMUD GENERAL COUNSEL LEWIS: Thank you.
 12 PUBLIC MEMBER JOHAN VAN RAVENHORST:
 13 right. Can you hear me?
 14 SMUD GENERAL COUNSEL LEWIS: Yes.
 15 PUBLIC MEMBER JOHAN VAN RAVENHORST:
 16 name is a Johan van Ravenhorst. I recently
 17 emigrated from the Netherlands in Western Europe to
 18 the United States, and now I am a SMUD residential
 19 customer.
 20 So the lower rates make it harder for me
 21 as a homeowner, who would like to get solar in the
 22 near future, and a small landlord. We are currently
 23 in the process of possibly installing solar into
 24 houses to invest in solar for my tenants,
 25 single-family homes. So I kindly request you to

Page 104

1 keep the current rates. You know, for our case, a
 2 lower net metering rate would be -- would make solar
 3 investment financially very unattractive.
 4 As one of the arguments, you said that
 5 currently the solar industry seems mature or is
 6 mature. Well, you know, I'm from the Netherlands,
 7 so I compare prices, and they are typically double
 8 here compared to in Western Europe while, you know,
 9 (inaudible) is the same price and wholesale prices,
 10 permitting and electrician hourly rates are roughly
 11 the same.
 12 So here in California, a lot of money goes
 13 either to, you know, overhead or profit, and I am
 14 not willing to pay for either of them. So it more
 15 looks like the solar industry has childish greed
 16 instead of being mature, or they are just abysmally
 17 inefficient.
 18 Another example, I bought a Tesla solar
 19 roof in October and for 34,000. In April, their
 20 price post signing contract -- contract breach, was
 21 increased to 58,000.
 22 And let's talk about roofs in the United
 23 States. When you buy roofs -- shingles, I mean, the
 24 moment you walk out of Home Depot it starts to
 25 crumble in your hands. In Western Europe, you have

Page 105

1 tile roofs that last for 300 years. Here in the
 2 United States, you replace them every 30 years. I
 3 think that is ridiculous.
 4 So, you know, Tesla sold a roof, or
 5 something like that, made of tempered glass like the
 6 side windows of your car, you know, that will last
 7 100 years if all goes well. But given the prices
 8 that I just quoted you, also that is certainly not a
 9 mature industry. Of course, not all goals of a
 10 solar roof can be attributed to the solar-generating
 11 portion of that, and it's a far more complicated
 12 story than this but just to, you know, give some
 13 attention to that point.
 14 Another point, 3 cents per kilowatt hour
 15 for industry-scale -- (inaudible) solar, wow. Yes,
 16 but what fraction of the annual energy consumption
 17 of SMUD can be covered with the current fields that
 18 operate at such a low cost? Is it scaleable to
 19 offer a much larger fraction of the annual demands
 20 of SMUD customers?
 21 It has advantages to have generation and
 22 storage closer to the loads. It saves a lot of
 23 copper in the ground. That should be mentioned as
 24 well. Thank you.
 25 SMUD GENERAL COUNSEL LEWIS: Thank you.

Page 106

1 Next up is Debbra Jacobs-Robinson.
 2 (Upcoming speakers' names announced.)
 3 SMUD STAFF JOSUE SWAY GARCIA: Debbra is
 4 not in attendance, so I have activated the
 5 microphone for Patrick Sterns.
 6 PUBLIC MEMBER PATRICK STERNS: Hello,
 7 President Bui-Thompson and members of the SMUD Board
 8 of Directors and staff. Thank you for having me.
 9 My name is Patrick Sterns with Sunpower Corporation.
 10 We are a 35-year-old leading solar energy
 11 and storage solutions provider. We have about 1400
 12 residential projects and 60 large commercial
 13 projects within the SMUD territory. We work with 17
 14 of the 20 top homebuilders in this state, many of
 15 which who are very active in SMUD territory. And of
 16 the 370 local contractors we work with, 25 of them
 17 are in SMUD. And as of last count, they have,
 18 combined, more than 900 employees in your territory.
 19 So we represent a big slice of the solar industry
 20 there.
 21 I'd like to thank the board for your
 22 commitment to providing reliable and affordable
 23 energy to your customers and helping to lead the way
 24 as we transition to a clean energy economy.
 25 However, in order to achieve this goal, we

Page 107

1 feel strongly that the board needs to reevaluate the
 2 current net metering proposal and examine the
 3 impacts it would have on SMUD's vision of a zero
 4 carbon economy.
 5 First of all, a problem with the NEM 2.0
 6 proposal is the large reduction in export rate,
 7 which a lot of folks have talked about. It's based
 8 on a flawed and contentious ACC proceeding.
 9 And a drastic cut like that so quickly
 10 with no glide path with severely impact the economic
 11 benefits to many solar-and-storage customers
 12 regardless of the financing options which have
 13 opened up the benefits of solar to Californians of
 14 all income levels. So the idea that solar is only
 15 for the wealthy is an idea really from 1998. It's
 16 no longer true. This abrupt reduction would create
 17 a shock to the industry and its employees and cause
 18 a massive decline in the Sacramento market.
 19 So we do suggest a glide path, and we also
 20 suggest that you take another look at the export
 21 rates and the peak periods. We recommend more like
 22 21 cents for peak hours and 11.5 cents during
 23 non-peak hours.
 24 We welcomed your energy storage system
 25 proposal, but we suggest it doesn't go far enough.

Page 108

1 The average incentive between now and 2030 would be
 2 \$841 per system. These are folks that would be
 3 providing a vital grid service on their own dime, so
 4 we think that SMUD should lean forward into that and
 5 help folks, adopt a better energy storage proposal.
 6 And we'd like to see an expansion of
 7 virtual net metering to all multi-tenant properties.
 8 That is a critical tool that can help extend the
 9 benefits of solar to Californians of all income
 10 brackets. And a lot of folks who live in
 11 multi-tenant properties, even if they're not
 12 designated as low-income, are of lower-income
 13 brackets and would be effectively locked out of
 14 these benefits.
 15 So, in conclusion, we think, you know,
 16 it's good to have this discussion, but we don't
 17 think this current proposal is going to work that
 18 well for solar.
 19 And I just want to point out that more
 20 utility-scaled solar is going to mean more
 21 high-voltage transmission lines, which, as we know,
 22 means more wildfires. So I would urge you to look
 23 at this again and reconsider. Thank you.
 24 SMUD GENERAL COUNSEL LEWIS: Thank you.
 25 Next up is Mo Kashmiri.

Page 109

1 (Upcoming speakers' names announced.)
 2 PUBLIC MEMBER MO KASHMIRI: All right.
 3 Can you hear me? Mo Kashmiri.
 4 SMUD GENERAL COUNSEL LEWIS: Yes.
 5 PUBLIC MEMBER MO KASHMIRI: I'm a
 6 homeowner that I also just installed solar. And
 7 when I installed it, I was really disappointed to
 8 hear that -- all of the solar installers kept
 9 telling me that SMUD was not friendly to solar, and
 10 I just couldn't believe my ears given the history of
 11 SMUD and the direction we need to go right now.
 12 You know, it took -- will take me 13 years
 13 to pay off my system, and I was counting on the
 14 rates staying the same, and it should for at least
 15 20 years, right? And so I'm paying money outside of
 16 my pocket just because I want to make sure we're
 17 getting -- I want to get off fossil fuels as fast as
 18 possible and get our grid to, you know, 100 percent
 19 renewable -- 100 percent non-carbon -- 100 percent
 20 carbon-free by 2030.
 21 The current plan doesn't go far enough. I
 22 would ask the board to reject the plan that's being
 23 proposed, especially around net metering, and
 24 continue to expand it. I don't think that it values
 25 solar enough. We know that the study that this was

Page 110

1 all based on was incorrect and had lots of flaws in
2 it.
3 But most of all it's because, you know, my
4 son had to decide by going to local school or to go
5 to a further-away school and still do immersion. He
6 said he chose the local school because he didn't
7 want to -- (inaudible) climate change.
8 I want to see us get off of carbon and
9 fossil fuels, such as natural gas, as soon as
10 possible. The current plan doesn't get us there.
11 The worst possible idea on the planet is to start
12 restricting solar subsidies. We need to save our
13 planet. It makes no sense to, you know, cut solar
14 subsidies when we need to be getting off of our
15 fossil fuels as fast as possible.
16 I'd also ask that SMUD make sure that its
17 program is not just targeting low-income
18 multi-family housing but targeting all multi-family
19 housing. That's a critical piece that is missing as
20 well.
21 So, again, I would ask -- I would ask SMUD
22 board to oppose the current plan around Net Energy
23 Metering and continue to expand it and make it
24 broader so that we can actually meet the 2030 goals.
25 And instead of goals, they should be requirements,

Page 111

1 like, that's just -- you know, I don't think science
2 says any less is doable, and I think our community
3 is worth that. Thank you.
4 SMUD GENERAL COUNSEL LEWIS: Thank you.
5 Next up is Vincent Battaglia.
6 (Upcoming speakers' names announced.)
7 SMUD STAFF JOSUE SWAY GARCIA: We don't
8 have Vincent in attendance, and we still do not have
9 Steve as well, Steve Uhler.
10 So it looks like next would be Alan
11 Escarda. I will go ahead and activate your
12 microphone now.
13 SMUD GENERAL COUNSEL LEWIS: Thank you.
14 PUBLIC MEMBER ALAN ESCARDA: Good evening.
15 Can you hear me?
16 SMUD GENERAL COUNSEL LEWIS: Yes.
17 PUBLIC MEMBER ALAN ESCARDA: Good evening.
18 My name is Alan Escarda. I'm a proud solar
19 provider, SMUD customer living in Sacramento.
20 I'm opposed to the current proposal of
21 7.4 cents. I realize that changes have to be made,
22 but I'm kind of confused on how the value was
23 arrived at. When I looked at the report, it said
24 the societal benefits of my rooftop solar. They
25 calculated monetary benefit, but it wasn't included

Page 112

1 in the 7.4 cents, but earlier I heard Mr. Poff say
2 it was. So I'm really confused about that.
3 I guess the biggest heartburn I would have
4 is, from the get-go, SMUD staff has been saying that
5 the loss of revenue is a cost. And as far as I'm
6 concerned, my solar system isn't a loss of revenue
7 that's causing costs to SMUD. I mean, I paid for
8 that. That was 20,000 out of my own pocket. So I
9 don't view that as a loss of revenue as a cost that
10 should be included in the calculation of the
11 reimbursement rate. So if it is, I really oppose
12 it.
13 I am okay with connection fees, although
14 the current proposal of \$450 seems pretty high
15 considering PG&E is a lot less than that. So that
16 might be taken a look at too.
17 Probably the other biggest concern I have
18 is in the future I wanted to add additional panels
19 and batteries. I was looking at putting -- buying
20 an electric vehicle. But under this proposal there
21 is no way it pencils out, so I'm really confused by
22 some of the slides I saw earlier that they don't
23 think this proposal would cause any harm to the
24 solar industry. And additional solar systems and
25 batteries being -- would go up, not down.

Page 113

1 I can tell you with certainty if it goes
2 through, I won't be doing it. Maybe I'll buy a
3 whole-house generator to protect my house if we get
4 power interruptions, which I don't want to do, but
5 it's -- economically it's not viable if we go this
6 route.
7 So I'd like to see what I call the
8 grandfather-death clause be removed so that if I do
9 put in a system with greater energy needs in my
10 household and batteries, that I don't lose my
11 grandfather status.
12 I'd like to see the entire NEM rate
13 transitioned in. It's just too big of an abrupt
14 change. I don't want to see the solar industry
15 decimated.
16 And, finally, I'd like to see the payback
17 period extended past 2030. After all, according to
18 you guys, we invested 250 million over the last
19 20-something years, I think we can afford 10 million
20 more a year after 2030. Thank you.
21 SMUD GENERAL COUNSEL LEWIS: Thank you.
22 We are in the process of getting Steve
23 Uhler a number to call. He does have that. But in
24 the meantime, I will move on to Chiwah Slater.
25 (Upcoming speakers' names announced.)

Page 114

1 SMUD STAFF JOSUE SWAY GARCIA: So I'm
2 still awaiting Steven Uhler here. So I'll go ahead
3 and do the next person. Bear with me one moment
4 while I activate the microphone for Chiwah Slater.
5 PUBLIC MEMBER CHIWAH SLATER: Hello. Can
6 you hear me?
7 SMUD GENERAL COUNSEL LEWIS: Yes.
8 PUBLIC MEMBER CHIWAH SLATER: Okay, good.
9 I am concerned about the precedent that
10 SMUD is setting for the rest of the state and the
11 rest the country. I don't live in Sacramento. I
12 live in Southern California, but what you're doing
13 in Sacramento is very likely to affect us down here,
14 and you're setting a precedent.
15 I was married for 20 years to a solar
16 salesman and have had ample opportunity to watch
17 what I can only call the destruction of the solar
18 industry over the last few years. I've heard some
19 people call it a well-established industry tonight.
20 But, in fact, the solar industry is really
21 suffering right now. And the proposal that you come
22 up with, in my point of view, threatens to
23 discourage from investing in solar and so further
24 threatens this industry.
25 In particular, I want to voice my concern

Page 115

1 about your proposal to end the NEM 1.0 rate for
2 existing solar customers in December 2030. Not all
3 existing solar customers are high income. And if
4 they're not allowed to stay on the current NEM
5 tariff until 20 years after interconnection, which
6 is the state standard, then they'll be severely
7 penalized. And this is especially true for those
8 who have recently switched to solar and will be
9 upside-down on their systems ten years from now.
10 So another point that bothers me is the
11 fact that your proposal fails to include
12 multi-family and multi-tenant commercial properties
13 in your VNEM. Low-income housing is unavailable to
14 many of these people, and I might say I'm one of
15 them. So people like me, we have no choice but to
16 share a home with other people. And if we're not
17 included in your plan, that really excludes us from
18 the opportunity to have solar.
19 We have reached the point, I believe,
20 where we are faced with the possibility of not
21 having a plan to condition -- you know, not having
22 an ability to sustain life on this plant, and the
23 decisions that you make are going to affect people
24 far, far beyond Sacramento.
25 And so I think that -- I think that your

Page 116

1 proposals -- NEM 2.0 proposal appears to be moving
2 in exactly the wrong direction, and I hope you'll
3 take a closer look at the disastrous future that
4 you're setting us up for. Thank you.
5 SMUD GENERAL COUNSEL LEWIS: Thank you.
6 Do we have Steve Uhler on the line?
7 SMUD STAFF JOSUE SWAY GARCIA: I do have
8 him on the line. Just let me go ahead and activate
9 him here.
10 Mr. Uhler, can you hear us? Mr. Uhler?
11 PUBLIC MEMBER STEVE UHLER: Hello?
12 SMUD STAFF JOSUE SWAY GARCIA: I can hear
13 you.
14 Can everyone hear, Mr. Uhler?
15 SMUD GENERAL COUNSEL LEWIS: I do.
16 PUBLIC MEMBER STEVE UHLER: I do not know
17 where we are in the meeting.
18 SMUD GENERAL COUNSEL LEWIS: We are in the
19 public comment period.
20 PUBLIC MEMBER STEVE UHLER: I have no idea
21 what has been said recently. I see a clock and
22 somebody talking.
23 I need to be allowed a dialogue with the
24 board secretary about the placement of my alternate
25 rate proposal, why Mr. Graham got his place on the

Page 117

1 board meeting page yet mine is not there. I have no
2 idea what the public is able to see and the board is
3 able to see.
4 SMUD GENERAL COUNSEL LEWIS: Mr. Uhler,
5 your time --
6 PUBLIC MEMBER STEVE UHLER: So, once
7 again, I have no idea from the video that's being
8 streamed to me where we are in the meeting.
9 SMUD GENERAL COUNSEL LEWIS: You can
10 provide your alternative proposal. You've got two
11 and a half minutes.
12 PUBLIC MEMBER STEVE UHLER: I cannot hear
13 you.
14 SMUD GENERAL COUNSEL LEWIS: Please
15 provide your alternative proposal.
16 SMUD STAFF JOSUE SWAY GARCIA: Mr. Uhler,
17 were you able to hear that?
18 PUBLIC MEMBER STEVE UHLER: I could not
19 hear. What are we doing right now?
20 SMUD STAFF JOSUE SWAY GARCIA: So you are
21 on the clock, and our chief legal staff has already
22 said --
23 PUBLIC MEMBER STEVE UHLER: I'm not on the
24 clock because I did not know to start. What am I
25 doing? What am I doing here?

Page 118

1 I do not see my alternate rate proposal
 2 next to Mr. Graham's on the board meeting page. I
 3 have no idea what the board has been given of my
 4 comments. My comments are not in -- on the rates
 5 page. There's a couple comments on the rates
 6 comment page. Those comments are missing.
 7 So how are we going to correct this? The
 8 Brown Act allows me to have that information
 9 provided to me without delay. So if you want to
 10 take some time to post what the board has on the
 11 board meeting page, I'll wait while you let me know
 12 what the board has, so I know what to say before any
 13 clock starts.
 14 SMUD GENERAL COUNSEL LEWIS: The clock has
 15 started. Please continue with your comments.
 16 PUBLIC MEMBER STEVE UHLER: I do not
 17 want -- you know, I do not know what the board has
 18 read or any of that at all. I do not see it next to
 19 Mr. Graham's on the board meeting page.
 20 I do not understand why my alternate rate
 21 proposal has less advantage than Mr. Graham's rate
 22 proposal. The Brown Act requires you to provide
 23 that information without delay. This happened
 24 before where you weren't prepared with my proposal
 25 and I came up to comment, and then I had to stand

Page 119

1 there while somebody went and fetched the proposal.
 2 So the only way you can do this -- because
 3 your system is so pro is to place it on the board
 4 meeting page so I can see what the board is seeing.
 5 I'm willing to give you time to populate that page
 6 so I know what they've seen so I do not duplicate
 7 testimony as required per PUC 14403.5. So are you
 8 going to do that?
 9 SMUD GENERAL COUNSEL LEWIS: Mr. Uhler, we
 10 have emailed several times today. I have told you
 11 several times --
 12 PUBLIC MEMBER STEVE UHLER: You have not
 13 emailed me one thing at all. It's just board
 14 secretary (inaudible) --
 15 SMUD GENERAL COUNSEL LEWIS: Through
 16 the --
 17 PUBLIC MEMBER STEVE UHLER: You have not
 18 emailed me.
 19 SMUD GENERAL COUNSEL LEWIS: Through the
 20 public comment inbox, we've explained that your
 21 presentation was provided to the board, your
 22 comments were provided to the board. You had three
 23 minutes that just expired.
 24 PUBLIC MEMBER STEVE UHLER: My
 25 presentation -- but it also stated that my

Page 120

1 supporting material. I don't know if you got even
 2 my most recent supporting material.
 3 SMUD GENERAL COUNSEL LEWIS: We will be
 4 moving on.
 5 PUBLIC MEMBER STEVE UHLER: -- (inaudible)
 6 requirements for renewable energy sources. Do I at
 7 least know you have that?
 8 SMUD GENERAL COUNSEL LEWIS: Yes.
 9 PUBLIC MEMBER STEVE UHLER: Has the board
 10 been given that document?
 11 SMUD GENERAL COUNSEL LEWIS: We have
 12 provided everything that you have sent us to our
 13 board through emails in the many, many emails you
 14 sent today and the many, many replies to public
 15 comment inbox --
 16 PUBLIC MEMBER STEVE UHLER: Not with the
 17 many, many staff. You never responded to me.
 18 (Simultaneously speaking, inaudible.)
 19 SMUD GENERAL COUNSEL LEWIS: Mr. Uhler,
 20 your time has elapsed and --
 21 BOARD PRESIDENT BUI-THOMPSON: Sway, can
 22 you please mute Mr. Uhler.
 23 His time has passed. Our chief legal
 24 officer has explained that we have all received his
 25 information, repeated several times that he had his

Page 121

1 time to speak, and he chose to use it not presenting
 2 his alternative request.
 3 So for the public to know, as you heard,
 4 we gave him many opportunities to present, but he
 5 chose to use his time in an alternate manner.
 6 Unfortunately, his time of three minutes has been
 7 completed. So we will move on to the next speaker.
 8 SMUD GENERAL COUNSEL LEWIS: Next speaker
 9 is David Mueller.
 10 (Upcoming speakers' names announced.)
 11 SMUD STAFF TONI STELLING: It looks like
 12 David Mueller is not currently logged in, so we will
 13 move on to Sara Long and will unmute her mike now.
 14 PUBLIC MEMBER SARA LONG: Great. Thank
 15 you. Can I get a sound check?
 16 SMUD GENERAL COUNSEL LEWIS: Yes, we can
 17 hear you.
 18 PUBLIC MEMBER SARA LONG: Wonderful.
 19 Good evening, everybody. My name is Sara
 20 Long, and I'm here representing Sunrun, the nation's
 21 leading provider of residential solar storage and
 22 energy services. We've installed over 4 gigawatts
 23 of behind-the-meter solar nationwide, so we have a
 24 pretty good understanding of the factors that
 25 encourage homeowners to install solar.

Page 122

1 We really appreciate the NEM successor
2 proposal does not contain punitive fixed monthly
3 charges. We think this is a smart policy.
4 However, the underlying economics of the
5 NEM successor simply don't support a healthy solar
6 market, as you've heard here tonight, for SMUD
7 customers or solar-plus-storage customers. And we
8 feel that Sacramento -- the Sacramento region
9 desires and really needs more distributed options
10 going forward.
11 Thank you so much for your time.
12 SMUD GENERAL COUNSEL LEWIS: Thank you.
13 Next up, Steve Letendre.
14 (Upcoming speakers' names announced.)
15 PUBLIC MEMBER STEVE LETENDRE: Good
16 evening. Can you hear me?
17 SMUD GENERAL COUNSEL LEWIS: Yes.
18 PUBLIC MEMBER STEVE LETENDRE: Yes, thank
19 you. Again, my name is Steve Leten- --
20 SMUD GENERAL COUNSEL LEWIS: I can no
21 longer hear you. I don't know if that's just me.
22 BOARD PRESIDENT BUI-THOMPSON: No, I can't
23 hear him either.
24 Mr. Letendre, do you mind starting over --
25 testing your mike again. We can restart your --

Page 123

1 PUBLIC MEMBER STEVE LETENDRE: Can you
2 hear me now?
3 BOARD PRESIDENT BUI-THOMPSON: Yes, yes.
4 You can start over. We've put three minutes back on
5 the clock.
6 PUBLIC MEMBER STEVE LETENDRE: Okay.
7 Thank you.
8 So, again, I am the policy director at
9 Freedom Forever. Freedom Forever is a national
10 residential solar installation company, and we're
11 based in Temecula, California, founded in 2011, and
12 we have operations in 24 states across the country.
13 Freedom Forever is driving the distributed energy
14 resolution by scaling solar and expanding access to
15 everyone. We have six branches in California. Our
16 Sacramento branch, located at 990 of Riverside
17 Parkway, has 70 full-time employees. Freedom
18 Forever has installed over 65 megawatts of rooftop
19 solar in California the past year and a half with
20 approximately 1.2 megawatts of this total within
21 SMUD's service territory.
22 I recall that SMUD pioneered the concept
23 of sustained orderly development of the
24 grid-connected photovoltaic market. Sustained
25 orderly development provides a regulatory certainty

Page 124

1 that is necessary for private businesses to plan for
2 and invest in serving a market. I firmly believe
3 that the current NEM 2.0 proposal is not consistent
4 with this fundamental principle.
5 Our internal analysis finds that the
6 NEM 2.0 proposal harms the economics of residential
7 solar and will, therefore, decrease adoption. If
8 the current proposal is adopted, we anticipate a
9 significant reduction in our installation volume
10 within SMUD's service territory.
11 Our branch in Salt Lake City, Utah, is
12 experiencing a significant reduction volume in 2021
13 due to the Utah Public Service Commission's decision
14 to reduce the NEM export rate from 9.2 cents per
15 kilowatt hour down to just under 6 cents per
16 kilowatt hour. In 2020, Freedom Forever installed
17 just under 2 megawatts in this state. We are on
18 track this year to install far less than 1 megawatt
19 in rooftop solar in Utah.
20 Freedom Forever is also concerned about
21 the provision in the proposal that solar customers
22 on the existing NEM 1.0 rate will be placed on the
23 NEM 2.0 rate in 2030. Just last week we signed a
24 contract with Christina who lives in Oregonville --
25 Orangevale to install 11 425-watt solar panels on

Page 125

1 the roof of her home. After nine years, the value
2 of investment would be radically reduced. If the
3 NEM 2.0 proposal is adopted, what shall we tell
4 Christina?
5 On behalf of Freedom Forever, I would
6 respectfully request that the board amend the
7 current NEM 2.0 proposal to one that is in line with
8 the principle of sustained, orderly development of
9 the solar market to avoid a major market
10 contraction. Waiting to see how the market responds
11 to the extreme changes to the NEM program is not
12 consistent with this ideal. When the market
13 contracts, we believe it will be -- it will have --
14 as has been the case in other regions, jobs will be
15 lost as will momentum towards getting SMUD's 2030
16 clean energy vision.
17 Thank you for the opportunity to provide
18 these comments this evening.
19 SMUD GENERAL COUNSEL LEWIS: Thank you.
20 Next up is David Salzmänn.
21 (Upcoming speakers' names announced.)
22 SMUD STAFF JOSUE SWAY GARCIA: And I do
23 not show David Salzmänn. I will go ahead and
24 promote Paul Sullivan with the ability to speak.
25 I appear to have lost Paul. Let me go

Page 126

1 ahead and move on to Steve.
 2 PUBLIC MEMBER PAUL SULLIVAN: Can you hear
 3 me? This is Paul.
 4 SMUD GENERAL COUNSEL LEWIS: Oh, Paul.
 5 Yes, we can hear you, Paul.
 6 PUBLIC MEMBER PAUL SULLIVAN: Yes. Sorry.
 7 Yeah, I forgot to unmute. Sorry about that.
 8 Good evening, Board members. My name is
 9 Paul Sullivan. I'm a SMUD customer in Carmichael,
 10 and I represent one of the many sun-powered dealers
 11 currently providing SMUD customers with reliable
 12 solar and storage systems. I've been in the solar
 13 industry for over 16 years and have had the pleasure
 14 of assisting thousands of families from all walks of
 15 life in reducing their energy costs.
 16 I would like to state my opposition to the
 17 proposed rate plan. First, I would like to echo
 18 Mr. Patrick Sterns's comments with Sunpower
 19 Corporation and would like to emphasize a couple of
 20 points.
 21 Number one, the full stop of the NEM 1.0
 22 tied to a static date, this is dramatically unfair
 23 to those customers that move to solar in say 2029
 24 under one rate plan and then be automatically moved
 25 to the very next year with another rate plan that

Page 127

1 severely diminishes their investment. The standard
 2 in the industry is 20 years from the point of
 3 agreement. I would be delighted with that sort of
 4 arrangement.
 5 Number two, the higher than normal
 6 connection fee, this is only adding to the overall
 7 cost of those customers that want to move to solar,
 8 including those customers in the low-income bracket.
 9 While I don't disagree with connection fees in
 10 general, they should be more in line with what the
 11 normal is, which is roughly around \$145.
 12 Number three, the storage incentive, while
 13 it is positive in general, it's truly not enough to
 14 drive adoption with the availability of storage at
 15 a -- at a detriment and the high cost of storage as
 16 it stands right now. We need a little bit more
 17 incentive to make that happen.
 18 Thank you for your time.
 19 SMUD GENERAL COUNSEL LEWIS: Thank you.
 20 Next up we have Steve Sedio.
 21 (Upcoming speakers' names announced.)
 22 SMUD STAFF JOSUE SWAY GARCIA: And I do
 23 not see Steve Sedio in here. I'm going to go ahead
 24 and go to Benjamin Davis. Bear with me one moment.
 25 There you go, Mr. Davis. Your microphone

Page 128

1 has been enabled.
 2 PUBLIC MEMBER BENJAMIN DAVIS: Good
 3 evening. Benjamin Davis, California Solar and
 4 Storage Association.
 5 So let me start by saying that it is
 6 incredibly important to get this right given the
 7 ever present and inescapable impacts of climate
 8 change we are all experiencing just with the smoke
 9 right out my window here in Sacramento.
 10 And -- (inaudible) that solar
 11 technologies, including storage, are a cornerstone
 12 of California's efforts to fight climate change and
 13 build more resilient communities, and now is not the
 14 time to put the brakes on solar in SMUD.
 15 As you all know, we are very concerned
 16 about the current proposal because it will contract
 17 the market. Roseville saw a 43 percent drop in the
 18 solar market for existing homes when they made
 19 similar changes. Imperial Irrigation District and
 20 Modesto saw even greater declines when they made
 21 similar cuts to their NEM programs.
 22 And while SMUD is simultaneously, yes,
 23 proposing new battery subsidies, these programs are
 24 insufficient to drive a market the size of what you
 25 have today.

Page 129

1 And, Mr. Poff, with all due respect, there
 2 were a lot of problems with the data you presented
 3 and how it was presented, but one of them was your
 4 claim that the payback period of solar-and-storage
 5 projects will be 12 years. And we ran the numbers
 6 with realistic assumptions, and the payback periods,
 7 even with the subsidies, are more than 15 and a half
 8 years.
 9 And financing, which is used by lower and
 10 middle income households that don't have the cash on
 11 hand to buy the system outright, is outright
 12 uneconomical.
 13 So this current proposal, with it you are
 14 not replacing standalone solar with a similarly
 15 sized solar-and-storage market, rather you are
 16 gutting your solar market and replacing it with an
 17 exceedingly small storage market that only the
 18 wealthy will be able to afford.
 19 And, finally, SMUD, you should do what is
 20 right by your customers and ours. But the proposal
 21 as it stands now would move tens of thousands of
 22 solar customers off of NEM 1 rates come 2031, which
 23 violates the spirit of Assembly Bill 327 and goes
 24 against a longstanding principle in California. We
 25 strongly urge SMUD to maintain protections for

Page 130

1 legacy customers that are commensurate with the rest
2 of the state.
3 To be clear, we believe that there are
4 some decent ideas in the current NEM proposal, and
5 staff has spent significant time developing them.
6 But during this opportunity for SMUD to hear from
7 the community and make changes to the proposal,
8 let's take some of those ideas and build upon them.
9 Let's make sure SMUD remains a national clean-energy
10 leader, and let's do it together.
11 SMUD is the fifth largest utility in
12 Sacramento, the sixth largest public utility in the
13 country. What you do on this proposal really
14 matters. It matters for the businesses I represent,
15 for the workers they employ right here in the
16 Sacramento region. It matters for your customers
17 who want clean air and clean energy and energy
18 choice, and it matters for the planet. Thank you.
19 SMUD GENERAL COUNSEL LEWIS: Thank you.
20 Next up, Jonathan Gemma.
21 (Upcoming speakers' names announced.)
22 PUBLIC MEMBER JONATHAN GEMMA: Good
23 evening. Can you hear me?
24 SMUD GENERAL COUNSEL LEWIS: Yes.
25 PUBLIC MEMBER JONATHAN GEMMA: Thank you.

Page 131

1 My name is Jonathan Gemma with Aztec
2 Solar. We are a local solar contractor that
3 celebrated our 40th year in the solar industry last
4 year.
5 Your decisions on the NEM 2 program will
6 have lasting effects on the adoption of solar for
7 your customers. It is our opinion that with the
8 export rate of 7.4 cents and a high interconnection
9 fee, the economics simply deter the adoption of
10 solar and battery storage. We'll see a drop in
11 installations that will have an enormous effect on
12 our company and other solar companies in the region.
13 We will see paybacks, whether cash or
14 finance, well above 14 years, which is more than the
15 warranty of the battery systems you would like to
16 see installed.
17 I believe the battery subsidies aren't big
18 enough to move the market especially with the
19 lowered export rate suggested.
20 I ask that you amend the proposal so that
21 we will not see a contraction of the market. A
22 wait, see, and adjust approach simply does not work.
23 It takes time to build up the effects of a market
24 that becomes unstable.
25 We have seen other municipalities change

Page 132

1 their expert rates with very public knowledge of the
2 significant drop in adoption rates.
3 We also would like to see consistency in
4 the export rate for solar customers. If you change
5 the export rate every couple of years to adjust for
6 the market for existing solar companies, customers,
7 it becomes impossible to model investment for
8 customers not knowing what the compensation would
9 be -- that they would be receiving. I suggest
10 locking in solar customers to their original export
11 rate for 20 years.
12 In our conversations, the solar industry
13 have provided possible solutions to ease change.
14 One such solution was implementing a glide path.
15 SMUD staff are saying a glide path is
16 unconstitutional due to Prop. 26. But SMUD staff
17 should be taking a serious look at Exception 2 of
18 Prop. 26, which applies to utility rates.
19 Additionally, my understanding is that
20 Prop. 26 concern is based on the notion that other
21 customers would have to pay higher bills to
22 unjustified higher export rate. However, there is
23 ample justification in the Value of Solar Study to
24 have a higher export rate based on the societal
25 benefits of solar.

Page 133

1 The Value of Solar Study gives numbers for
2 those benefits, and E3 always said it was the SMUD
3 Board's discretion whether to include these numbers
4 in the export rate. Therefore, if SMUD wanted to
5 include those, some of those benefits for customers
6 that went solar next year and the year after and the
7 year after, stepping down they could. Thank you.
8 SMUD GENERAL COUNSEL LEWIS: Thank you.
9 Next up is Janna West-Heiss.
10 (Upcoming speakers' names announced.)
11 SMUD STAFF JOSUE SWAY GARCIA: Thank you,
12 Laura.
13 And Janna West-Heiss is absent, so I am
14 activating Jennifer Tanner's microphone.
15 And, Jennifer, your microphone has been
16 activated, and you can unmute when you are ready.
17 PUBLIC MEMBER JENNIFER TANNER: Can you
18 hear me?
19 SMUD GENERAL COUNSEL LEWIS: Yes.
20 PUBLIC MEMBER JENNIFER TANNER: Okay,
21 wonderful. Thank you, Members of the board, for
22 this opportunity to speak. I appreciate it.
23 I'm Jennifer Tanner, leader of Indivisible
24 California Green Team, the environmental arm of
25 Indivisible California's 81 Indivisible groups

Page 134

1 representing 80,000 members.
 2 Because your proposal affects all of us
 3 and is the continuation of the attack on rooftop
 4 solar that's a feature of the CPUC NEM campaigns, I
 5 am speaking here.
 6 Notwithstanding the good work that SMUD
 7 has done in so many things, I have to disagree with
 8 the proposals as you present it. We have seen what
 9 happened with these proposals to kill any -- how it
 10 killed rooftop solar in Utah and in Arizona. And
 11 they tried to do it in Nevada, and it was such a
 12 failure that they had to undo it.
 13 So you have some kind of hopeful
 14 statistics, but these are real-life examples I'm
 15 giving you that you can check with reality how these
 16 plans to reduce NEM will help kill rooftop solar.
 17 Other municipalities have made similar cuts to NEM
 18 and have had significant declines in the market,
 19 regardless if you claim otherwise.
 20 And just under 50 percent of all new
 21 rooftop solar has come from middle and low income
 22 because they see the value, and they are not rich
 23 people, and this needs to be said.
 24 We have seen a study that we will save
 25 120 billion over the next 30 years in California if

Page 135

1 we continue what we're doing with rooftop solar. We
 2 continually save money by having rooftop solar
 3 support the grid. We saved 2.6 billion in
 4 California in 2018 alone.
 5 Each of the faulty arguments about the
 6 non-reality of a cost shift always leaves out the
 7 real cost in comparing costs of rooftop solar and
 8 always leaves out the most important real costs,
 9 namely, the exorbitant cost of long-distance utility
 10 lines, the fires caused by the long-distance utility
 11 lines, and the blackouts that come from the utility
 12 wires and all these harms to society that do not
 13 happen with rooftop solar.
 14 These costs are always left out, and if
 15 they were included -- the billions of money in
 16 wires, fires, and blackouts -- the whole financial
 17 story would change. Even the CPUC admits the huge
 18 cost these utility fires are costing everyone and
 19 has no solution.
 20 We should change the fees to be like
 21 LADWP, back to 135. And, again, the NEM change you
 22 are planning will harm rooftop solar business, make
 23 no mistake about it. The great expansion of rooftop
 24 solar that has been so successful will die.
 25 And the new disasters that are our new

Page 136

1 reality, all of the climate things, we need to
 2 actually increase rooftop solar not help diminish
 3 it. Thank you very much.
 4 SMUD GENERAL COUNSEL LEWIS: Thank you.
 5 Next up, Kathleen Nicholson.
 6 (Upcoming speakers' names announced.)
 7 PUBLIC MEMBER KATHLEEN NICHOLSON:
 8 this is Kathy Nicholson. Are you able to hear me?
 9 SMUD GENERAL COUNSEL LEWIS: Yes.
 10 PUBLIC MEMBER KATHLEEN NICHOLSON:
 11 Good evening, President Bui-Thompson,
 12 Members of the board, and SMUD staff. My name is
 13 Kathy Nicholson. I'm an energy engineer, an energy
 14 consultant with over 30 years of experience in
 15 various areas of clean energy including energy
 16 efficiency, distributed solar energy and storage and
 17 electrification. Many of my years of experience
 18 were gained at one of California's investor-owned
 19 utilities.
 20 The future of decarbonized energy and a
 21 climate-safe, truly equitable world is 100 percent
 22 distributed renewable generation, distributed energy
 23 storage in its many forms on a network of small
 24 microgrid -- or smart microgrids using artificial
 25 intelligence to leverage the power of a truly free

Page 137

1 market.
 2 It is not centralized generation. It is
 3 not wasteful and dangerous transmission lines moving
 4 electricity over unnecessarily long distances. It
 5 is not monopolies. It is not the old long-obsolete,
 6 command-and-control business models used by
 7 utilities for over 100 years. It is not any system
 8 that discourages locally generated, locally used,
 9 and locally traded energy. It is not any system
 10 that discourages local energy independence, local
 11 self-reliance, local energy -- lower energy costs
 12 and greater energy resilience for its prosumers.
 13 SMUD's proposed changes to its NEM rates
 14 do not meet these requirements. So SMUD needs to go
 15 back to the drawing board with a fundamentally
 16 different attitude, an approach that is built on a
 17 distributed and truly equitable energy future.
 18 Thank you.
 19 SMUD GENERAL COUNSEL LEWIS: Thank you.
 20 Next up, Subhash Kale.
 21 (Upcoming speakers' names announced.)
 22 SMUD STAFF JOSUE SWAY GARCIA: Subhash, I
 23 am trying to activate your microphone, but you are
 24 using an older version of Zoom that does not allow
 25 this option. I don't know if you are able to try to

Page 138

1 update your Zoom client, and we can come back to you
 2 if you come back in, possibly.
 3 And I went ahead and activated Keith's
 4 microphone in the meantime.
 5 PUBLIC MEMBER KEITH UMEMOTO: Hello. Can
 6 you hear me?
 7 SMUD GENERAL COUNSEL LEWIS: Yes.
 8 PUBLIC MEMBER KEITH UMEMOTO: Oh, great,
 9 great. Good evening, Chair Bui-Thompson and other
 10 board members. Thank you for the opportunity to
 11 comment.
 12 My name is Keith Umemoto, and I'm a SMUD
 13 customer who installed a solar panel a few years ago
 14 and work for a person that many of you should know,
 15 not because he's alive, but Senator Alquist, who
 16 authored SB 656, which created the net metering
 17 providing incentives to install solar.
 18 First, I want to thank you to have -- SMUD
 19 for having such an aggressive plan to reduce carbon
 20 and emission.
 21 But at this point in time, I'm testifying
 22 because the proposal to change the time-of-day net
 23 metering and connect charges are contrary to SMUD's
 24 ability to achieve its goal in reducing carbon
 25 emissions.

Page 139

1 Let me be perfectly clear, I am not
 2 opposing subsidizing low-income rate payors. I do
 3 not believe that a proposal would suggest to pit one
 4 group with one another.
 5 I invested over \$20,000 that SMUD doesn't
 6 calculate in their budget. Based upon an extensive
 7 cost calculation taking out a home equity loan,
 8 research of my costs extensively, asking some power,
 9 put on a spreadsheet the kilowatt hours solar
 10 generated by each hour, 365 days a year, and based
 11 upon the time-of-day use at 3:00 to 7:00 p.m. My
 12 investment of 20,000 was upfront costs and a major
 13 outlay. And it -- I have not gotten my return on my
 14 investment.
 15 And ending this subsidy in 2030 would just
 16 dramatically increase and extend the repayment of my
 17 investment. So the return on my investment is
 18 certainly questionable with this proposal, and it
 19 comes close to saying maybe I shouldn't have done
 20 this. Because when you consider all of the
 21 inflationary rates, it doesn't pay out.
 22 So the proposal -- I've been making --
 23 I've been looking at is based upon my own personal
 24 calculation. Your decision will impact not only
 25 SMUD customers but also have a domino impact on all

Page 140

1 utilities.
 2 SMUD is generally considered a very
 3 progressive utility to other utilities who will make
 4 similar changes. There is no question that this
 5 would impact not just the solar industry here in the
 6 SMUD territory but beyond.
 7 So, anyway, I should highlight AB 1139,
 8 which has a similar parallel to this program, was
 9 killed in the Assembly. And contrary to what
 10 staff's comments are, I don't believe this is a --
 11 beneficial for solar installers or users or -- and
 12 maybe the encouragement should be increasing
 13 subsidies to HEAP or provide incentives for
 14 low-income folks even more so to install solar.
 15 That should be the direction that SMUD takes.
 16 SMUD GENERAL COUNSEL LEWIS: Thank you.
 17 Do we have Subhash on the phone?
 18 SMUD STAFF JOSUE SWAY GARCIA: I still do
 19 not show that Subhash has returned.
 20 SMUD GENERAL COUNSEL LEWIS: The next up
 21 is Marcy Winograd followed by Karinna Gonzalez.
 22 PUBLIC MEMBER MARCY WINOGRAD: Hi. Can
 23 you hear me?
 24 SMUD GENERAL COUNSEL LEWIS: Yes.
 25 PUBLIC MEMBER MARCY WINOGRAD: Yes, great.

Page 141

1 Hi. Thank you so much for this opportunity to
 2 speak. I'm Marcy Winograd. I am with CTA Divest,
 3 which is an effort to get our teacher pension fund
 4 to divest from the climate-catastrophe-producing,
 5 fossil-fuel industry. I thank everybody here
 6 tonight for their interest in solar energy and --
 7 you know, I have to stand back.
 8 I am in Santa Barbara. I'm not in
 9 Sacramento, but I know that what you do here tonight
 10 will impact people throughout the state of
 11 California. They will be looking to you for a
 12 model. So we --
 13 I would say -- I would urge you to be very
 14 judicious and very cautious in adopting any plan
 15 that would disincentivize solar energy. And that's
 16 what I'm hearing a lot of in the comments, that this
 17 plan includes reduced NEM export rates, higher
 18 interconnection fees, limiting the system size to
 19 current electrical needs even if the customer is
 20 planning to purchase an electrical vehicle or
 21 electrify utilities in the near future, that you
 22 want to end subsidies in 2030 even though,
 23 theoretically, in California how many sunny days do
 24 we have? A lot, right?
 25 We should have free solar energy. We

Page 142

1 should allow customers to invest in solar energy to
 2 make a greater return and not to be burdened by
 3 taking out huge home-equity loans and then seeing
 4 their subsidies end.
 5 I also wanted to mention that these
 6 policies that you're looking at could potentially
 7 contract the solar market that we should be
 8 expanding, not contracting.
 9 Also, in spite of repeated calls from the
 10 solar industry, solar customers, environmentalists,
 11 you are proposing -- or the staff is proposing to
 12 allow customers to install a solar system larger
 13 than their current electrical needs if they are
 14 planning to get an EV or electrify in the near
 15 future, and you are imposing limitations on system
 16 sizes.
 17 So all of this is of great concern. I'm
 18 not a solar expert, but I am an environmentalist,
 19 and I do want to see California tap into the great
 20 potential of the sunshine that we have because, as
 21 others have stated, we are in a climate emergency,
 22 wildfires, smoke-filled air. We can't breath. I'm
 23 ordering air purifiers right after I get off this
 24 call.
 25 So I hope you'll reconsider what has been

Page 143

1 presented to you tonight and amend what's on the
 2 agenda. Thank you so much.
 3 SMUD GENERAL COUNSEL LEWIS: Thank you.
 4 Next up, I understand we have Subhash on
 5 the phone.
 6 SMUD STAFF JOSUE SWAY GARCIA: Yes.
 7 I'm going to try to activate your
 8 microphone now, Subhash. Subhash, I'm getting the
 9 same error message that your client has too old of a
 10 version for Zoom to allow this option.
 11 We can go ahead and try Karinna next, if
 12 that's okay. Karinna, your microphone has been
 13 activated.
 14 PUBLIC MEMBER KARINNA GONZALES: Good
 15 evening, Chair and Board members. My name is
 16 Karinna Gonzales, and I am with Hammond Climate
 17 Solutions.
 18 I'm calling in today to respectfully urge
 19 the board to amend the proposal so that solar can
 20 continue to grow sustainably. High interconnection
 21 fees, limitations on Virtual Net Energy Metering,
 22 and limitations on system sizes are barriers on the
 23 market that should be removed.
 24 We are in a climate emergency, and the
 25 most recent IPCC report was clear, that we need to

Page 144

1 rapidly deploy clean energy and phase off of dirty
 2 fossil fuels. We should be protecting rooftop solar
 3 and making solar and storage more accessible,
 4 especially in communities of concern, not making it
 5 less attractive. The solution to expanding access
 6 to distributed energy is not to make going solar
 7 harder and extending payback periods.
 8 Lastly, I would like to caution the board
 9 against taking NRDC's support of this as a blanket
 10 buy-in from environmental groups, as they have a
 11 long history of aligning with investor-owned
 12 utilities to oppose the expansion of rooftop solar
 13 and supporting the continued use of dirty energy.
 14 I hope that you will continue to support
 15 the growth of solar and storage and amend the
 16 current proposal. Thank you.
 17 SMUD GENERAL COUNSEL LEWIS: Thank you.
 18 And except for Mr. Kale, that is all of
 19 the oral comments I believe that we have for tonight
 20 on this item.
 21 We do have some written comments that we
 22 can have read into the record. And perhaps we can
 23 do that while we continue to figure out if we can
 24 get Mr. Kale on the phone.
 25 So if we can queue that up, that would be

Page 145

1 wonderful.
 2 DIGITIZED VOICE: Public comment number
 3 one:
 4 "Severin Borenstein. Hello. I
 5 would like to weigh in in favor of the SMUD
 6 2021-22 Rate Proposal. I think it is an
 7 important first step in moving policy on
 8 Distributed Energy Resources to focus on
 9 compensating the value these resources bring
 10 to the grid. As we battle the climate
 11 crisis, there is quite a lot of uncertainty
 12 about the value of different low-carbon
 13 resources in different locations on the
 14 grid.
 15 "This proposal improves the alignment
 16 of financial incentives with the best
 17 available knowledge today about the value of
 18 DERs. In my view, it probably is still
 19 overly optimistic in valuing the
 20 contribution of DERs and in the vision for
 21 the size of the DER role in the grid.
 22 However, I do believe that DERs have an
 23 important role to play, and our knowledge of
 24 the most cost-effective low-carbon grid
 25 architecture continues to evolve. At this

Page 146

1 point in that evolution, the proposed
2 changes are a prudent step in the right
3 direction.
4 "I would also like to commend the
5 expanded use of Critical Peak Pricing in the
6 proposal. SMUD has been a leader in this
7 important area, which will be crucial to
8 grid balancing as evening net peak demands
9 grow due to a warming climate and increased
10 solar adoption. CPP is the most
11 proven-effective tool in eliciting
12 demand-side adjustment to help balance the
13 grid when it is under stress. Sincerely,
14 Severin Borenstein."
15 DIGITIZED VOICE: Public comment number
16 two:
17 "Lee Miller. The SMUD Board members
18 have expressed a desire for NEM 2.0 to grow
19 the solar market in Sacramento, but the
20 executive staff has shown, once again, that
21 they don't have the same desire.
22 "As the basis for the proposal, SMUD
23 executive staff used the water carrier for
24 the California Utilities and the CPUC
25 consulting company, E3, report as the basis

Page 147

1 for SMUD's NEM 2.0 proposal. The SMUD
2 website is full of public comments regarding
3 the flaws in the E3 study.
4 "During a SMUD board meeting, over 80
5 people were waiting to make their public
6 comments on this flawed study, but many had
7 to drop off the line because the meeting was
8 running long and the SMUD Board decided not
9 to be flexible to let people make their
10 comments when a panel participant offered to
11 give up their time on the agenda. But the
12 executive chose to use the bad data anyway.
13 When bad data is used, well, as the old
14 saying goes, 'Garbage in and garbage out.'
15 "SMUD staff claims that the large
16 reduction in export credits will not impact
17 the market, a puzzling and insincere claim.
18 Staff is projecting that their proposed NEM
19 2.0 plan will lead to 39,000 additional
20 solar-only customers by 2030, equivalent to
21 4,300 projects per year, which is nearly the
22 current installation rate. SMUD's NEM 2.0
23 proposal will bring the number of PV-only
24 projects closer to zero according to the
25 industry initial estimates. An export rate

Page 148

1 of 7.4 cents kWh would also jeopardize the
2 new solar homes mandate as the Energy
3 Commission can only enforce requirements if
4 they are cost-effective.
5 "Further, last year, SMUD pushed
6 through a special allowance under the state
7 building code to build utility-scale power
8 plants in place of rooftop solar
9 incorporated into the building. SMUD's NEM
10 2.0 proposal includes incentives for energy
11 storage systems. Great news, but customers
12 enrolled in Critical Peak Pricing or the
13 Virtual Power Plant program will receive
14 additional benefits, but SMUD has yet to
15 release the details.
16 "The board has promised transparency,
17 but as usual, the executive staff does not
18 unless they are pressured by customers,
19 someone raises an issue to their board
20 member, or someone asks for a public records
21 request.
22 "Other proposals presented by SMUD
23 staff related to solar will further impede
24 the market. SMUD would like residential
25 interconnection fees to increase to \$475 for

Page 149

1 systems 10 kW and \$900 for systems greater
2 than 10 kW. Commercial interconnection fees
3 would range from \$2,500 to \$5,000. Utilities
4 should be able to recoup the costs of
5 interconnecting systems, but SMUD-proposed
6 fees are significantly higher than the fees
7 in other utilities."
8 DIGITIZED VOICE: Comment number three:
9 "Sean Frame. I am writing to
10 address your proposed changes to
11 solar-and-storage rates and the terms of
12 those rates. I relocated to Sacramento from
13 Placerville about a year ago. At my old
14 residence, I installed solar panels in an
15 array that was about the right size for my
16 residence and needs. I did so with an
17 understanding of the rough payback time,
18 based upon the rates and the way my utility,
19 PG&E, would compensate me for generating
20 excess electricity.
21 "When I moved to Sacramento,
22 installing solar at my residence was at the
23 top of my list of items to do at my home.
24 In doing my research, I discovered
25 immediately that SMUD was proposing new

Page 150

1 rates of compensation and that the sizing of
 2 my system would be limited to the past usage
 3 at my residence. Both of these factors
 4 immediately gave me pause. Should I invest
 5 my money in a system when the payback time
 6 might change? Does it make sense to
 7 purchase a system that is too small because
 8 my residence has been occupied by my
 9 90-year-old mother-in-law who used much less
 10 electricity than a family of four with
 11 children doing distance learning and adults
 12 working from home? Just the uncertainty was
 13 enough for me to reconsider installing
 14 solar.

15 "Now that I see what you are
 16 proposing, I have to say that solar would no
 17 longer make sense for me and my family. I
 18 say that as someone who is keenly aware of
 19 how climate change is threatening the future
 20 of our species and as the parent of two sons
 21 who will inherit this deadly mess if we
 22 don't start fixing it now. I want to do the
 23 right thing, and I want a public utility
 24 that helps me do it. Instead of
 25 discouraging rooftop solar, I would like to

Page 151

1 see it expanded to include more people in
 2 multi-unit housing and incentives for
 3 low-income ratepayers and renters. I know
 4 that rooftop solar alone cannot solve the
 5 climate crisis, but it must be a viable part
 6 of the mix.

7 "Let's just be clear, the changes you
 8 are proposing will kill rooftop solar. They
 9 will certainly cause more GHGs to be
 10 released, in direct opposition to your
 11 Carbon Free 2030 initiative. They will
 12 incent people to purchase dirty
 13 GHG-releasing gas and diesel generators to
 14 protect against outages. They are not in
 15 keeping with your mission as a public
 16 utility tasked with acting in the public
 17 interest and necessity.

18 "You must reverse course and return
 19 to providing the incentives to grow rooftop
 20 solar and storage in our region. Your
 21 ratepayers and the young people of this
 22 region are watching. Do the right thing."

23 DIGITIZED VOICE: Comment number four:
 24 "Rick Codina. Comments on SMUD's
 25 proposed Critical Peak Pricing: I strongly

Page 152

1 support the intent of the Critical Peak
 2 Pricing, CPP, program to encourage the
 3 installation of battery storage and other
 4 future resources in SMUD's planned Virtual
 5 Power Plant. My comments here apply to CPP
 6 as a condition of SMUD's battery incentive
 7 program.

8 "The current GM Report on Rates and
 9 Regulations does not provide actual CPP
 10 rates and otherwise offers only scant
 11 information. Yet, batteries are such a big
 12 investment that SMUD should post more
 13 details on this new tariff to allow
 14 prospective customers to evaluate the
 15 financial benefits for investing in storage
 16 and committing to the CPP program. The
 17 tariff becomes effective next June, but the
 18 pricing and conditions should be published
 19 well in advance, by the end of this year,
 20 for example. Here are some questions that
 21 the CPP should be answering:

22 "What is the discounted non-peak
 23 pricing? What are the discount prices for
 24 mid-peak and off-peak time periods? Do they
 25 apply to all non-peak hours during the

Page 153

1 summer season, including weekend and
 2 holidays? For solar customers, the details
 3 are particularly important since discounted
 4 off-peak prices will effectively lower
 5 savings during solar self-consumption hours.

6 "What is the Critical Peak Pricing
 7 rate? The original Smart Sacramento pilot
 8 in 2011 balanced the off-peak discounts with
 9 a very high CPP rate of 75 cents kWh as an
 10 incentive to voluntarily curtail loads when
 11 activated. The current proposal is for a
 12 price adder during CPP-called events on top
 13 of current TOD prices. Will this be a fixed
 14 adder set annually or a per-event price?
 15 Will the rate change each year? When the
 16 CPP extends beyond the peak period, will the
 17 adder be applied to baseline TOD or to the
 18 discounted TOD mid- and off-peak pricing?
 19 Does this also apply to export power to the
 20 grid during called CPP events, or is the
 21 adder on the current export compensation
 22 rate?

23 "What are the terms for
 24 participation? Will the battery discharge
 25 be controlled by SMUD as a condition of

Page 154

1 participation? How long will the commitment
2 be to the CPP program? The report says a
3 minimum of one year but implies a longer
4 period may be required.
5 "Can SMUD share cost-benefit
6 analysis? The report notes that the CPP
7 program will be financially neutral for SMUD
8 ratepayers. But can staff provide details
9 on the estimated potential savings and
10 payback for program participants? If SMUD
11 expects 30,000 battery participants to help
12 meet its Carbon Zero goals, it should
13 demonstrate the cost benefits for their
14 relatively large investment in batteries.
15 This is particularly true for existing solar
16 customers contemplating upgrading to solar
17 plus storage since participation in the CPP
18 program will entail losing their
19 grandfathered pricing status for the sale of
20 export generation."
21 DIGITIZED VOICE: Comment number five:
22 "John Briggs. My name is John
23 Briggs. I was a non-NEM representative on
24 the technical working group, Value of Solar
25 and Storage. I have remained engaged in the

Page 155

1 process for the adoption of NEM 2.0 and
2 submit this email as my comments concerning
3 the adoption of the proposed changes to the
4 NEM program.
5 "There are common systemic issues all
6 utilities in California are facing from the
7 impact of NEM 1.0 on utility rates: (i)
8 There is a significant and growing
9 cross-subsidy paid by non-NEM customers to
10 NEM customers which has a disproportionate
11 impact on the low-to-moderate income
12 population. And, two, NEM customers do not
13 pay a fair share of the costs of the fixed
14 assets needed to deliver on-demand power,
15 shifting these costs to non-NEM customers.
16 "Indeed, those who can participate in
17 rooftop solar and storage and
18 electrification, such as electric cars, are
19 more affluent. NEM 1.0 effectively imposes
20 a regressive tax on those least able to
21 absorb it, a reverse Robin Hood situation.
22 It is only fair that a rate structure be
23 adopted which avoids a windfall to
24 better-off NEM customers.
25 "It is also important to remember

Page 156

1 that NEM 1.0 was designed to provide a
2 generous financial incentive to promote the
3 nascent solar industry. Needless to say,
4 the solar industry has matured and is
5 vigorous. The goal has been reached.
6 Simply stated, there is no need to continue
7 to make grossly inflated energy purchases to
8 spur the solar industry. A fair value for
9 NEM energy deliveries was developed through
10 a painstaking and thorough analysis starting
11 with the working group and ending with the
12 E3 report after robust public participation.
13 That effort should form the bedrock for NEM
14 2.0 because it reflects a considered
15 analysis taking into consideration the
16 relevant factors identified by the
17 stakeholders.
18 "In my travels, I have also read a
19 criticism of NEM 2.0 as penalizing NEM
20 customers for generating their own power.
21 This argument ignores a -- two basic facts:
22 First, NEM customers are not off the grid.
23 When the sun goes down or does not shine on
24 overcast days, they flip the switch and the
25 lights turn on because of power supplied

Page 157

1 through the grid. Conversely, the grid
2 takes delivery of their excess power. The
3 importance of basic grid infrastructure,
4 including reliable and dispatchable
5 generation, has been recently demonstrated
6 by the shortage of capacity during
7 hot days.
8 "Second, tested by market standards,
9 the rate at which NEM customers are
10 reimbursed for delivered power is not
11 competitive. Solar farms deliver power at 3
12 to 4 cents kwh versus about 12 cents for NEM
13 customers. If anyone is getting penalized,
14 it is non-NEM customers who are paying
15 dearly for NEM-generated electrons."
16 DIGITIZED VOICE: Comment number six:
17 "Megan Shumway. I think SMUD is
18 generally moving in the right direction, but
19 there are areas of deep concern to me. I
20 turn to you to express our opinions to the
21 SMUD CEO. Primarily, it is clear SMUD has
22 not taken the shortcomings of the E3 report
23 seriously. In addition, they have not
24 modified their view of rooftop solar owners
25 as rich people foisting off paying their

Page 158

1 fair share of electric infrastructure on to
 2 the poor. This attitude offends me deeply.
 3 Short of sharing my SMUD bill and income tax
 4 return, which is not anyone's business, I
 5 will assure you I am not rich and can
 6 not afford large donations of my funds to
 7 any cause, including to SMUD to fund any
 8 energy project.
 9 "Let's be clear, SMUD charges me a
 10 \$22.25 system infrastructure fixed charge
 11 along with county tax and state surcharge
 12 every month. And SMUD charges me for any
 13 kilowatt I get from SMUD and even breaks it
 14 down into time of day. SMUD knows how much
 15 energy I produce with my solar system that
 16 is saving SMUD kilowatts for use elsewhere,
 17 just like anyone else who conserves energy.
 18 Now there is a proposal to increase the Net
 19 Energy Metering that would make it even less
 20 likely people will want to invest in rooftop
 21 solar or even buy home with rooftop solar.
 22 "By state law, new homes must have
 23 solar or SMUD solar shares, which is less
 24 economical for the homeowner. SMUD
 25 apparently wants to ensure they are the only

Page 159

1 economical energy producers by snuffing
 2 individual consumers' ability to utilize the
 3 sun that hits their rooftop to provide their
 4 energy needs. This is a self-serving policy
 5 that is not taking into consideration the
 6 consequences of their action. We need solar
 7 on every rooftop that can support it if we a
 8 [sic] to get off our addiction to fossil
 9 fuel.
 10 "If a recent survey is any indication
 11 of participation in the emergency battery
 12 use slash Virtual Power plant, I am severely
 13 disappointed. First of all, SMUD asked a
 14 question without giving adequate information
 15 to answer the question, if I would
 16 participate. No information about if this
 17 was behind-my-meter calculations if I was in
 18 control of the battery discharge, and would
 19 it apply to a one-time or possibly multiple
 20 times I would be required to share my
 21 storage.
 22 "In addition, they seem to want to
 23 charge me a large fee for my peak hours and
 24 in return give me a tiny discount -- for how
 25 long or how often is not clear -- on my

Page 160

1 off-peak hours as compensation, which in no
 2 way comes even close to making up for the
 3 charge, for the privilege of sharing my
 4 power in an emergency situation.
 5 "Of course, this was for emergency
 6 use, which SMUD says I would be notified in
 7 advance, most likely 24 hours in advance,
 8 but possibly only a few hours in advance.
 9 It would probably be only once a year, but
 10 it could be multiple times. If this notice
 11 is by email, I could miss it entirely if it
 12 was after I checked my email, which is once
 13 a day, if that."
 14 DIGITIZED VOICE: Comment number seven:
 15 "Tom Wiechert. As part of the
 16 proposal, SMUD is stating that the new rate
 17 would apply to excess energy created.
 18 "Would SMUD please define the term
 19 "excess energy" under the new proposal?
 20 "Can we assume that this refers to
 21 energy produced in excess of actual
 22 consumption and not the solar generated for
 23 consumption?"
 24 DIGITIZED VOICE: Comment number eight:
 25 "Jane Lamborn. Dear SMUD Board of

Page 161

1 Directors and General Manager Paul Lau, as a
 2 homeowner with rooftop solar, I have seen
 3 the benefits and savings available with
 4 solar-powered systems. And, as a resident
 5 of California, I have seen the devastation
 6 and damage caused by drought, fires, and
 7 floods that have been exacerbated by climate
 8 change. Using solar power to reduce our
 9 reliance on fossil fuels is critical to
 10 mitigating this harm.
 11 "SMUD's commitment to reducing
 12 greenhouse gas emissions, as expressed in
 13 advertisements and statements on its web
 14 page, reads well, but it is contradicted by
 15 the pending proposals to reduce the credit
 16 that solar users receive for sharing their
 17 extra energy and to force existing solar
 18 users onto the lower solar credit tier if
 19 they add a battery to their system. Just
 20 when SMUD should be working to expand the
 21 use of solar power and make it more
 22 available to more people, it is proposing to
 23 make it more expensive for anyone who adds a
 24 battery or more solar panels or who is a new
 25 homeowner.

Page 162

1 "What SMUD should be proposing is to
2 make solar energy available to more people,
3 such as residents of multi-tenant buildings,
4 and to provide subsidies for low-income
5 customers. This would help these customers
6 reduce their energy bills and help protect
7 them from rising energy costs and power
8 outages that could occur.
9 "Rolling back the successful net
10 metering program makes energy more expensive
11 for everyone and takes us away from the goal
12 of reducing GHG emissions. Making solar
13 power available to more homeowners and
14 businesses will take us forward to a more
15 equitable, energy-efficient system, and this
16 should be where SMUD wants to go. Thank
17 you. Jane Lamborn."
18 DIGITIZED VOICE: Comment number nine:
19 "Ed Smeloff. Greetings, SMUD Board
20 Members. The SMUD staff proposal has five
21 key elements. The multi-prong program
22 should be designed to work together to
23 create a transformative policy for
24 distributed energy at SMUD.
25 "Some of the new elements SMUD has

Page 163

1 articulated require further elaboration.
2 Vote Solar strongly supports the development
3 of an optional Critical Peak Price rate.
4 The details of that rate still need to be
5 developed and should be done quickly and
6 transparently. Likewise, SMUD is proposing
7 a Virtual Net Energy Metering, VNEM, program
8 for multi-family dwellings in
9 under-resourced communities. Again, the
10 details of this program need further
11 elaboration. We urge SMUD to quickly
12 complete the VNEM program design so that the
13 program can begin in early 2022.
14 "Importantly, SMUD is proposing an
15 innovative Virtual Power Plant Program.
16 This program has a lot of potential to
17 address the need to meet the evening net
18 peak energy requirements. It is worth
19 noting that the Hawaii Electric Company is
20 already implementing the equivalent of
21 SMUD's battery incentive program to meet
22 critical needs. The Hawaii program provides
23 an incentive of \$4,350 for customers who
24 install storage paired with solar and commit
25 to making 5 kilowatts available daily for

Page 164

1 serving peak system requirements.
2 "SMUD is setting a goal of 30,000
3 customers that will have paired systems by
4 2030. While Vote Solar appreciates SMUD
5 setting a target for customer engagement by
6 2030, however, we believe that the 30,000
7 customer participation in the VPP is not
8 ambitious enough given the climate emergency
9 and customer interest in energy resiliency.
10 We encourage SMUD to adopt a stretch goal of
11 enabling at least 90,000 customers to
12 install storage with solar over the next
13 decade. If SMUD were to achieve such an
14 ambitious target, it will clearly transform
15 the way energy is generated and delivered
16 for Sacramento and set an example for the
17 rest of California and beyond."
18 DIGITIZED VOICE: Comment number ten:
19 "Robin Durston. I oppose the rate
20 hike and support Mark Graham's argument.
21 The rates must be based on SMUD's reasonable
22 costs not on its budget wishes, according to
23 the California Court of Appeal. We should
24 have voter approval of rate hikes.
25 "The rates were just raised in 2019.

Page 165

1 Is this a public utility, or are you trying
2 to make a profit for investors? You're more
3 concerned with the stock market than your
4 customers. We are in the middle of a
5 pandemic and a depression. Inflation is
6 rising every day. We have many low-income
7 people that cannot afford a rate increase.
8 "In response to your argument for
9 wildfire mitigation, how many customers live
10 in a forested location? I don't think many.
11 "Regarding solar rates, if you want
12 to have more people install solar, you must
13 provide an incentive. This increases the
14 amount of energy SMUD can provide;
15 otherwise, new customers will not install
16 solar.
17 "Also, if rates are raised, customers
18 will have no incentive to install
19 all-electric homes. Robin Durston."
20 SMUD GENERAL COUNSEL LEWIS: I believe
21 that's all of the written comments that we've
22 received. I don't know if we can --
23 BOARD PRESIDENT BUI-THOMPSON: Were you
24 able to get the one gentleman who needed to call in?
25 SMUD GENERAL COUNSEL LEWIS: Sway, were we

Page 166

1 able to get ahold of Subhash? I know you were
2 reaching out to him.
3 SMUD STAFF JOSUE SWAY GARCIA: No, we were
4 not able to get a call from Subhash. I provided the
5 same option as earlier where he could give our staff
6 person a phone call, but we have not received one
7 yet.
8 SMUD GENERAL COUNSEL LEWIS: So that would
9 be the end of the public comment period for this
10 item.
11 BOARD PRESIDENT BUI-THOMPSON: Okay. So
12 we have exhausted all of that, and hopefully we got
13 to everybody who wanted to speak tonight.
14 Before we move on to see who else might be
15 waiting in the wings, are there any questions from
16 the directors about the comments? I know we can't
17 get too much in the back and forth. I know a lot of
18 things were said.
19 Do directors have questions per se? I
20 know that we will go through the discussion of the
21 various recommendations, but I wanted to provide a
22 time for questions before I close the public hearing
23 portion.
24 Just keep in mind you'll have your time to
25 discuss the various draft resolutions. This is just

Page 167

1 the time to get clarifications or questions before
2 we close the public hearing part.
3 It looks like Director Sanborn.
4 SMUD BOARD DIRECTOR SANBORN: President
5 Bui-Thompson. I have two questions.
6 One is for Eric Poff. I think you had
7 mentioned we can change things quickly in reference
8 to the solar rate if we start to see a drop in
9 installations, that there would be an ability to
10 change quickly. What does "quickly" mean? How
11 fast, and what kind of changes were you proposing or
12 would you discuss?
13 SMUD STAFF POFF: I will probably ask Paul
14 to kind of chime in here with this, but that was a
15 comment in reference to our programs. And programs
16 are much different than rate design. It doesn't
17 require this formal process.
18 So the programs are around solar and
19 storage and storage incentives in the VNEM or
20 Virtual Solar Program. So if we did not see the
21 rates of adoptions that we're hoping to, that we're
22 forecasting to see, then we can make adjustments for
23 those programs.
24 Paul or Jennifer, would you like to add
25 anything to that?

Page 168

1 SMUD BOARD DIRECTOR SANBORN: If somebody
2 can be a little more specific because I had --
3 timing is important to businesses, and waiting too
4 long for the shift could be problematic, so.
5 SMUD CEO LAU: Yes. So what it is is that
6 I can't specifically talk about the timing because I
7 don't want to forecast, to say, well, in three
8 months, you know, if nothing changes -- because a
9 lot of things could actually change in three months.
10 So what we plan to do is actually
11 monitoring to see what was happening in the industry
12 itself, what the adoption rate is, how it actually
13 has impacted, like, other folks who went through
14 this, like, TID and MID and actually Roseville to
15 see what are some of the things that we can do.
16 So I think what Eric said is right. We
17 can certainly adjust, you know, from incentives, you
18 know, how much we're actually offering for battery
19 incentives, how much is interconnection fees that we
20 have, and then, you know, if we need to adjust the
21 VNEM program, what the VNEM program needs to look
22 like.
23 SMUD BOARD DIRECTOR SANBORN: Okay.
24 So second question was -- quickly:
25 Does adding EV double the energy use? I

Page 169

1 think Jeff Spies said that, and I hadn't heard that
2 before. Is that an accurate statement?
3 SMUD CEO LAU: Well, usually what we
4 looked at before, when we actually oversized to
5 110 percent, it usually accommodates like one EV and
6 any kind of stuff that you need to look at.
7 Now, if you need to add more than that, so
8 certainly our staff, you know, will work with them.
9 When they do the panel sizing, we take that into
10 consideration. So a lot of times if they already
11 bought one and have an intention of buying one,
12 we'll take into that consideration when we do the
13 sizing of it.
14 But right now, the 110 percent was one of
15 things that we looked and actually talked to the
16 CPUC. That's one of the things I think CALSSA
17 actually put forth as a good number. 110 percent is
18 a good number instead of the 100 percent that we had
19 before.
20 SMUD BOARD DIRECTOR SANBORN: It wouldn't
21 be an average to double?
22 SMUD CEO LAU: Well, usually what happens
23 when you charge an EV, we highly recommend you
24 charge it at night because it's actually the
25 cheapest, right? I mean, you're not charging it

Page 170

1 during the day, you know, when solar is producing,
 2 so depends. And the reason why I say "depends,"
 3 because usually for a home, usually you would
 4 actually do the charging at nighttime.
 5 SMUD BOARD DIRECTOR SANBORN: I'm not sure
 6 if that was my question. I was trying to get at the
 7 total amount of energy usage.
 8 SMUD CEO LAU: I don't know that off the
 9 top of my head. Maybe Jennifer does.
 10 SMUD BOARD DIRECTOR SANBORN: Okay. Thank
 11 you.
 12 BOARD PRESIDENT BUI-THOMPSON: Okay. I
 13 believe Director Rose's hand was up next.
 14 But, Jennifer, did you have your hand up?
 15 Did you want to say something before Director Rose
 16 went on?
 17 SMUD CFO DAVIDSON: I also want to make
 18 sure -- I'm not an electrical engineer, but I
 19 just -- just think about people who have an electric
 20 vehicle, think about how much your monthly
 21 electricity bill is, and think about what it costs
 22 to charge your home. Right then and there you could
 23 see it probably -- your electricity bill didn't
 24 double when you bought an electric vehicle. So that
 25 was the thought that went through my head, because I

Page 171

1 have an electric vehicle, and I'm thinking: Uh, my
 2 SMUD bill didn't double. So I'm not quite sure I
 3 agree with that.
 4 SMUD BOARD DIRECTOR SANBORN: That's why I
 5 wanted to get it on the record. I have one too, and
 6 mine didn't double either. So I just wanted to make
 7 sure that we could -- because I just want to make
 8 sure everybody gets the facts.
 9 SMUD CFO DAVIDSON: Yes.
 10 SMUD BOARD DIRECTOR SANBORN: So that was
 11 my understanding. So thank you.
 12 BOARD PRESIDENT BUI-THOMPSON: Okay.
 13 Director Rose.
 14 SMUD BOARD DIRECTOR ROSE: Yes, thank you.
 15 I guess I will respond and make that
 16 clear, real quick. I mean, it depends on how many
 17 miles -- how many miles a day you're driving, right,
 18 and how much of that you're going to charge at home.
 19 So if you did 40 miles a day, you drove a Tesla
 20 which maybe gets three miles per kilowatt hour,
 21 that's like 13 kilowatt hours per day times 20 or 30
 22 days a month. I mean, that's 3- or 400 kilowatt
 23 hours. So you can ballpark it pretty easy and do
 24 the MPG conversion as well.
 25 I had typed questions to some of the

Page 172

1 comments so -- I misplaced it.
 2 One of them was that we heard a comment
 3 that the person was concerned about moving from the
 4 4:00 to 7:00 -- this is tricky, 4:00 to 7:00
 5 time-of-use period to a 5:00 to 8:00 time-of-use
 6 period, and they were -- their comment was very
 7 unhappy about that, and I didn't understand that
 8 context of when -- what exactly was happening.
 9 I've read the language, but are we
 10 requiring the current solar customers at 4:00 to
 11 7:00 to move to 5:00 to 8:00, or is that going to be
 12 after, like, the 2031 time frame?
 13 SMUD CFO DAVIDSON: I'm happy to take that
 14 if you would like. I don't know if people could see
 15 my raised hand, so I'm just going to jump in here.
 16 This is Jennifer Davidson.
 17 Yes, that was something that was put in
 18 place back in -- when we put in the time-of-day
 19 rates and that existing solar -- remember we were
 20 thinking about 4:00 to 7:00, and then we went to
 21 5:00 to 8:00.
 22 And so at that point, when we put the
 23 time-of-day rates in, we said: But the default will
 24 be 5:00 to 8:00 for everybody but not solar
 25 customers but if non-solar -- sorry. And if solar

Page 173

1 customers want to stay on the 4:00 to 7:00, we will
 2 let them stay on that until 2023. And so that
 3 reflects a prior board decision.
 4 SMUD BOARD DIRECTOR ROSE: So that was
 5 something we already decided that would -- we would
 6 switch them from 4:00 to 7:00 so the current 5:00 to
 7 8:00, which much better matches the grid -- the
 8 realities of the electric grid.
 9 SMUD CFO DAVIDSON: That is correct. And
 10 that was decided by the board back when they
 11 approved the time of day.
 12 SMUD BOARD DIRECTOR ROSE: Okay. And then
 13 the other question -- I wanted to just clarify the
 14 comment.
 15 There was concern that because we passed
 16 the 2030 carbon plan after we did the value -- E3
 17 Value of Solar Study, that that study, there was
 18 potentially something incorrect with it. I was
 19 trying to figure out what that might be. Would you
 20 have some thoughts or comments on what might change
 21 if we were to redo the study today?
 22 SMUD CFO DAVIDSON: I actually think that,
 23 if anything, the value might actually go down
 24 quicker because, remember, the 7.4 cents -- there
 25 was a range. It was between 3 and 7, and that 7 was

Page 174

1 for displacing thermal energy. And so by 2030, if
 2 there's no thermal energy to displace and all of the
 3 costs of the carbon attributes, then the value of
 4 the solar actually then will decrease. So I
 5 actually think the zero carbon plan potentially has
 6 the ability to move us closer to the value of the
 7 3 cents versus the 7 cents.
 8 SMUD BOARD DIRECTOR ROSE: Thank you.
 9 BOARD PRESIDENT BUI-THOMPSON: Okay. I
 10 believe Director Tamayo has the next question.
 11 SMUD BOARD DIRECTOR TAMAYO: Yes. Thank
 12 you, President Bui-Thompson.
 13 Paul or -- well, anybody on staff, I was
 14 wondering what is the reason for the limitation on
 15 the system size?
 16 SMUD CFO DAVIDSON: I can go ahead and
 17 take that. I think that part of it is that we
 18 really want to make sure that customers are not
 19 using the grid as a battery. Because that means
 20 that if the generation is -- if you're having this
 21 flooding of the solar onto the grid, that is
 22 actually what causes some of that stress, that real
 23 ramping in the late afternoon. And so part of it is
 24 a signal that we really would like to have customers
 25 be able to self-consume what they generate.

Page 175

1 And that's also a real financial benefit
 2 for customers as well. This is a way for them to
 3 really be able to maximize that self-consumption.
 4 Our modeling shows that they can actually have
 5 85 percent self-consumption, so that's how they can
 6 really get that value and actually be -- get full
 7 retail value for that 85 percent. And so it's
 8 beneficial for the grid, beneficial for operation,
 9 beneficial for all customers, and it also really
 10 helps maximize the customer's investment as well.
 11 SMUD BOARD DIRECTOR TAMAYO: So when you
 12 said not wanting customers to be using the grid as a
 13 battery, you're talking about sort of racking up
 14 excessive credits; is that what you mean?
 15 SMUD CFO DAVIDSON: Well, I think it's
 16 even just ideally you want the solar energy to be
 17 used at that point of generation.
 18 SMUD BOARD DIRECTOR TAMAYO: Yes, but I
 19 don't understand what you mean by "using the grid as
 20 a battery." Could you explain what you mean by
 21 that.
 22 SMUD CFO DAVIDSON: Well, I think that
 23 what happens is when you've got this -- using the
 24 grid as a battery, what that's doing is it's pushing
 25 a lot of energy onto the grid, and then that means

Page 176

1 that you have a surplus.
 2 When you have a surplus, that is where the
 3 grid now has to deal with all of that surplus of
 4 energy, but then the sun goes down and all of a
 5 sudden you've got the scarcity, and that causes that
 6 so that all of the systems have to ramp. And that's
 7 where sometimes California is having problems after
 8 the sun goes down. So it's all about having a
 9 system size that's compatible with the overall grid
 10 to help California and help SMUD achieve our carbon
 11 goals.
 12 SMUD BOARD DIRECTOR TAMAYO: Okay.
 13 And then as far as the establishment of
 14 interconnection fees, I understand that we did a
 15 pretty careful study of what our actual costs were,
 16 but they're very different from other utilities
 17 around the state. Did you look into what the
 18 nature -- or what the cause of what that disparity
 19 is?
 20 SMUD CFO DAVIDSON: We did actually call
 21 around because we were surprised. And I'll be
 22 honest, what some of them said is that: Yeah,
 23 actually we're not collecting our true costs. This
 24 was a cost that we set a while ago, and it's not
 25 reflective of our actual costs.

Page 177

1 So I think it's more a matter of our study
 2 has been done recently, and their costs -- fees were
 3 determined a while ago when costs were lower.
 4 SMUD BOARD DIRECTOR TAMAYO: Okay. Thank
 5 you.
 6 BOARD PRESIDENT BUI-THOMPSON: Does
 7 anybody else have any questions based on the public
 8 comment?
 9 Okay. I believe we have Subhash on the
 10 phone line. So, Laura, do you mind getting him on
 11 and giving him the three minutes.
 12 SMUD GENERAL COUNSEL LEWIS: Yes. I
 13 think, Sway, if you have that ready to go.
 14 SMUD STAFF JOSUE SWAY GARCIA: Yes, I have
 15 Subhash (inaudible) in place.
 16 PUBLIC MEMBER SUBHASH KALE: Hello. Can
 17 you all hear me?
 18 SMUD GENERAL COUNSEL LEWIS: Yes.
 19 PUBLIC MEMBER SUBHASH KALE: Thank you for
 20 being patient and -- (inaudible) me out. I'm
 21 calling from Vedante Society of Sacramento. I'm on
 22 the board of directors there. And we are thinking
 23 about installing solar around this summer, but our
 24 installation is like 750 feet away, the back of our
 25 property. And there's an electrical meter there,

Page 178

1 and we want to connect to that meter, but our
2 account executive -- (inaudible) we were told that
3 we cannot do that.
4 So I'm requesting you guys to see if you
5 can give us special permission to do the net energy
6 metering -- (inaudible) so we can connect to this
7 back meter and be able to install solar; otherwise,
8 we have to take a line from the ground, and there
9 are cypress trees, which damages the roots of the
10 trees so we want to avoid that.
11 So we do want to go solar because of the,
12 you know, climate considerations, but, you know, we
13 have this as a big impediment is number one.
14 Number two, from what I'm understanding
15 from what I heard also, that you're recommending
16 having battery storage if we are going to go solar.
17 And we are -- (inaudible) that it's going to be
18 really expensive -- expensive to have batteries so
19 we're ruling that out.
20 Do I understand correctly that you regard
21 the battery storage as not going to be as helpful?
22 I can follow up later if somebody wants to talk to
23 me in more detail, and my contact information is
24 there in my email that I had sent. But this
25 considered net energy metering -- (inaudible)

Page 179

1 because other energy -- (inaudible) and I don't know
2 what SMUD -- (inaudible). So please consider that
3 so that we can go solar. Thank you.
4 BOARD PRESIDENT BUI-THOMPSON: Great.
5 Thank you. I'm glad we had the opportunity to hear
6 your comments.
7 Okay. One last time: Any more questions
8 from the directors before we close the public
9 hearing?
10 So our -- next up is our discussion and
11 our discussion calendar. So Item Number 3 is to
12 introduce draft rate solutions to make changes to
13 SMUD'S rates, rules, and regulations as proposed by
14 our CEO and General Manager's report. That's Volume
15 1 and 1 [sic] from June 17th, and then 3(b). So
16 that was 3(a). And then 3(b), which is CEO and
17 General Manager's report on the Open Access
18 Transmission Tariff, Volume 1, also from June 17th.
19 So updates have been made to the
20 resolutions provided for 3(a), and these updates
21 have also been posted on the SMUD's meeting page and
22 has been distributed.
23 So this is the time to discuss -- I
24 believe we discuss first, right, or do we do more
25 public comment, Laura?

Page 180

1 SMUD GENERAL COUNSEL LEWIS: Yes. Just
2 for clarification, President Bui-Thompson, have we
3 closed the public hearing?
4 BOARD PRESIDENT BUI-THOMPSON: Well,
5 that's one of my questions. So I know that board
6 members usually like to just generally comment on
7 the -- you know, what we've heard, but I also
8 thought since we were discussing, that we could
9 group them all together because we had several
10 discussion points.
11 But I'll defer to you as to when you think
12 the best time is to provide our general comments on
13 what all we heard now or lump that in both
14 discussing of the rate resolutions, right, which is
15 also reacting to the public. I'm just trying to
16 kill several birds with one stone, but I know that
17 there are procedural processes that we may have to
18 follow.
19 SMUD GENERAL COUNSEL LEWIS: Yes.
20 Actually, before we close the public
21 hearing, one of my staff is able to provide some
22 response to Mr. Uhler's alternative proposal. If we
23 could have just a moment to do that to get that on
24 the record, because Andrew Meditz is prepared to do
25 that. Then I think we can close the hearing and

Page 181

1 then move to the discussion calendar, which is
2 discussing the draft rate resolution, and the board
3 have opportunities to provide additional comments
4 then.
5 BOARD PRESIDENT BUI-THOMPSON: ^{That's what}
6 I thought besides having us just comment now and
7 then comment again, because we have the discussion.
8 So that's why I'm just hoping to lump just our board
9 members' discussions seeing that it's 9:00 because I
10 know each one of us will want to respond to what we
11 heard this evening and also respond to the proposal.
12 So as long as we're allowed to do that in
13 the same discussion point, then, yes, I'll move
14 forward with letting Andrew speak and then ask the
15 board members if we can kind of combine both our
16 reactions to what we heard and then just general
17 reactions to the rate resolution.
18 Is that acceptable, Laura?
19 SMUD GENERAL COUNSEL LEWIS: Yes.
20 BOARD PRESIDENT BUI-THOMPSON: ^{Okay. So}
21 that we don't have to do it twice, basically.
22 Okay. So if that's okay with everybody, I
23 would like to combine your general comments into one
24 section. Is that good with everybody, unless you
25 want two bites at the apple? Okay. So we'll have

Page 182

1 one bite at the apple in a little bit.
 2 So, Andrew, do you mind responding to
 3 Mr. Uhler's draft rate proposal?
 4 SMUD COUNSEL MEDITZ: Sure, yeah.
 5 Just quickly, Mr. Uhler proposed -- is
 6 asking the board to consider an alternative
 7 recommendation that SMUD purchase RECs that are
 8 generated by rooftop solar.
 9 And so our solar-and-storage rate does not
 10 propose to purchase RECs, the customers' fee for
 11 RECs. And there's a process to register renewable
 12 generation with the CEC. And our solar-and-storage
 13 rate, similar to our NEM -- NEM 1 tariff, simply
 14 requires that the renewable resource be eligible for
 15 certification by the CEC. It doesn't require the
 16 system be actually registered and permitted for
 17 that. And so our solar-and-storage rate has a
 18 similar proposal as what's in our current NEM 1
 19 tariff.
 20 BOARD PRESIDENT BUI-THOMPSON: Okay,
 21 great. I appreciate that.
 22 So then are we good to close the hearing
 23 portion and move on to discussing the resolutions,
 24 Laura?
 25 SMUD GENERAL COUNSEL LEWIS: Yes.

Page 183

1 SMUD BOARD DIRECTOR KERTH: Do you need a
 2 motion to close the public hearing?
 3 SMUD GENERAL COUNSEL LEWIS: No.
 4 BOARD PRESIDENT BUI-THOMPSON: It
 5 doesn't -- (inaudible) that I do.
 6 SMUD GENERAL COUNSEL LEWIS: No, we don't.
 7 SMUD BOARD DIRECTOR ROSE: Laura, can I
 8 ask -- sorry. I saw one of the public comments that
 9 we received was saying that we should do an EIR
 10 through CEQA. Would you have a response to that?
 11 It seems like it's something we've never done
 12 before.
 13 SMUD GENERAL COUNSEL LEWIS: Yes. I am
 14 happy to respond to that.
 15 There is -- California law provides an
 16 exemption for CEQA to the extent that the board is
 17 adopting rates that recover our operating expenses
 18 and other capital expenses and other financial
 19 costs. And as a result, as noted in our
 20 environmental analysis that's contained in the
 21 General Manager's report, there is no requirement
 22 to. This is exempt from CEQA, and that is included
 23 in the CEO and GM report.
 24 SMUD BOARD DIRECTOR ROSE: Perfect.
 25 Director Kerth, I think you were speaking,

Page 184

1 but.
 2 SMUD BOARD DIRECTOR KERTH: Well, I was
 3 asking do we need a motion to close the public
 4 hearing or not.
 5 BOARD PRESIDENT BUI-THOMPSON: It doesn't
 6 appear that we do.
 7 SMUD GENERAL COUNSEL LEWIS: No.
 8 (Public hearing concluded at 9:12 p.m.)
 9 (Further proceedings held, not transcribed.)
 10 --oOo--
 11
 12
 13
 14
 15
 16
 17
 18
 19
 20
 21
 22
 23
 24
 25

Page 185

REPORTER'S CERTIFICATE

--oOo--

I, CHERYL L. KYLE, a Certified Shorthand
 Reporter for the State of California, duly
 commissioned and a disinterested person, certify:
 That the foregoing deposition pages 1
 through 184 was taken remotely before me at the time
 and place herein set forth;
 That all audible statements of all parties
 made at the time of the proceeding were recorded
 stenographically by me to the best of my ability and
 thereafter transcribed into typewriting;
 That the foregoing transcript is a record
 of all audible statements of all parties made at the
 time of the proceeding.
 IN WITNESS WHEREOF, I subscribe my name on
 this 7th day of September, 2021.

Cheryl L. Kyle, CSR No. 7014
 Certified Shorthand Reporter

Ref. No. 21204

1
 2
 3
 4
 5
 6
 7
 8
 9
 10
 11
 12
 13
 14
 15
 16
 17
 18
 19
 20
 21
 22
 23
 24
 25

	[sic] (2) 159:8;179:15	54:12	17,24;170:4;173:22, 23;174:4,5,22;175:4,6; 176:20,23;180:20; 182:16	135:17
\$	A	according (3) 113:17;147:24; 164:22	add (8) 5:14;30:8;50:9; 51:17;112:18;161:19; 167:24;169:7	adopt (11) 6:11;18:3;20:6;24:2; 32:6;36:9;60:23;65:4; 73:22;108:5;164:10
\$1.91 (1) 15:18	AB (1) 140:7	accordingly (1) 53:7	added (2) 45:10;48:15	adopted (4) 17:22;124:8;125:3; 155:23
\$10 (2) 26:23;27:1	abandoned (1) 78:4	account (1) 178:2	adders (4) 153:12,14,17,21	adopters (2) 68:19;101:13
\$126.44 (1) 15:15	ability (9) 62:20;67:17;93:19; 115:22;125:24;138:24; 159:2;167:9;174:6	ACC's (1) 81:5	addiction (1) 159:8	adoption (17) 9:10;11:1;23:22,24, 25;30:13;35:15;90:17; 124:7;127:14;131:6,9; 132:2;146:10;155:1,3; 168:12
\$145 (1) 127:11	able (28) 7:18;10:15;17:11; 35:10;55:11;57:20; 64:16;74:5;76:21; 78:18;81:17;85:11; 100:21;117:2,3,17; 129:18;136:8;137:25; 149:4;155:20;165:24; 166:1,4;174:25;175:3; 178:7;180:21	accurate (1) 169:2	adding (7) 45:25;50:20;54:21; 55:24;91:8;127:6; 168:25	adoptions (1) 167:21
\$1500 (1) 36:7	above (3) 62:11;65:23;131:14	achieve (10) 18:6;21:16;32:2; 54:2;77:1;94:13; 106:25;138:24;164:13; 176:10	addition (8) 37:24;39:1;62:5; 77:14;87:19;102:23; 157:23;159:22	adults (1) 150:11
\$2,500 (1) 149:3	abrupt (2) 107:16;113:13	achieves (1) 33:7	additional (15) 4:19;5:16;15:18; 31:22;41:2;42:21; 57:18;81:13;88:11; 91:21;112:18,24; 147:19;148:14;181:3	advance (7) 4:20;67:11;92:14; 152:19;160:7,7,8
\$2.57 (1) 15:18	absent (1) 133:13	achieving (1) 54:6	additionally (4) 5:9;94:1;102:18; 132:19	advantage (4) 31:17;88:9;89:6; 118:21
\$20,000 (1) 139:5	absolute (2) 21:2;49:6	acknowledged (3) 11:21;48:24;54:11	additions (1) 55:3	advantages (1) 105:21
\$200 (1) 73:4	absolutely (1) 97:3	ACR (1) 97:10	address (12) 25:23;34:1;44:19; 61:1;71:12;74:10; 93:15,17,24;101:6; 149:10;163:17	advertisements (1) 161:13
\$22.25 (1) 158:10	absorb (1) 155:21	across (5) 12:1;85:2,21;92:16; 123:12	addressed (4) 41:1,13;70:8,9	affect (4) 50:20;75:20;114:13; 115:23
\$25 (6) 11:5;17:25;20:2; 23:3;29:17;35:18	abysmally (1) 104:16	Act (2) 118:8,22	addresses (1) 93:4	affected (1) 71:3
\$250 (1) 17:19	academic (2) 85:21;87:7	acting (1) 151:16	adds (2) 8:14;161:23	affecting (2) 70:3;72:23
\$2500 (1) 36:11	ACC (7) 79:19,20,22;80:5,6, 13;107:8	action (9) 39:4,13;40:2,10,20; 92:14;93:3,16;159:6	adequate (1) 159:14	affects (1) 134:2
\$3,000 (1) 73:4	accelerate (5) 11:1;23:22;35:16; 66:25;67:20	actionable (1) 92:13	adjust (9) 7:18;80:23;98:2,15, 19;131:22;132:5; 168:17,20	affluent (2) 66:4;155:19
\$4,350 (1) 163:23	accelerated (1) 95:22	actions (2) 75:6;94:13	adjusted (1) 35:16	afford (12) 57:20;60:5;64:12,16; 74:6;76:21;81:17; 93:20;113:19;129:18; 158:6;165:7
\$44 (1) 16:1	acceptable (2) 51:14;181:18	activate (5) 111:11;114:4;116:8; 137:23;143:7	administering (1) 72:11	affordability (2) 10:22;79:3
\$450 (1) 112:14	accepted (1) 86:7	activated (8) 74:15;92:4;96:13; 106:4;133:16;138:3; 143:13;153:11	administration (1) 33:17	affordably (1) 64:7
\$475 (3) 24:16,22;148:25	Access (19) 4:12;14:14;22:17,21; 23:1;35:2;37:14;40:21; 57:14;64:11;81:10; 85:25;86:16;87:11; 100:13;103:3;123:14; 144:5;179:17	activating (2) 96:8;133:14	admiration (1) 59:4	afternoon (1) 174:23
\$486 (1) 73:5	accessible (1) 144:3	active (2) 91:2;106:15	admits (1)	afterthoughts (1) 70:24
\$5,000 (1) 149:3	accommodates (1) 169:5	actively (2) 87:15;92:17		again (35)
\$500 (1) 35:24	accommodating (1)	activities (1) 10:16		
\$59 (1) 16:1		actual (5) 17:14;152:9;160:21; 176:15,25		
\$8,500 (1) 102:19		actually (36) 7:4;9:4;33:10;52:25; 62:7,9;82:18;83:3,8, 17;98:18;99:8;100:7; 110:24;136:2;168:9, 10,12,14,18;169:4,15,		
\$800 (1) 16:22				
\$841 (1) 108:2				
\$850 (2) 91:2;102:20				
\$900 (1) 149:1				
\$91 (1) 66:8				
[

18:19;24:23;21:24:1; 27:4;28:24;30:5,12,17; 31:5,16;33:21;35:18; 36:11;37:9;45:1;48:12; 50:24;51:5,7;52:18; 56:9;60:25;73:14;84:7; 108:23;110:21;117:7; 122:19,25;123:8; 135:21;146:20;163:9; 181:7	all-electric (1) 165:19	ample (2) 114:16;132:23	appreciated (4) 83:1,6;92:19;98:6	45:8;47:3,12
Alliance (1) 53:22	allow (11) 8:17;50:2;55:23,25; 88:9;90:18;137:24; 142:1,12;143:10; 152:13	analysis (9) 31:16;55:3,14; 102:11;124:5;154:6; 156:10,15;183:20	appreciates (1) 164:4	articulated (1) 163:1
against (3) 129:24;144:9;151:14	allowance (1) 148:6	Andrew (3) 180:24;181:14;182:2	appreciation (1) 40:15	artificial (1) 136:24
agency (1) 58:23	allowances (1) 25:5	announce (2) 52:20,25	appreciative (2) 41:23;76:11	ASAP (1) 45:2
agenda (4) 5:9;58:15;143:2; 147:11	allowed (6) 14:4;74:1;78:20; 115:4;116:23;181:12	announced (36) 56:14;58:11;61:4; 63:16;64:23;66:19; 68:9;69:19;72:7;74:13; 77:9;79:16;81:25; 84:12;86:21;89:12; 92:2;94:19;96:4,11; 97:7;99:3;101:20; 103:7;106:2;109:1; 111:6;113:25;121:10; 122:14;125:21;127:21; 130:21;133:10;136:6; 137:21	approach (8) 7:3,15;10:4;67:10; 77:22;88:16;131:22; 137:16	ash (1) 70:12
aggregations (1) 67:19	allowing (5) 81:21;82:4;84:17; 91:11,23	annual (2) 105:16,19	approaches (3) 55:7;77:19;79:6	Asia (1) 95:11
aggressive (1) 138:19	allows (1) 118:8	annually (1) 153:14	approaching (1) 10:17	aspects (1) 39:9
aging (3) 57:19;80:17;81:13	almost (2) 71:5,11	anticipate (1) 124:8	approval (6) 45:19;47:4,7,8;48:1; 164:24	aspire (1) 74:25
ago (11) 19:22;62:24;68:20; 70:7;71:19;85:3;90:4; 138:13;149:13;176:24; 177:3	alone (2) 135:4;151:4	apartment (2) 69:11;71:16	approve (1) 60:12	Assembly (2) 129:23;140:9
agree (3) 95:9;101:12;171:3	along (6) 7:13;61:10;62:25; 69:3;96:7;158:11	apparently (1) 158:25	approved (1) 173:11	assertions (1) 9:23
agreement (4) 5:13;20:16;70:25; 127:3	Alquist (1) 138:15	Appeal (1) 164:23	approximately (2) 102:19;123:20	asset (1) 68:11
ahead (12) 17:12;53:19;55:20; 111:11;114:2;116:8; 125:23;126:1;127:23; 138:3;143:11;174:16	altered (1) 38:18	annually (1) 153:14	April (2) 79:22;104:19	assets (1) 155:14
ahold (1) 166:1	alternate (6) 6:7;66:14;116:24; 118:1,20;121:5	anticipate (1) 124:8	APS (2) 90:4,14	assist (1) 73:21
air (5) 73:9;93:1;130:17; 142:22,23	alternative (11) 6:5;42:21,23;48:13; 52:9,11;117:10,15; 121:2;180:22;182:6	apartment (2) 69:11;71:16	APS-qualified (1) 90:9	assistance (3) 40:8;72:15;101:2
Al (4) 97:6,8,10;138:15	alternatives (2) 27:10;44:20	appeal (1) 164:23	architecture (1) 145:25	assisted (2) 79:25;80:25
Alan (4) 111:10,14,17,18	although (1) 112:13	appear (2) 125:25;184:6	area (6) 33:24;36:25;37:6; 70:10;94:10;146:7	assisting (1) 126:14
Alcides (4) 13:9,10,13;17:4	always (11) 37:4;38:15;57:24; 69:9;72:25;76:16; 80:14;133:2;135:6,8, 14	appeared (1) 103:10	areas (3) 88:18;136:15;157:19	associated (1) 25:3
Alex (5) 53:9,14,15,18,20	amazing (1) 68:13	appears (2) 88:21;116:1	argument (3) 156:21;164:20;165:8	association (5) 53:22;54:8;65:1; 95:2;128:4
aligned (2) 54:5;94:11	ambitious (6) 7:9;88:25;92:23; 94:12;164:8,14	applaud (3) 55:14;73:20;88:1	arguments (3) 101:4;104:4;135:5	associations (1) 40:1
aligning (1) 144:11	amend (5) 125:6;131:20;143:1, 19;144:15	apple (2) 181:25;182:1	Arizona (3) 90:4,5;134:10	assume (1) 160:20
alignment (2) 70:19;145:15	AmeriCorps (2) 86:25;87:19	appliances (1) 65:12	arm (1) 133:24	assumptions (1) 129:6
aligns (1) 92:24	among (3) 16:12;59:24;87:1	application (1) 93:25	around (14) 24:10;37:21;41:21; 54:10;61:18;74:2; 99:21;109:23;110:22; 127:11;167:18;176:17, 21;177:23	assure (2) 5:11;158:5
alive (2) 73:16;138:15	amount (5) 18:18;20:5;23:5; 165:14;170:7	applies (2) 13:20;132:18	arrays (1) 60:2	attached (2) 47:14;83:20
allegations (1) 51:19		apply (7) 51:11;76:4;152:5,25; 153:19;159:19;160:17	array (2) 94:7;149:15	attack (1) 134:3
		appreciate (21) 5:15;12:24;42:17; 52:2;54:13;63:12; 67:15;78:6;82:4,11,19, 24;83:9,12,23;89:17; 94:5;101:1;122:1; 133:22;182:21	arranged (1) 127:4	attend (1) 40:22
			arrangements (1) 59:25	attendance (4) 53:13;96:7;106:4; 111:8
			arrays (1) 60:2	attention (2) 46:6;105:13
			arrived (1) 111:23	attitude (2) 137:16;158:2
			Article (3)	attractive (1) 144:5
				attributed (1) 105:10
				attributes (2) 55:25;174:3

<p>audience (1) 85:9</p> <p>audit (1) 59:6</p> <p>August (1) 44:25</p> <p>Austin (2) 36:21;37:3</p> <p>authentic (1) 87:13</p> <p>authored (1) 138:16</p> <p>authority (1) 46:3</p> <p>authorized (1) 44:23</p> <p>authorizes (2) 45:25;49:4</p> <p>automatically (1) 126:24</p> <p>avail (1) 73:17</p> <p>availability (1) 127:14</p> <p>available (8) 38:19;101:16; 145:17;161:3,22; 162:2,13;163:25</p> <p>Avenue (1) 77:14</p> <p>average (12) 15:14,17,25;16:4,9; 32:8;73:4;91:2;102:20, 25;108:1;169:21</p> <p>averages (1) 26:13</p> <p>avoid (3) 93:22;125:9;178:10</p> <p>avoids (1) 155:23</p> <p>awaiting (1) 114:2</p> <p>aware (3) 39:4;40:16;150:18</p> <p>awareness (1) 87:17</p> <p>awash (1) 62:16</p> <p>away (7) 19:21;46:6;65:11; 96:23;97:3;162:11; 177:24</p> <p>Azizza (3) 69:18,20,22</p> <p>Aztec (5) 94:25;95:4,7,8;131:1</p>	<p>14;29:6;31:6,20;42:14; 48:14;55:2;71:2,16; 78:10;86:9;100:6; 101:8;123:4;135:21; 137:15;138:1,2;141:7; 162:9;166:17;172:18; 173:10;177:24;178:7</p> <p>back-fed (1) 91:17</p> <p>background (4) 50:1;58:20;84:14,15</p> <p>bad (2) 147:12,13</p> <p>baked (1) 45:15</p> <p>balance (1) 146:12</p> <p>balanced (1) 153:8</p> <p>balancing (2) 10:11;146:8</p> <p>ballpark (1) 171:23</p> <p>bar (1) 16:13</p> <p>Barbara (1) 141:8</p> <p>barriers (1) 143:22</p> <p>bars (1) 27:20</p> <p>based (15) 20:22;46:23;50:4,16; 107:7;110:1;123:11; 132:20,24;139:6,10,23; 149:18;164:21;177:7</p> <p>baseline (1) 153:17</p> <p>basic (10) 57:21;64:3,4,6;74:6; 76:22;81:17;93:20; 156:21;157:3</p> <p>basically (4) 50:8;51:3;61:8; 181:21</p> <p>basics (1) 64:16</p> <p>basis (6) 24:18;45:6,23;46:10; 146:22,25</p> <p>Battaglia (1) 111:5</p> <p>batteries (8) 11:9,10;112:19,25; 113:10;152:11;154:14; 178:18</p> <p>battery (34) 30:12,19;31:1;67:3; 76:2;90:25;91:5,6; 98:4,17,18,21;102:18, 23;128:23;131:10,15, 17;152:3,6;153:24; 154:11;159:11,18;</p>	<p>161:19,24;163:21; 168:18;174:19;175:13, 20,24;178:16,21</p> <p>battle (1) 145:10</p> <p>Bean (3) 66:18,20,22</p> <p>bear (4) 57:18;75:13;114:3; 127:24</p> <p>bears (2) 81:12;88:11</p> <p>beauty (1) 35:10</p> <p>became (3) 21:24;70:12;99:18</p> <p>become (8) 28:2,17;31:17;36:13; 50:19;62:19;70:23; 74:25</p> <p>becomes (3) 131:24;132:7;152:17</p> <p>bedrock (1) 156:13</p> <p>bedtime (1) 94:23</p> <p>beg (1) 48:6</p> <p>begin (4) 67:4;70:1,23;163:13</p> <p>behalf (5) 56:24;66:24;77:5; 84:22;125:5</p> <p>behind (3) 18:1;19:19;58:1</p> <p>behind-my-meter (1) 159:17</p> <p>behind-the-meter (4) 23:7;24:25;67:12; 121:23</p> <p>below (4) 58:2;76:20;80:20; 94:2</p> <p>benchmark (1) 16:10</p> <p>beneficial (4) 140:11;175:8,8,9</p> <p>benefit (11) 8:14,15;25:10,12; 32:2;62:14;71:17;74:1; 88:21;111:25;175:1</p> <p>benefits (25) 11:10;18:13;20:4,6; 23:15;55:15;57:15; 60:20;62:21;68:25; 73:17;81:11;88:9; 107:11,13;108:9,14; 111:24;132:25;133:2, 5;148:14;152:15; 154:13;161:3</p> <p>benefitted (1) 68:21</p> <p>benefitting (1)</p>	<p>20:3</p> <p>Benjamin (3) 127:24;128:2,3</p> <p>Berlin (1) 96:7</p> <p>besides (1) 181:6</p> <p>best (9) 19:6;29:14;30:3,16; 77:24,24;89:9;145:16; 180:12</p> <p>Beth (3) 63:15,17,18</p> <p>better (9) 8:10;25:17;56:5; 60:20;82:23;86:1,16; 108:5;173:7</p> <p>better-off (1) 155:24</p> <p>beyond (7) 26:24;41:20;79:6; 115:24;140:6;153:16; 164:17</p> <p>bid (1) 20:19</p> <p>bidder (1) 20:20</p> <p>big (6) 33:3;106:19;113:13; 131:17;152:11;178:13</p> <p>biggest (3) 83:25;112:3,17</p> <p>bill (13) 15:15;16:4,6;37:22, 24;73:4,8;100:21; 129:23;158:3;170:21, 23;171:2</p> <p>billion (4) 19:1;102:15;134:25; 135:3</p> <p>billions (1) 135:15</p> <p>bills (13) 15:8;16:22;41:10; 73:3;76:9;78:10; 100:17,19,25;102:14; 103:4;132:21;162:6</p> <p>birds (1) 180:16</p> <p>bit (14) 5:21;6:23;17:24; 19:18;21:21;25:21; 28:11;29:2;32:20;34:3; 35:19;53:1;127:16; 182:1</p> <p>bite (1) 182:1</p> <p>bites (1) 181:25</p> <p>Black (3) 69:23,24;71:23</p> <p>blackouts (2) 135:11,16</p>	<p>blanket (1) 144:9</p> <p>Board (149) 4:3,5;5:3,22;6:1,3, 11,13;11:19;13:12; 17:12;21:5,17;23:14; 35:12;42:16;43:2,8,16, 22;44:6,10,11,15,15, 19,21,24;45:5,18,20, 22,22;46:22;48:24; 49:7,12,13,23;52:1,5, 15,23;53:4;56:10,20; 58:13;61:7;63:13;66:8, 22;68:5;74:18;82:3; 84:17;86:23;88:2;92:7, 22;94:21;95:19;97:9; 98:7;99:16;101:9; 106:7,21;107:1; 109:22;110:22;116:24; 117:1,2;118:2,3,10,11, 12,17,19;119:3,4,13, 21,22;120:9,13,21; 122:22;123:3;125:6; 126:8;133:21;136:12; 137:15;138:10;143:15, 19;144:8;146:17; 147:4,8;148:16,19; 160:25;162:19;165:23; 166:11;167:4;168:1, 23;169:20;170:5,10, 12;171:4,10,12,14; 173:3,4,10,12;174:8,9, 11;175:11,18;176:12; 177:4,6,22;179:4; 180:4,5;181:2,5,8,15, 20;182:6,20;183:1,4,7, 16,24;184:2,5</p> <p>board's (5) 6:6;21:8;46:5;59:6; 133:3</p> <p>Bodipo-Memba (1) 79:11</p> <p>bolts (1) 24:6</p> <p>Borenstein (5) 33:13,16;66:12; 145:4;146:14</p> <p>both (12) 7:5;10:4;25:19;50:4; 51:5;65:3;77:20;85:12; 87:16;150:3;180:13; 181:15</p> <p>bothers (1) 115:10</p> <p>bottom (4) 8:9;16:13,19;79:7</p> <p>bought (3) 104:18;169:11; 170:24</p> <p>box (1) 23:1</p> <p>bracket (1) 127:8</p>
B				
<p>back (38) 8:21;9:3;18:3;19:4; 20:11,23,24;21:5,10; 22:16;23:4;27:18;28:5,</p>				

<p>brackets (3) 64:13;108:10,13</p> <p>brake (1) 35:13</p> <p>brakes (1) 128:14</p> <p>branch (2) 123:16;124:11</p> <p>branches (1) 123:15</p> <p>Brandon (1) 52:3</p> <p>breach (1) 104:20</p> <p>breaks (1) 158:13</p> <p>Breakthrough (4) 74:20,21;75:21; 76:11</p> <p>breath (1) 142:22</p> <p>breathe (1) 78:3</p> <p>brief (1) 86:2</p> <p>briefly (3) 49:20;52:6;70:16</p> <p>Briggs (2) 154:22,23</p> <p>bring (7) 17:19;20:4;31:6; 63:21;84:24;145:9; 147:23</p> <p>bringing (4) 59:16;75:23;85:13; 87:17</p>	<p>52:1,17,23;53:4;56:19; 58:13;61:6;66:21; 74:17;82:3;92:7;97:9; 106:7;120:21;122:22; 123:3;136:11;138:9; 165:23;166:11;167:5; 170:12;171:12;174:9, 12;177:6;179:4;180:2, 4;181:5,20;182:20; 183:4;184:5</p> <p>burden (2) 93:7;100:15</p> <p>burdened (1) 142:2</p> <p>burning (1) 95:20</p> <p>business (19) 4:3;10:24;18:10,12, 13;33:17,18;39:20,24; 62:25;63:4;70:4;71:9; 79:8;82:6;96:20; 135:22;137:6;158:4</p> <p>businesses (6) 14:23;71:3;124:1; 130:14;162:14;168:3</p> <p>buy (8) 8:24;9:1;25:4;37:20; 104:23;113:2;129:11; 158:21</p> <p>buy-in (1) 144:10</p> <p>buying (2) 112:19;169:11</p> <p>buzz (1) 36:24</p>	<p>107:13;108:9</p> <p>Californian's (1) 102:14</p> <p>California's (3) 128:12;133:25; 136:18</p> <p>call (23) 7:12;14:3;21:7; 25:16;30:17,18,20; 33:21;35:13;47:1,2; 50:7;99:14;100:2; 113:7,23;114:17,19; 142:24;165:24;166:4, 6;176:20</p> <p>called (8) 4:1;9:8;33:20;39:19; 62:18;99:8;100:10; 153:20</p> <p>calling (4) 88:1;92:21;143:18; 177:21</p> <p>calls (3) 40:9,24;142:9</p> <p>CALSSA (2) 95:2;169:16</p> <p>came (11) 20:16,23,24;21:19; 22:25;25:21;26:14; 31:19;41:7;100:1; 118:25</p> <p>camp (2) 85:4,12</p> <p>campaign (1) 82:25</p> <p>campaigns (2) 75:12;134:4</p> <p>can (135) 5:2;9:1,19;16:12; 18:5,15;21:10;26:16, 21;27:20,23;28:7,13, 14;29:10,25;31:21; 32:7;34:9;35:16;38:12; 39:9;41:15,19,22;42:5, 7,9,11;43:1,2,25;44:4; 46:15,19;51:9;52:6,18, 24;53:5,7,15;55:2,12, 17;56:16;62:18;64:6, 12;65:19;71:16;75:13, 20;76:7;81:3;88:12; 89:14;91:13;92:4; 93:18;96:18;97:2,20; 98:2;99:4;101:22; 102:2,14;103:13; 105:10,17;108:8; 109:3;110:24;111:15; 113:1,19;114:5,17; 116:10,12,14;117:9; 119:2,4;120:21; 121:15,16;122:16,20, 25;123:1,4;126:2,5; 130:23;133:16,17; 134:15;138:1,5; 140:22;143:11,19;</p>	<p>144:22,22,23,25;148:3; 154:5,8;155:16;158:5; 159:7;160:20;163:13; 165:14,22;167:7,22; 168:2,15,17;171:23; 174:16;175:4,5; 177:16;178:5,6,22; 179:3;180:25;181:15; 183:7</p> <p>cap (1) 18:20</p> <p>capacity (5) 25:6;36:17;62:12,14; 157:6</p> <p>capital (1) 183:18</p> <p>capture (1) 55:17</p> <p>captured (3) 50:22;51:10,21</p> <p>car (1) 105:6</p> <p>carbon (25) 7:9,20;18:4;21:12, 16;25:5;32:3;33:8; 54:6;63:10;68:25;69:2; 88:3,24;92:23;107:4; 110:8;138:19,24; 151:11;154:12;173:16; 174:3,5;176:10</p> <p>carbon-free (1) 109:20</p> <p>carbonization (2) 7:8;13:6</p> <p>carbon-reduction (2) 10:16;58:6</p> <p>care (3) 79:25;87:14;89:23</p> <p>career (1) 85:15</p> <p>careers (1) 85:5</p> <p>careful (1) 176:15</p> <p>caregiver (1) 80:3</p> <p>Carmichael (2) 97:11;126:9</p> <p>carrier (1) 146:23</p> <p>cars (3) 32:12;76:3;155:18</p> <p>case (4) 10:3;46:10;104:1; 125:14</p> <p>cases (1) 41:14</p> <p>cash (3) 97:21;129:10;131:13</p> <p>cast (1) 39:2</p> <p>catalysts (1) 78:14</p>	<p>catalytic (1) 92:14</p> <p>categories (1) 25:16</p> <p>cause (6) 93:18;107:17; 112:23;151:9;158:7; 176:18</p> <p>caused (3) 62:3;135:10;161:6</p> <p>causes (25) 174:22;176:5</p> <p>causing (1) 112:7</p> <p>caution (3) 19:16;72:23;144:8</p> <p>cautious (1) 141:14</p> <p>CD (1) 31:10</p> <p>CEC (2) 182:12,15</p> <p>celebrated (1) 131:3</p> <p>cent (4) 25:12;29:7,23;97:22</p> <p>centralized (1) 137:2</p> <p>cents (33) 8:20,23,25;19:13,15; 21:1,1,3;24:6,23;25:7; 61:17,18;62:5,10; 65:22,23;97:24; 105:14;107:22,22; 111:21;112:1;124:14, 15;131:8;148:1;153:9; 157:12,12;173:24; 174:7,7</p> <p>Century (1) 75:4</p> <p>CEO (19) 5:23;21:24;22:1; 45:16;49:16;56:21; 63:18;69:22;72:9; 79:19;92:9;157:21; 168:5;169:3,22;170:8; 179:14,16;183:23</p> <p>CEQA (3) 183:10,16,22</p> <p>certain (3) 14:17,18;90:17</p> <p>certainly (5) 105:8;139:18;151:9; 168:17;169:8</p> <p>certainty (3) 97:2;113:1;123:25</p> <p>certification (1) 182:15</p> <p>CESA (2) 54:16,19</p> <p>CFO (11) 6:18,20;170:17; 171:9;172:13;173:9,</p>
<p>broader (1) 110:24</p> <p>brought (1) 58:18</p> <p>Brown (2) 118:8,22</p> <p>brunt (1) 57:18</p> <p>Bryan (3) 68:8,10,11</p> <p>budget (3) 51:5;139:6;164:22</p> <p>Bui (1) 94:21</p> <p>build (6) 76:2;85:8;128:13; 130:8;131:23;148:7</p> <p>building (3) 78:4;148:7,9</p> <p>buildings (1) 162:3</p> <p>built (3) 18:11;47:15;137:16</p> <p>BUI-THOMPSON (49) 4:5;5:3;6:13,21; 42:15,16;43:2,8,16,22; 44:6,11,18;49:13,23;</p>	<p style="text-align: center;">C</p> <p>calculate (1) 139:6</p> <p>calculated (1) 111:25</p> <p>calculation (5) 50:23;90:8;112:10; 139:7,24</p> <p>calculations (1) 159:17</p> <p>calendar (2) 179:11;181:1</p> <p>California (39) 16:12;45:8,24;47:23; 48:3;53:21,24;54:1; 58:21,24;62:15;65:1; 68:12;70:11;77:16; 84:5;89:21;95:1; 104:12;114:12;123:11, 15,19;128:3;129:24; 133:24;134:25;135:4; 141:11,23;142:19; 146:24;155:6;161:5; 164:17,23;176:7,10; 183:15</p> <p>Californians (2)</p>	<p>5:2;9:1,19;16:12; 18:5,15;21:10;26:16, 21;27:20,23;28:7,13, 14;29:10,25;31:21; 32:7;34:9;35:16;38:12; 39:9;41:15,19,22;42:5, 7,9,11;43:1,2,25;44:4; 46:15,19;51:9;52:6,18, 24;53:5,7,15;55:2,12, 17;56:16;62:18;64:6, 12;65:19;71:16;75:13, 20;76:7;81:3;88:12; 89:14;91:13;92:4; 93:18;96:18;97:2,20; 98:2;99:4;101:22; 102:2,14;103:13; 105:10,17;108:8; 109:3;110:24;111:15; 113:1,19;114:5,17; 116:10,12,14;117:9; 119:2,4;120:21; 121:15,16;122:16,20, 25;123:1,4;126:2,5; 130:23;133:16,17; 134:15;138:1,5; 140:22;143:11,19;</p>	<p>care (3) 79:25;87:14;89:23</p> <p>career (1) 85:15</p> <p>careers (1) 85:5</p> <p>careful (1) 176:15</p> <p>caregiver (1) 80:3</p> <p>Carmichael (2) 97:11;126:9</p> <p>carrier (1) 146:23</p> <p>cars (3) 32:12;76:3;155:18</p> <p>case (4) 10:3;46:10;104:1; 125:14</p> <p>cases (1) 41:14</p> <p>cash (3) 97:21;129:10;131:13</p> <p>cast (1) 39:2</p> <p>catalysts (1) 78:14</p>	<p>CEQA (3) 183:10,16,22</p> <p>certain (3) 14:17,18;90:17</p> <p>certainly (5) 105:8;139:18;151:9; 168:17;169:8</p> <p>certainty (3) 97:2;113:1;123:25</p> <p>certification (1) 182:15</p> <p>CESA (2) 54:16,19</p> <p>CFO (11) 6:18,20;170:17; 171:9;172:13;173:9,</p>

22;174:16;175:15,22; 176:20 Chair (3) 61:6;138:9;143:15 challenged (1) 76:4 challenges (3) 59:13;67:10;93:9 Chamber (3) 69:23,24;71:23 chance (1) 77:24 change (40) 7:24;8:3;10:18,25; 12:6;19:25;43:9;50:16; 75:8,17;78:14;88:1,5; 93:4,6,23;94:1;95:22, 25;97:22;102:2;110:7; 113:14;128:8,12; 131:25;132:4,13; 135:17,20,21;138:22; 150:6,19;153:15; 161:8;167:7,10;168:9; 173:20 changed (2) 10:25;70:14 changes (30) 7:11;8:19;9:23; 13:16;14:14,17;15:10; 21:6,22;21:23;4:34;5; 38:25;39:15;40:17,25; 41:24;93:15;111:21; 125:11;128:19;130:7; 137:13;140:4;146:2; 149:10;151:7;155:3; 167:11;168:8;179:12 changing (1) 10:24 charge (14) 22:17,21;23:2;40:21; 47:14;50:2;67:25; 158:10;159:23;160:3; 169:23,24;170:22; 171:18 chargers (2) 63:21;76:3 charges (7) 32:22,25;55:1;122:3; 138:23;158:9,12 charging (4) 66:23;68:18;169:25; 170:4 chart (6) 16:8,8,17;27:22; 28:6;32:4 charts (2) 29:2;31:6 cheapest (1) 169:25 check (2) 121:15;134:15 checked (1) 160:12	Chen (2) 103:6,9 Chief (7) 4:8,10,14,22;84:18; 117:21;120:23 childish (1) 104:15 children (1) 150:11 chime (1) 167:14 Chiwah (4) 113:24;114:4,5,8 choice (3) 54:25;115:15;130:18 choices (1) 73:12 choose (1) 73:7 choosing (3) 73:8,9;95:17 chose (4) 110:6;121:1,5; 147:12 chosen (1) 90:10 Christina (2) 124:24;125:4 Church (3) 77:12,25;78:19 cite (1) 12:10 cited (1) 12:10 cities (1) 88:22 City (9) 77:12,25;78:19;85:7; 86:24,25;87:4,23; 124:11 civic (1) 92:10 civil (1) 77:15 claim (3) 129:4;134:19;147:17 claimed (1) 102:7 claims (2) 49:21;147:15 clarification (2) 5:20;180:2 clarifications (1) 167:1 clarify (2) 52:6;173:13 classroom (1) 87:8 clause (1) 113:8 clean (13) 15:2;89:6;93:12,13, 25;94:6;102:12;	106:24;125:16;130:17, 17;136:15;144:1 clean-energy (3) 54:2,6;130:9 cleanest (1) 16:14 clear (9) 101:6;130:3;139:1; 143:25;151:7;157:21; 158:9;159:25;171:16 clearly (2) 70:10;164:14 client (3) 102:2;138:1;143:9 clients (2) 73:3,6 climate (23) 67:14;68:3;75:17; 87:25;91:22;93:4; 95:22,25;98:6;110:7; 128:7,12;136:1; 142:21;143:16,24; 145:10;146:9;150:19; 151:5;161:7;164:8; 178:12 climate-catastrophe-producing (1) 141:4 climate-safe (1) 136:21 clinic (1) 78:22 clock (6) 116:21;117:21,24; 118:13,14;123:5 close (14) 85:10,17;86:2; 102:21;139:19;160:2; 166:22;167:2;179:8; 180:20,25;182:22; 183:2;184:3 closed (1) 180:3 closely (1) 94:11 closer (5) 8:23;105:22;116:3; 147:24;174:6 closes (1) 6:3 closing (3) 58:4;68:4;81:20 code (1) 148:7 Codina (1) 151:24 coffee (1) 15:24 cofounder (1) 84:18 cohort (1) 85:19 co-laborer (1) 79:12	collaborate (1) 8:5 collaboration (2) 11:15;92:14 collaborative (4) 12:20;80:4;97:12; 98:10 collaborator (1) 95:7 collecting (1) 176:23 college (4) 74:22,24;84:20; 86:11 color (4) 70:4;84:20,25;86:11 combat (1) 102:2 combine (2) 181:15,23 combined (2) 50:24;106:18 combining (1) 99:23 comitted (1) 16:15 command-and-control (1) 137:6 commend (3) 59:15;92:22;146:4 commended (1) 59:17 commensurate (1) 130:1 comment (34) 6:8,16;9:22;52:4,22; 58:19;94:22;99:11; 116:19;118:6,25; 119:20;120:15;138:11; 145:2;146:15;149:8; 151:23;154:21;157:16; 160:14,24;162:18; 164:18;166:9;167:15; 172:2,6;173:14;177:8; 179:25;180:6;181:6,7 commented (1) 66:12 comments (39) 5:6,7,10,12,14,16; 7:1;41:3,11;42:24; 49:15;81:22;118:4,4,5, 6,15;119:22;125:18; 126:18;140:10;141:16; 144:19,21;147:2,6,10; 151:24;152:5;155:2; 165:21;166:16;172:1; 173:20;179:6;180:12; 181:3,23;183:8 Commerce (3) 69:23,25;71:23 commercial (10) 14:15;15:20,22;16:3; 35:3;42:8;96:1;106:12;	115:12;149:2 commingling (1) 99:23 Commission (6) 46:17;58:22,22,25; 59:2;148:3 commissioners (1) 59:3 Commission's (1) 124:13 commit (1) 163:24 commitment (9) 37:13;57:8;76:14; 77:1;80:9;92:25; 106:22;154:1;161:11 committed (6) 13:21;24:8;25:23; 28:24;34:24;89:24 committee (2) 59:6;61:14 committing (1) 152:16 common (2) 51:13;155:5 communication (1) 83:11 communities (44) 27:9;37:11,12,14; 40:7;41:20;64:11; 68:17,24,24;69:12; 70:6;71:4,9,10;72:1,3, 13,19,20;73:14;74:8; 78:1;84:25,25;85:17; 87:6,20,25;88:7,13,21; 89:23;92:16,25;93:18, 20;94:7;97:2,99:22; 100:24;128:13;144:4; 163:9 community (49) 10:11;12:1,2,9; 23:10;37:20;38:7,14; 39:17,20,24,25;40:23; 41:3,25;56:11;57:1,7, 23;58:7;64:18;68:22; 69:6;70:4;71:19;72:10; 76:9,13,24;77:2,13; 78:11,14,23;79:3,13; 80:9;81:19;85:3,20; 86:10,15;87:15;88:13; 89:9;94:6,8;111:2; 130:7 community-based (1) 94:8 community-owned (1) 10:8 companies (3) 95:3;131:12;132:6 company (5) 89:20;123:10; 131:12;146:25;163:19 compare (2) 16:10;104:7
---	---	---	---	--

<p>compared (2) 16:23;104:8</p> <p>comparing (2) 18:23;135:7</p> <p>comparison (1) 15:9</p> <p>comparisons (1) 31:5</p> <p>compatible (1) 176:9</p> <p>compelled (1) 75:2</p> <p>compelling (1) 65:7</p> <p>compensate (1) 149:19</p> <p>compensating (1) 145:9</p> <p>compensation (10) 10:14;21:4;24:7; 29:8,23;91:16;132:8; 150:1;153:21;160:1</p> <p>competent (1) 78:19</p> <p>competition (2) 65:17,19</p> <p>competitive (3) 20:19;81:2;157:11</p> <p>complementing (1) 11:2</p> <p>complete (2) 40:1;163:12</p> <p>completed (2) 8:24;121:7</p> <p>completely (4) 20:21;34:9;70:11; 101:3</p> <p>compliance (2) 15:2;80:19</p> <p>complicated (1) 105:11</p> <p>complied (1) 51:16</p> <p>components (4) 20:17;50:11;51:6; 101:9</p> <p>compromise (4) 12:13;22:15;88:6; 98:10</p> <p>concept (1) 123:22</p> <p>concern (21) 11:22;26:2;27:14; 28:21;30:11;42:1; 57:17,25;69:9;75:5; 76:17;80:14;83:25; 93:18;112:17;114:25; 132:20;142:17;144:4; 157:19;173:15</p> <p>concerned (12) 26:7;57:12;81:8; 83:13,19;100:5;112:6; 114:9;124:20;128:15;</p>	<p>165:3;172:3</p> <p>concerning (1) 155:2</p> <p>concerns (12) 8:5;12:10;25:15,24; 30:13;41:12;42:8;63:6; 70:8;75:4;84:2,3</p> <p>concluded (1) 184:8</p> <p>conclusion (2) 91:19;108:15</p> <p>concrete (1) 71:15</p> <p>condition (3) 115:21;152:6;153:25</p> <p>conditioner (1) 73:9</p> <p>conditions (2) 98:20;152:18</p> <p>conducted (1) 4:3</p> <p>confidence (1) 82:13</p> <p>confident (2) 10:2;51:16</p> <p>confine (1) 5:5</p> <p>conflict (3) 99:13,15,24</p> <p>confused (3) 111:22;112:2,21</p> <p>conjecture (1) 25:25</p> <p>connect (4) 83:21;138:23;178:1, 6</p> <p>connection (3) 112:13;127:6,9</p> <p>consequences (1) 159:6</p> <p>conserve (1) 34:16</p> <p>conserves (1) 158:17</p> <p>consider (5) 73:18;93:17;139:20; 179:2;182:6</p> <p>consideration (7) 71:13;83:16;94:15; 156:15;159:5;169:10, 12</p> <p>considerations (1) 178:12</p> <p>considered (5) 54:1;77:21;140:2; 156:14;178:25</p> <p>considering (2) 73:22;112:15</p> <p>considers (1) 55:21</p> <p>consistency (1) 132:3</p> <p>consistent (4)</p>	<p>100:19,21;124:3; 125:12</p> <p>constituents (3) 38:21;39:22;40:12</p> <p>Constitution (2) 45:8;47:24</p> <p>construction (1) 77:18</p> <p>constructs (1) 70:23</p> <p>consultant (1) 136:14</p> <p>consulting (1) 146:25</p> <p>consumers' (1) 159:2</p> <p>consumption (4) 91:10;105:16; 160:22,23</p> <p>contact (1) 178:23</p> <p>contain (1) 122:2</p> <p>contained (1) 183:20</p> <p>contemplating (1) 154:16</p> <p>content (2) 38:22;59:18</p> <p>contentious (1) 107:8</p> <p>context (3) 8:1,23;172:8</p> <p>continually (1) 135:2</p> <p>continuation (1) 134:3</p> <p>continue (16) 4:24;8:6;52:20; 55:22;66:3;78:25;81:3; 89:4;109:24;110:23; 118:15;135:1;143:20; 144:14,23;156:6</p> <p>continued (4) 23:15;84:24;86:15; 144:13</p> <p>continues (3) 28:16;29:13;145:25</p> <p>continuing (1) 74:2</p> <p>continuous (1) 84:21</p> <p>continuously (1) 85:24</p> <p>contract (6) 90:19;104:20,20; 124:24;128:16;142:7</p> <p>contracted (1) 90:4</p> <p>contracting (1) 142:8</p> <p>contraction (2) 125:10;131:21</p>	<p>contractor (1) 131:2</p> <p>contractors (2) 90:13;106:16</p> <p>contractor-training (1) 90:7</p> <p>contracts (1) 125:13</p> <p>contradicted (2) 102:10;161:14</p> <p>contrary (3) 62:9;138:23;140:9</p> <p>contrast (3) 29:16;30:5;31:24</p> <p>contribution (1) 145:20</p> <p>contributions (1) 67:13</p> <p>control (2) 54:25;159:18</p> <p>controlled (1) 153:25</p> <p>conversation (1) 8:1</p> <p>conversations (1) 132:12</p> <p>Conversely (1) 157:1</p> <p>conversion (1) 171:24</p> <p>convert (1) 62:20</p> <p>converting (1) 61:19</p> <p>cooperation (2) 5:15;98:4</p> <p>copper (1) 105:23</p> <p>copy (1) 47:18</p> <p>Cordova (1) 94:25</p> <p>corner (1) 77:13</p> <p>cornerstone (1) 128:11</p> <p>Corporation (2) 106:9;126:19</p> <p>Corps (1) 87:23</p> <p>corrective (1) 67:7</p> <p>correctly (2) 89:17;178:20</p> <p>cost (46) 25:3;45:11;47:5,21; 48:23;50:3,3,8,9,10,11, 19,22,24,25;57:22; 60:15;62:1;64:17; 65:13;66:1,2,6,9,15; 73:10;74:7;76:23; 81:13,18;88:11;94:3; 102:13,23;105:18;</p>	<p>112:5,9;127:7,15; 135:6,7,9,18;139:7; 154:13;176:24</p> <p>cost-benefit (1) 154:5</p> <p>cost-effective (3) 55:4;145:24;148:4</p> <p>Costello (1) 79:11</p> <p>Costing (3) 47:17;50:7;135:18</p> <p>costs (55) 14:23;15:3,4;28:14; 36:8;46:24,25;47:2,2; 49:2;50:4,5,6,11,14,15, 15,18;51:2,4,6,7,7,10, 11,12;57:18;72:22,25; 78:7;80:18;81:1;88:24; 102:19;112:7;126:15; 135:7,8,14;137:11; 139:8,12;149:4; 155:13,15;162:7; 164:22;170:21;174:3; 176:15,23,25;177:2,3; 183:19</p> <p>Council (1) 32:15</p> <p>COUNSEL (98) 5:1,18;49:18,24; 52:13,16;53:3,8,17; 56:12,17;58:9,21,25; 61:2;63:14;64:21; 66:17;68:7;69:17;72:5; 74:11;77:7;79:14; 81:23;84:10;86:18; 89:10,15;91:25;94:17; 96:2,10;97:5;99:1,6; 101:18,22;103:5,11,14; 105:25;108:24;109:4; 111:4,13,16;113:21; 114:7;116:5,15,18; 117:4,9,14;118:14; 119:9,15,19;120:3,8, 11,19;121:8,16;122:12, 17,20;125:19;126:4; 127:19;130:19,24; 133:8,19;136:4,9; 137:19;138:7;140:16, 20,24;143:3;144:17; 165:20,25;166:8; 177:12,18;180:1,19; 181:19;182:4,25; 183:3,6,13;184:7</p> <p>count (1) 106:17</p> <p>counting (1) 109:13</p> <p>country (3) 114:11;123:12; 130:13</p> <p>County (3) 85:2,22;158:11</p> <p>couple (8)</p>
--	--	--	--	---

<p>29:15;31:22;33:20; 46:5;86:6;118:5; 126:19;132:5 course (8) 57:16;58:22;83:19, 25;85:6;105:9;151:18; 160:5 court (5) 4:16;45:24;49:3,3; 164:23 cover (8) 14:19;47:17,18; 48:21,21;51:4,11; 60:15 covered (3) 41:4;70:11;105:17 covers (1) 16:5 COVID (2) 78:22;85:20 CPP (14) 41:21;73:18;146:10; 152:2,5,9,16,21;153:9, 16,20;154:2,6,17 CPP-called (1) 153:12 CPUC (6) 19:22;32:23;134:4; 135:17;146:24;169:16 create (5) 62:11;78:25;93:2; 107:16;162:23 created (4) 45:11;62:23;138:16; 160:17 creates (2) 8:15;19:15 creating (2) 93:7,21 creatively (1) 54:16 credit (5) 37:22;55:18;102:22; 161:15,18 credits (3) 37:24;147:16;175:14 crisis (2) 145:11;151:5 criteria (1) 101:10 critical (26) 10:22;14:9;33:25; 34:4,6,13;36:6,10; 54:22;67:16,17,21; 73:13;75:23;85:11; 89:24;108:8;110:19; 146:5;148:12;151:25; 152:1;153:6;161:9; 163:3,22 criticism (1) 156:19 crop (1) 53:2</p>	<p>cross-subsidy (1) 155:9 CRP (1) 72:10 crucial (1) 146:7 crumble (1) 104:25 CTA (1) 141:2 current (41) 18:15;22:17;23:13; 41:15;45:7;47:10; 57:15;61:16;62:3; 73:23;81:11;85:16; 88:9;98:17;104:1; 105:17;107:2;108:17; 109:21;110:10,22; 111:20;112:14;115:4; 124:3,8;125:7;128:16; 129:13;130:4;141:19; 142:13;144:16;147:22; 152:8;153:11,13,21; 172:10;173:6;182:18 currently (11) 15:15;18:11;19:11, 23;52:8;73:4;97:19; 103:22;104:5;121:12; 126:11 curriculum (2) 76:6;87:9 curtail (1) 153:10 curve (2) 19:19;23:22 customer (27) 11:10;15:8,14,17; 18:16;23:13;26:6,10; 28:1;35:25;41:14;50:9, 13,20;59:12;61:8; 82:16,20,20;103:19; 111:19;126:9;138:13; 141:19;164:5,7,9 customers (164) 8:8,10,11,20;9:6,7, 15,16,19;10:10,23; 11:12,16,22;12:8;13:4, 21;14:4,11;15:9,20; 16:3,23;17:22,23;18:2, 14,17,18;19:16,17; 20:3,6;23:14,19;24:2, 15;25:1,20;26:4,17; 27:2,7,9,16,21;28:8; 32:5,10,22;33:1;34:7,8, 12,16,18;35:4,21;36:9, 12,16,18;37:22;38:10, 14;39:3,10,16;40:5,16, 19,22,24;50:17;54:25; 55:9,12;56:3;58:17; 59:24;60:1,3,4,14; 62:13,22;63:9;65:4,10; 66:1,2,3,4,10,14;68:1; 72:16;73:19;90:23;</p>	<p>93:8,23;96:25;97:3; 98:22;105:20;106:23; 107:11;115:2,3;122:7, 7;124:21;126:11,23; 127:7,8;129:20,22; 130:1,16;131:7;132:4, 6,8,10,21;133:5; 139:25;142:1,10,12; 147:20;148:11,18; 152:14;153:2;154:16; 155:9,10,12,15,24; 156:20,22;157:9,13,14; 162:5,5;163:23;164:3, 11;165:4,9,15,17; 172:10,25;173:1; 174:18,24;175:2,9,12 customers' (2) 67:13;182:10 customer's (1) 175:10 customer-wide (1) 32:1 cut (3) 102:14;107:9;110:13 cuts (2) 128:21;134:17 CWEA (1) 65:2 cypress (1) 178:9</p>	<p>95:15;121:9,12; 125:20,23 Davidson (14) 6:19,20;46:22;51:22; 170:17;171:9;172:13, 16;173:9,22;174:16; 175:15,22;176:20 Davis (8) 69:18,20,22;78:20; 127:24,25;128:2,3 day (11) 24:8;62:17;87:8; 158:14;160:13;165:6; 170:1;171:17,19,21; 173:11 days (8) 4:20;6:8;17:20; 139:10;141:23;156:24; 157:7;171:22 deadly (1) 150:21 deal (4) 8:24;80:25;97:15; 176:3 dealer (1) 96:16 dealers (1) 126:10 Dear (1) 160:25 dearly (1) 157:15 Debra (2) 106:1,3 dec (2) 35:5;40:25 decade (2) 61:25;164:13 decarbonize (1) 8:13 decarbonized (1) 136:20 December (5) 9:21;26:11,12;100:9; 115:2 decent (1) 130:4 decide (1) 110:4 decided (3) 147:8;173:5,10 decimated (1) 113:15 decision (3) 124:13;139:24;173:3 decision-making (2) 70:13;87:14 decisions (3) 24:13;115:23;131:5 deck (1) 95:24 declares (1) 34:13</p>	<p>decline (2) 91:20;107:18 declines (2) 128:20;134:18 decrease (3) 78:7;124:7;174:4 decreased (1) 59:10 deep (1) 157:19 deeply (2) 87:14;158:2 default (1) 172:23 defending (1) 51:19 Defense (2) 32:15;33:4 defer (1) 180:11 define (1) 160:18 defined (1) 45:7 definite (1) 29:25 delay (3) 14:15;118:9,23 delighted (1) 127:3 deliver (3) 50:12;155:14;157:11 delivered (2) 157:10;164:15 deliveries (1) 156:9 delivery (2) 50:16;157:2 demand (2) 30:25;31:3 demands (2) 105:19;146:8 demand-side (1) 146:12 demographic (1) 79:1 demographics (4) 57:7;64:10;76:13; 80:8 demonstrate (1) 154:13 demonstrated (1) 157:5 dependent (1) 73:15 depending (1) 16:4 depends (3) 170:2,2;171:16 deploy (1) 144:1 Depot (1) 104:24</p>
		<p>D</p>		
		<p>daily (1) 163:25 damage (1) 161:6 damages (1) 178:9 danger (1) 84:1 dangerous (1) 137:3 Dare (1) 79:7 Darrick (3) 79:15,17,18 data (8) 10:2;25:24;26:9; 27:19,19;129:2; 147:12,13 data-driven (2) 26:1;28:25 date (6) 23:18,20;26:15; 98:11,14;126:22 dated (3) 4:10,12;47:17 daughters (1) 82:9 Dave (1) 44:21 David (5)</p>		

depression (1) 165:5	75:6	discount (4) 34:11;37:25;152:23; 159:24	145:8;162:24;179:22	drawing (2) 101:9;137:15
DER (2) 67:10;145:21	die (1) 135:24	discounted (3) 152:22;153:3,18	distributors (1) 95:3	drive (5) 24:13;59:9;97:3; 127:14;128:24
DERs (3) 145:18,20,22	diesel (1) 151:13	discounts (1) 153:8	District (1) 128:19	drives (1) 92:13
deserve (1) 64:11	different (9) 20:13;22:2;25:18; 99:9;137:16;145:12, 13;167:16;176:16	discourage (1) 114:23	districts (1) 82:17	driving (2) 123:13;171:17
design (16) 17:8;21:9;33:5,14, 15;36:23;37:1;47:20; 48:18,20,21,25;68:17; 77:17;163:12;167:16	difficult (2) 91:9;96:25	discourages (2) 137:8,10	disturb (1) 25:10	drop (6) 61:24;128:17; 131:10;132:2;147:7; 167:8
designated (2) 73:25;108:12	DIGITIZED (10) 145:2;146:15;149:8; 151:23;154:21;157:16; 160:14,24;162:18; 164:18	discouraging (1) 150:25	diverse (2) 74:25;94:7	drought (1) 161:6
designed (4) 21:15;63:9;156:1; 162:22	dime (1) 108:3	discovered (1) 149:24	diversion (1) 46:21	drove (1) 171:19
designs (1) 24:20	diminish (1) 136:2	discretion (1) 133:3	divert (1) 46:5	due (4) 124:13;129:1; 132:16;146:9
desire (2) 146:18,21	diminishes (1) 127:1	discuss (6) 6:3;45:6;166:25; 167:12;179:23,24	Divest (2) 141:2,4	duplicate (1) 119:6
desires (1) 122:9	direct (6) 7:7,7;21:10;24:18; 46:2;151:10	discussed (4) 71:7,7;97:25;98:10	doable (1) 111:2	during (21) 5:8;9:22;12:9;27:24; 34:22,22;38:18;39:13; 40:20;59:2;67:17; 91:20;107:22;130:6; 147:4;152:25;153:5, 12,20;157:6;170:1
despite (1) 96:21	Direction (7) 21:6;33:6;109:11; 116:2;140:15;146:3; 157:18	discussing (4) 180:8,14;181:2; 182:23	document (1) 120:10	Durston (2) 164:19;165:19
destined (1) 71:6	directly (2) 28:13;38:13	discussion (12) 7:22;45:23;74:2; 99:18;108:16;166:20; 179:10,11;180:10; 181:1,7,13	dollars (2) 19:1;78:9	dwelling (2) 37:14,19
destruction (1) 114:17	director (40) 17:5;33:19;47:16; 52:3,5,15;53:21;64:25; 68:11;69:24;74:19; 86:24;123:8;167:3,4; 168:1,23;169:20; 170:5,10,13,15;171:4, 10,13,14;173:4,12; 174:8,10,11;175:11,18; 176:12;177:4;183:1,7, 24,25;184:2	discussions (1) 181:9	domestic (1) 63:23	dwelling (2) 37:14,19
detail (2) 20:10;178:23	dirty (3) 144:1,13;151:12	disincentivize (2) 90:23;141:15	domino (1) 139:25	dwells (1) 81:5
details (10) 7:11;13:14;14:7; 17:3;148:15;152:13; 153:2;154:8;163:4,10	disadvantaged (1) 68:24	disincentivize (2) 90:23;141:15	don't (1) 165:10	dynamic (1) 55:23
deter (1) 131:9	disagree (3) 97:24;127:9;134:7	disparity (1) 176:18	donations (1) 158:6	
determine (1) 50:10	disappointed (6) 95:6;98:12;99:18,25; 109:7;159:13	dispatch (2) 18:8;34:18	done (10) 42:19;81:14;82:25; 96:22;100:8;134:7; 139:19;163:5;177:2; 183:11	E
determined (2) 50:6;177:3	disasters (1) 135:25	dispatchable (1) 157:4	double (8) 18:18;91:10;104:7; 168:25;169:21;170:24; 171:2,6	
detriment (1) 127:15	disastrous (1) 116:3	displacement (1) 174:1	Dove (3) 68:8,10,11	E3 (7) 20:19;133:2;146:25; 147:3;156:12;157:22; 173:16
devastation (1) 161:5	discharge (2) 153:24;159:18	display (1) 44:5	down (15) 19:10;22:4;23:23; 28:13;62:1,18;112:25; 114:13;124:15;133:7; 156:23;158:14;173:23; 176:4,8	EAPR (2) 27:9;37:25
develop (5) 8:5;22:10;32:19; 67:7;90:6	disclosure (1) 77:25	displays (2) 15:14;16:9	draft (5) 6:4;166:25;179:12; 181:2;182:3	earlier (9) 16:17;21:25;35:9; 37:10;41:13;96:21; 112:1,22;166:5
developed (2) 156:9;163:5		disposable (1) 100:17	drafted (1) 52:8	early (6) 17:20;68:19;97:13; 98:14;101:13;163:13
developing (2) 68:14;130:5		disproportionate (2) 87:24;155:10	drafting (1) 89:20	earnings (1) 30:20
development (7) 67:18,20;87:7; 123:23,25;125:8;163:2		dissimilar (1) 90:6	dramatically (3) 91:16;126:22;139:16	ears (1) 109:10
developments (1) 73:22		distance (1) 150:11	drastic (1) 107:9	ease (1) 132:13
devices (2) 55:10;73:16		distances (1) 137:4	draw (1) 21:10	easy (1) 171:23
dialogue (1) 116:23		distributed (17) 33:23;55:8,15;56:6; 67:20;87:2;91:21; 122:9;123:13;136:16, 22,22;137:17;144:6;		
dictate (1)				

<p>echo (1) 126:17</p> <p>economic (5) 60:17;61:18;79:1; 92:15;107:10</p> <p>economical (3) 102:22;158:24;159:1</p> <p>economically (1) 113:5</p> <p>economics (4) 68:1;122:4;124:6; 131:9</p> <p>economy (4) 93:5,11;106:24; 107:4</p> <p>Ed (4) 94:18,20,24;162:19</p> <p>educate (1) 75:19</p> <p>educated (1) 85:23</p> <p>education (3) 70:19;75:2,24</p> <p>educational (2) 82:24;87:1</p> <p>educators (1) 75:1</p> <p>effect (4) 19:3;87:24;90:16; 131:11</p> <p>effective (8) 13:18,19,25;14:9; 23:18;24:17;71:25; 152:17</p> <p>effectively (3) 108:13;153:4;155:19</p> <p>effects (2) 131:6,23</p> <p>efficiency (2) 72:13;136:16</p> <p>efficient (1) 5:11</p> <p>efficiently (1) 11:8</p> <p>effort (5) 12:21;80:7;88:15; 141:3;156:13</p> <p>efforts (8) 57:6;58:6;64:9; 72:17;73:21;76:12; 88:2;128:12</p> <p>eight (2) 85:6;160:24</p> <p>EIR (1) 183:9</p> <p>either (4) 104:13,14;122:23; 171:6</p> <p>elaboration (2) 163:1,11</p> <p>elapsed (1) 120:20</p> <p>elected (2)</p>	<p>40:4;75:5</p> <p>electric (26) 16:22,23;57:22; 58:24;63:21;64:17; 65:11,12;67:2;68:18; 74:7;76:23;81:19;88:5; 90:5;91:8,10;95:4; 112:20;155:18;158:1; 163:19;170:19,24; 171:1;173:8</p> <p>electrical (8) 57:19;81:13;88:12; 141:19,20;142:13; 170:18;177:25</p> <p>electrician (1) 104:10</p> <p>electricity (14) 11:7;48:23;50:13; 61:20;63:9,21;64:4; 65:9;102:14;137:4; 149:20;150:10;170:21, 23</p> <p>electrification (4) 10:17,21;136:17; 155:18</p> <p>electrify (2) 141:21;142:14</p> <p>electrons (1) 157:15</p> <p>elements (2) 162:21,25</p> <p>Elena (1) 100:10</p> <p>eliciting (1) 146:11</p> <p>eligible (2) 72:16;182:14</p> <p>eliminate (1) 66:2</p> <p>eliminating (1) 16:15</p> <p>Elk (1) 44:17</p> <p>else (3) 158:17;166:14;177:7</p> <p>elsewhere (1) 158:16</p> <p>email (5) 42:7;155:2;160:11, 12;178:24</p> <p>emailed (4) 39:19;119:10,13,18</p> <p>emails (6) 39:16;40:24;41:2; 45:2;120:13,13</p> <p>embedded (6) 46:23,25;47:2;50:5, 25;51:7</p> <p>Emergency (7) 98:6;142:21;143:24; 159:11;160:4,5;164:8</p> <p>emigrated (1) 103:17</p>	<p>emission (1) 138:20</p> <p>emission-reduction (1) 94:12</p> <p>emissions (9) 16:16;59:10;60:21; 68:3;77:1;93:1;138:25; 161:12;162:12</p> <p>Emotional (1) 87:6</p> <p>emphasize (3) 34:5;35:9;126:19</p> <p>employ (1) 130:15</p> <p>employee (1) 24:19</p> <p>employees (4) 95:20;106:18; 107:17;123:17</p> <p>employment (1) 80:2</p> <p>empowerment (1) 76:10</p> <p>enabled (1) 128:1</p> <p>enabling (1) 164:11</p> <p>encourage (10) 11:5;18:2;34:15; 63:11;65:4,10;74:4; 121:25;152:2;164:10</p> <p>encouragement (1) 140:12</p> <p>end (9) 26:12;30:22;40:2; 45:3;115:1;141:22; 142:4;152:19;166:9</p> <p>ending (2) 139:15;156:11</p> <p>endorsement (1) 33:12</p> <p>energy (148) 8:23;9:8,11;14:3; 15:2;17:17;22:23; 33:19,23;34:14,17,17; 36:21;37:3,20;41:24; 42:10;53:21,23,23,25; 54:7,9,25;55:4,7,8,18; 56:6;57:6,8;58:7,17; 59:20,24;60:6,24;61:9; 62:23;64:9;65:1,8; 66:11,23;67:1,3,21; 70:20;72:12,18;73:10; 75:23;76:2,8,9,12,14; 78:7,10;79:3,5;80:7, 10;84:24;88:23;89:7; 91:3,22;93:13,25;94:6; 100:11,15;101:2; 102:8,12,14;105:16; 106:10,23,24;107:24; 108:5;110:22;113:9; 120:6;121:22;123:13; 125:16;126:15;130:17,</p>	<p>17;136:13,13,15,15,16, 20,22;137:9,10,11,11, 12,17;141:6,15,25; 142:1;143:21;144:1,6, 13;145:8;148:2,10; 156:7,9;158:8,15,17, 19;159:1,4;160:17,19, 21;161:17;162:2,6,7, 10,24;163:7,18;164:9, 15;165:14;168:25; 170:7;174:1,2;175:16, 25;176:4;178:5,25; 179:1</p> <p>energy-efficient (2) 78:8;162:15</p> <p>energy's (1) 54:1</p> <p>enforce (1) 148:3</p> <p>engaged (2) 32:18;154:25</p> <p>engagement (1) 164:5</p> <p>engaging (1) 56:11</p> <p>engineer (4) 24:20;77:15;136:13; 170:18</p> <p>enjoy (1) 60:3</p> <p>enormous (1) 131:11</p> <p>enough (12) 23:21;26:4,7;40:11; 81:2;107:25;109:21, 25;127:13;131:18; 150:13;164:8</p> <p>enrich (1) 87:7</p> <p>enroll (1) 14:11</p> <p>enrolled (1) 148:12</p> <p>ensure (8) 37:13;51:9;53:24,25; 58:7;81:1;86:16; 158:25</p> <p>ensures (1) 8:6</p> <p>entail (1) 154:18</p> <p>entered (1) 98:9</p> <p>entire (4) 88:17;89:9;99:12; 113:12</p> <p>entirely (2) 65:16;160:11</p> <p>environment (2) 75:4;89:1</p> <p>environmental (7) 20:4,14;33:4;92:15; 133:24;144:10;183:20</p>	<p>environmentalist (1) 142:18</p> <p>environmentalists (1) 142:10</p> <p>environmentally (1) 75:9</p> <p>equal (2) 86:16;101:9</p> <p>equally (1) 87:2</p> <p>equitable (5) 8:8;78:25;136:21; 137:17;162:15</p> <p>equitably (1) 64:18</p> <p>equity (14) 27:5;59:24;70:19,22; 84:24;87:1;89:5;92:16; 94:9;100:13;101:6,8, 10;139:7</p> <p>equity-based (1) 87:13</p> <p>equivalent (3) 32:11;147:20;163:20</p> <p>Eric (11) 14:6,19;17:2,4,5; 38:5;41:13;54:11; 56:10;167:6;168:16</p> <p>error (1) 143:9</p> <p>Escarda (4) 111:11,14,17,18</p> <p>especially (11) 12:6;19:16;42:10; 54:11;72:19;79:4; 81:14;109:23;115:7; 131:18;144:4</p> <p>essential (3) 8:3;65:9;79:4</p> <p>essentially (3) 51:2;52:9;91:13</p> <p>establishment (1) 176:13</p> <p>estimated (3) 15:16,17;154:9</p> <p>estimates (1) 147:25</p> <p>ethical (1) 90:12</p> <p>Europe (4) 95:11;103:17;104:8, 25</p> <p>EV (7) 91:8,9,13;142:14; 168:25;169:5,23</p> <p>evacuations (1) 70:12</p> <p>evaluate (1) 152:14</p> <p>evaluating (1) 19:5</p> <p>evaluation (1) 33:23</p>
---	---	---	---	---

<p>Evan (4) 92:1,3,6,9</p> <p>Even (19) 8:10;71:17;76:3; 82:23;97:19;100:1; 108:11;120:1;128:20; 129:7;135:17;140:14; 141:19,22;158:13,19, 21;160:2;175:16</p> <p>evening (37) 5:11;13:12;17:12,25; 18:7;38:6;56:19,24; 58:15;64:24;66:21; 67:21;70:2;71:7,8; 72:9;79:17;86:22;92:6, 8;94:16;97:8;101:24; 111:14,17;121:19; 122:16;125:18;126:8; 128:3;130:23;136:11; 138:9;143:15;146:8; 163:17;181:11</p> <p>event (3) 34:14;71:18,21</p> <p>events (5) 34:23;38:8;67:18; 153:12,20</p> <p>ever-increasing (1) 81:1</p> <p>everybody (12) 27:3;28:7;35:21; 77:23;99:10;121:19; 141:5;166:13;171:8; 172:24;181:22,24</p> <p>everyday (1) 76:5</p> <p>everyone (12) 8:16;12:5,14;65:10; 72:23;79:18;83:13; 99:12;116:14;123:15; 135:18;162:11</p> <p>evidence (2) 62:7;102:11</p> <p>evolution (1) 146:1</p> <p>evolve (1) 145:25</p> <p>evolved (1) 75:7</p> <p>exacerbated (1) 161:7</p> <p>exactly (2) 116:2;172:8</p> <p>examine (1) 107:2</p> <p>example (8) 15:13,21;50:17;88:6; 96:24;104:18;152:20; 164:16</p> <p>examples (1) 134:14</p> <p>exceed (3) 18:19;47:5;50:2</p> <p>exceeded (1)</p>	<p>48:22</p> <p>exceedingly (1) 129:17</p> <p>except (1) 144:18</p> <p>Exception (1) 132:17</p> <p>excess (7) 8:20;28:22;149:20; 157:2;160:17,19,21</p> <p>excessive (1) 175:14</p> <p>excite (1) 87:10</p> <p>excited (4) 23:8;24:1;36:18; 85:15</p> <p>excludes (1) 115:17</p> <p>excuses (1) 46:5</p> <p>execute (1) 85:12</p> <p>Executive (17) 4:8,10,22;35:12; 53:21;54:14,15;64:25; 69:24;74:19;84:18; 86:24;146:20,23; 147:12;148:17;178:2</p> <p>exempt (1) 183:22</p> <p>exemption (1) 183:16</p> <p>exhausted (1) 166:12</p> <p>existing (19) 9:19,20;14:2,3; 23:14;27:2;56:3;59:24; 60:6;66:7;93:24;115:2, 3;124:22;128:18; 132:6;154:15;161:17; 172:19</p> <p>exorbitant (1) 135:9</p> <p>expand (4) 41:19;109:24; 110:23;161:20</p> <p>expanded (3) 76:6;146:5;151:1</p> <p>expanding (3) 123:14;142:8;144:5</p> <p>expansion (3) 108:6;135:23;144:12</p> <p>expect (1) 40:1</p> <p>expected (1) 51:4</p> <p>expects (1) 154:11</p> <p>expedite (1) 98:3</p> <p>expense (1) 60:4</p>	<p>expenses (4) 51:13;69:11;183:17, 18</p> <p>expensive (7) 9:4,5,6;161:23; 162:10;178:18,18</p> <p>experience (7) 82:22;85:10;86:14; 87:8,12;136:14,17</p> <p>experiencing (2) 124:12;128:8</p> <p>experiments (1) 76:1</p> <p>expert (5) 51:23;66:11;88:4; 132:1;142:18</p> <p>expertise (2) 12:23;85:14</p> <p>experts (3) 8:22;42:13;102:12</p> <p>expired (1) 119:23</p> <p>explain (1) 175:20</p> <p>explained (3) 44:25;119:20;120:24</p> <p>explains (1) 47:10</p> <p>export (24) 21:4;24:7;29:7,23; 67:17;97:22;98:1; 107:6,20;124:14; 131:8,19;132:4,5,10, 22,24;133:4;141:17; 147:16,25;153:19,21; 154:20</p> <p>exposure (1) 87:11</p> <p>express (8) 11:22;57:5;64:8; 72:16;80:6;84:7,23; 157:20</p> <p>expressed (3) 63:6;146:18;161:12</p> <p>extend (7) 27:2;45:17;47:11,24; 48:2;108:8;139:16</p> <p>extended (1) 113:17</p> <p>extending (2) 26:24;144:7</p> <p>extends (2) 91:17;153:16</p> <p>extensive (10) 11:14,17;12:1,16,21; 38:20;39:6,12;59:19; 139:6</p> <p>extensively (1) 139:8</p> <p>extent (1) 183:16</p> <p>external (1) 38:16</p>	<p>extra (1) 161:17</p> <p>extreme (1) 125:11</p> <p>extremely (1) 96:25</p> <p style="text-align: center;">F</p> <p>faced (3) 73:12;93:9;115:20</p> <p>facilitating (1) 54:12</p> <p>facing (1) 155:6</p> <p>fact (14) 12:7;38:21;39:22; 49:1;62:6;63:20;65:25; 66:5;82:11;83:12; 90:19;93:23;114:20; 115:11</p> <p>factor (4) 45:9,14;46:11;49:5</p> <p>factors (4) 14:24;121:24;150:3; 156:16</p> <p>facts (3) 27:6;156:21;171:8</p> <p>faculty (1) 33:18</p> <p>fails (1) 115:11</p> <p>failure (1) 134:12</p> <p>fair (7) 8:7;13:4;83:22; 155:13,22;156:8;158:1</p> <p>fairness (3) 27:5;79:3;89:24</p> <p>Faith (4) 74:12,14,16,19</p> <p>fallen (1) 65:14</p> <p>false (1) 46:24</p> <p>familiar (4) 22:23;33:16;37:16; 47:20</p> <p>familiarity (1) 77:19</p> <p>families (7) 56:25;63:24,24;69:9; 73:24;103:2;126:14</p> <p>family (6) 80:3;81:5;89:18; 103:1;150:10,17</p> <p>family's (1) 76:8</p> <p>fans (1) 76:3</p> <p>far (10) 28:6;82:18;105:11; 107:25;109:21;112:5;</p>	<p>115:24,24;124:18; 176:13</p> <p>farms (1) 157:11</p> <p>fashion (1) 35:20</p> <p>fast (3) 109:17;110:15; 167:11</p> <p>Fatima (3) 99:2,4,7</p> <p>faulty (1) 135:5</p> <p>favor (2) 83:17;145:5</p> <p>favoring (1) 59:25</p> <p>feature (2) 49:19;134:4</p> <p>features (1) 67:19</p> <p>federal (1) 55:17</p> <p>federally (1) 54:10</p> <p>fee (8) 24:15;30:9;60:13,14; 127:6;131:9;159:23; 182:10</p> <p>feedback (10) 12:2,3,11;38:11; 39:15;40:10,19;42:5; 67:7;68:6</p> <p>feel (8) 17:11;71:11;75:2; 81:18;83:21;97:15; 107:1;122:8</p> <p>feels (1) 71:10</p> <p>fees (15) 14:19;83:20;90:22; 112:13;127:9;135:20; 141:18;143:21;148:25; 149:2,6,6;168:19; 176:14;177:2</p> <p>feet (1) 177:24</p> <p>fellow (1) 86:9</p> <p>felt (1) 70:8</p> <p>fetch (1) 119:1</p> <p>few (11) 8:18;12:7;32:14; 52:18;54:18,19;75:14; 82:5;114:18;138:13; 160:8</p> <p>fiddle (1) 43:3</p> <p>field (1) 75:2</p> <p>fields (1)</p>
---	---	--	--	---

105:17 fierce (1) 65:19 fifth (1) 130:11 fight (1) 128:12 figure (3) 101:15;144:23; 173:19 file (1) 27:15 final (3) 6:1,11;42:4 finally (4) 21:17;40:2;113:16; 129:19 finance (3) 59:6;97:20;131:14 financial (10) 31:8;90:8,12,15; 135:16;145:16;152:15; 156:2;175:1;183:18 financially (2) 104:3;154:7 financing (2) 107:12;129:9 find (7) 49:19;57:11;70:19; 76:4;81:7;95:13;98:12 finding (2) 54:17;59:12 finds (1) 124:5 finish (2) 31:4;45:2 finished (1) 5:2 fire (3) 70:12;84:1;102:1 fires (7) 75:14;84:5;95:22; 135:10,16,18;161:6 firm (1) 90:1 firmly (1) 124:2 first (30) 6:18;10:5;13:17; 15:13;16:1;18:1;21:25; 27:15;32:15;35:24; 43:23,24;52:20,25; 53:2,8,11;54:21;59:22; 68:19;70:7;78:21; 82:22;107:5;126:17; 138:18;145:7;156:22; 159:13;179:24 firsthand (1) 88:16 first-hand (1) 87:24 fiscal (1) 85:12	five (11) 42:23;43:5,7;49:10; 53:2,6,9;75:22;86:7; 154:21;162:20 five-X (1) 30:24 fixed (8) 32:21,25;47:14; 67:25;122:2;153:13; 155:13;158:10 fixing (1) 150:22 flawed (2) 107:8;147:6 flaws (2) 110:1;147:3 flexibility (1) 8:14 flexible (2) 7:17;147:9 flip (1) 156:24 flooding (1) 174:21 floods (1) 161:7 flow (1) 97:21 focus (3) 60:17;89:4;145:8 focused (1) 86:25 foisting (1) 157:25 folks (7) 22:7;107:7;108:2,5, 10;140:14;168:13 follow (2) 178:22;180:18 followed (1) 140:21 food (1) 73:8 footprint (2) 63:10;70:20 forbidden (1) 45:13 force (1) 161:17 forecast (1) 168:7 forecasting (2) 32:10;167:22 forefront (1) 60:11 foremost (1) 59:22 forest (2) 75:14;95:21 forested (1) 165:10 Forever (7) 123:9,9,13,18;	124:16,20;125:5 forgot (1) 126:7 form (1) 156:13 formal (1) 167:17 formation (1) 55:16 former (1) 58:21 forms (1) 136:23 forth (3) 90:1;166:17;169:17 Fortunately (1) 75:7 forward (10) 55:20;59:16;63:2; 71:25;74:2;79:12; 108:4;122:10;162:14; 181:14 forward-looking (1) 67:10 forward-thinking (2) 37:5;95:15 fossil (8) 65:11;102:3;109:17; 110:9,15;144:2;159:8; 161:9 fossil-fuel (1) 141:5 foster (1) 65:17 found (1) 42:11 Foundation (1) 69:25 foundational (1) 23:16 founded (1) 123:11 four (10) 6:24;19:5,21;20:16; 24:9;25:17;34:24; 90:20;150:10;151:23 Fourth (2) 14:13;91:15 fraction (2) 105:16,19 frame (3) 8:1;149:9;172:12 framework (2) 78:25;87:7 Frank (4) 53:10;58:10,12,13 free (3) 136:25;141:25; 151:11 Freedom (7) 123:9,9,13,17; 124:16,20;125:5 Freeman's (1)	95:15 Friday (3) 41:1;47:19,19 friendly (3) 59:13;75:9;109:9 fudge (4) 45:9,14;46:11;49:5 fuel (2) 91:13;159:9 fuels (7) 65:11;102:3;109:17; 110:9,15;144:2;161:9 full (8) 10:11;18:5;67:17; 71:13;77:25;126:21; 147:2;175:6 full-time (1) 123:17 fully (1) 31:20 functionality (1) 67:11 Fund (4) 33:4;85:19;141:3; 158:7 fundamental (1) 124:4 fundamentally (1) 137:15 funded (1) 27:11 funds (1) 158:6 further (9) 5:14;66:15;93:3; 114:23;148:5,23; 163:1,10;184:9 further-away (1) 110:5 future (12) 62:20;75:18,20; 103:22;112:18;116:3; 136:20;137:17;141:21; 142:15;150:19;152:4	177:14 gas (9) 15:24;16:16,23;25:4; 35:13;68:2;110:9; 151:13;161:12 gases (1) 59:11 gas-fired (2) 18:8;25:2 gasoline (1) 32:12 gas-powered (1) 67:22 gave (5) 29:4;38:21;44:21; 121:4;150:4 Gemma (4) 130:20,22,25;131:1 General (112) 4:8,11,22;5:1,18,23; 45:16;49:16,18,24; 52:13,16;53:3,8,17; 56:12,17;58:9,21,25; 61:2;63:14;64:21; 66:17;68:7;69:17;72:5; 74:11;77:7;79:14; 81:23;84:10;86:18; 89:10,15;91:25;94:17; 96:2,10;97:5;99:1,6; 101:18,22;103:5,11,14; 105:25;108:24;109:4; 111:4,13,16;113:21; 114:7;116:5,15,18; 117:4,9,14;118:14; 119:9,15,19;120:3,8, 11,19;121:8,16;122:12, 17,20;125:19;126:4; 127:10,13,19;130:19, 24;133:8,19;136:4,9; 137:19;138:7;140:16, 20,24;143:3;144:17; 161:1;165:20,25; 166:8;177:12,18; 179:14,17;180:1,12,19; 181:16,19,23;182:25; 183:3,6,13,21;184:7 generally (5) 60:2;66:4;140:2; 157:18;180:6 generate (2) 50:12;174:25 gap (1) 137:8;139:10; 160:22;164:15;182:8 generating (2) 149:19;156:20 generation (11) 25:2;50:16;91:21; 105:21;136:22;137:2; 154:20;157:5;174:20; 175:17;182:12 generator (1) 113:3
G				
			gained (1) 136:18 Galati (3) 74:12,16,19 gap (1) 85:18 Garbage (2) 147:14,14 GARCIA (25) 43:20;48:4,8;49:9; 53:12;74:14;92:3;96:5, 12;103:8;106:3;111:7; 114:1;116:7,12; 117:16,20;125:22; 127:22;133:11;137:22; 140:18;143:6;166:3;	

generators (1) 151:13	38:6;54:12;56:9,19; 58:18;64:24;66:21;	128:20;137:12;142:2; 149:1	guttled (1) 102:21	heads-up (1) 83:1
generous (4) 32:21;65:24;66:13; 156:2	70:25;71:1;72:9;79:8, 17;86:22;92:6;97:8,15; 101:24;108:16;111:14,	greatly (2) 92:18;98:6	gutting (1) 129:16	Health (3) 78:20;79:23;93:2
gentleman (1) 165:24	17;114:8;121:19,24; 122:15;126:8;128:2;	greed (1) 104:15	guys (4) 55:19;56:16;113:18; 178:4	healthier (2) 89:1,2
get-go (1) 112:4	130:22;134:6;136:11; 138:9;143:14;169:17, 18;181:24;182:22	green (4) 22:25;37:4;65:8; 133:24	H	healthy (3) 89:25;100:10;122:5
gets (2) 171:8,20	gosh (1) 28:5	greenhouse (4) 16:15;59:11;68:2; 161:12	Haas (2) 33:18,19	HEAP (2) 72:11;140:13
GHG (1) 162:12	government (2) 75:6,8	Greetings (1) 162:19	Habitat (4) 56:21,24;57:2,4	hear (40) 8:4;9:23;17:24; 25:14;40:5;43:1,3; 53:16;56:16;70:16; 89:14;99:5;100:22; 101:23;103:13;109:3, 8;111:15;114:6; 116:10,12,14;117:12, 17,19;121:17;122:16, 21,23;123:2;126:2,5; 130:6,23;133:18; 136:8;138:6;140:23; 177:17;179:5
GHG-releasing (1) 151:13	GPA (1) 86:5	grid (46) 8:16;11:8,11;20:5; 22:17,21;23:1;27:10; 34:1;40:21;54:22,24; 55:1,2,12,24;60:20; 67:13;83:21;102:11, 14;108:3;109:18; 135:3;145:10,14,21,24; 146:8,13;153:20; 156:22;157:1,1,3; 173:7,8;174:19,21; 175:8,12,19,24,25; 176:3,9	half (5) 20:13;22:8;117:11; 123:19;129:7	heard (24) 22:20;25:18;27:15; 28:19,21;30:11;36:24; 41:6;59:3;61:16;62:2; 70:9,25;112:1;114:18; 121:3;122:6;169:1; 172:2;178:15;180:7, 13;181:11,16
GHGs (1) 151:9	graduated (1) 86:12	grid-connected (1) 123:24	Hammond (1) 143:16	hearing (23) 4:6,7,16;5:17,23;6:2, 16,24;7:11;44:22;46:4; 56:8;141:16;166:22; 167:2;179:9;180:3,21, 25;182:22;183:2; 184:4,8
gigawatts (1) 121:22	Graham (19) 42:22,25;43:6,13,14; 44:4,9,14,16;48:4,6,10; 49:10,11;50:7,23;51:1, 17;116:25	grids (1) 60:20	hand (6) 49:20;52:4;129:11; 170:13,14;172:15	heartburn (1) 112:3
given (8) 44:19;62:6;105:7; 109:10;118:3;120:10; 128:6;164:8	Graham's (1) 164:20	gross (1) 85:21	handle (1) 52:19	heater (1) 73:11
gives (2) 46:12;133:1	Graham's (4) 49:21;118:2,19,21	grossly (1) 156:7	hands (2) 95:24;104:25	heating (2) 65:12;95:5
giving (3) 134:15;159:14; 177:11	grandfather (1) 113:11	ground (2) 105:23;178:8	hands-on (1) 76:1	held (2) 11:18;184:9
glad (2) 67:24;179:5	grandfather-death (1) 113:8	Group (12) 12:22;20:12,23; 57:17;81:12;88:11; 100:9,10;139:4; 154:24;156:11;180:9	happen (5) 32:24;71:1;72:3; 127:17;135:13	Hello (12) 63:17;68:10;74:18; 84:13;89:13;101:21; 106:6;114:5;116:11; 138:5;145:4;177:16
glass (1) 105:5	grandfathered (2) 83:7;154:19	groups (8) 52:24;53:6;75:7; 79:1;83:15,15;133:25; 144:10	happened (3) 29:3;118:23;134:9	help (26) 8:1,12;11:3;18:6; 21:15;33:7;36:8;55:17; 67:20,22;69:5;78:7; 84:19;85:4,11;103:3; 108:5,8;134:16;136:2; 146:12;154:11;162:5, 6;176:10,10
glide (9) 29:9,10,23,24;98:1; 107:10,19;132:14,15	grandfathering (1) 56:2	grow (4) 143:20;146:9,18; 151:19	happening (6) 23:6;24:13;32:23; 35:11;168:11;172:8	helped (3) 9:14;18:25;86:14
global (4) 30:25;31:3;66:22; 102:16	grantee (1) 99:12	Grove (1) 44:17	happens (2) 169:22;175:23	helpful (1) 178:21
GM (2) 152:8;183:23	grantees (1) 99:19	grow (4) 143:20;146:9,18; 151:19	happy (5) 12:6;55:5;83:10; 172:13;183:14	
goal (8) 14:11;32:3;106:25; 138:24;156:5;162:11; 164:2,10	granular (1) 35:20	grown (1) 60:9	hard (4) 22:4;30:18;67:5; 98:8	
goals (20) 7:8,9,20;54:2,5,6; 58:6;67:14;68:3;91:23; 92:18;93:6;94:9,13,13; 105:9;110:24,25; 154:12;176:11	graph (2) 28:13;29:4	growth (3) 35:16;90:18;144:15	harder (2) 103:20;144:7	
goes (12) 28:6,18;62:17;79:6; 104:12;105:7;113:1; 129:23;147:14;156:23; 176:4,8	grapple (1) 75:17	guarantor (1) 63:3	harm (6) 10:18;28:23;97:18; 112:23;135:22;161:10	
Goines (3) 69:18,20,22	grateful (1) 69:15	guess (3) 43:18;112:3;171:15	harmed (1) 68:1	
GONZALES (2) 143:14,16	gravitate (1) 36:13	guidance (1) 21:8	harms (2) 124:6;135:12	
Gonzalez (1) 140:21	gravy (3) 45:13,13,14		Hashtag (1) 101:7	
Good (38) 13:12;31:15;34:1;	great (26) 5:4;6:13;18:13,20; 27:19;42:16;44:3; 49:13;50:17;56:18; 58:9;63:8;82:22;87:19; 88:5,6;121:14;135:23; 138:8,9;140:25; 142:17,19;148:11; 179:4;182:21		Hassett (3) 63:15,17,18	
	greater (11) 28:9;56:22,25;57:4; 59:23;65:17;113:9;		Hawaii (2) 163:19,22	

<p>helping (12) 12:20;25:1;32:2; 54:2;68:3;75:19;78:3; 85:17,19,24;86:10; 106:23</p> <p>helps (5) 13:4;54:24;93:4; 150:24;175:10</p> <p>here's (2) 59:5,21</p> <p>Hernandez (3) 13:9,10,13</p> <p>Hi (6) 53:15;77:10;89:16; 99:4;140:22;141:1</p> <p>high (10) 15:2;31:21;86:5; 90:21;112:14;115:3; 127:15;131:8;143:20; 153:9</p> <p>higher (12) 9:7;30:9;65:22; 69:12;73:10;90:22; 127:5;132:21,22,24; 141:17;149:6</p> <p>highest (1) 36:15</p> <p>highlight (4) 55:3;59:1;77:18; 140:7</p> <p>highlighted (2) 15:13;16:18</p> <p>highly (2) 92:22;169:23</p> <p>high-quality (1) 81:4</p> <p>high-voltage (1) 108:21</p> <p>hike (1) 164:20</p> <p>hikes (1) 164:24</p> <p>historically (1) 40:9</p> <p>history (3) 93:21;109:10;144:11</p> <p>hit (2) 32:9,10</p> <p>hits (1) 159:3</p> <p>hold (2) 4:7;40:13</p> <p>holding (2) 5:23;19:23</p> <p>holidays (1) 153:2</p> <p>holistic (1) 10:6</p> <p>home (16) 82:8,10,21;91:10; 98:21;102:8;104:24; 115:16;125:1;139:7; 149:23;150:12;158:21;</p>	<p>170:3,22;171:18</p> <p>homebuilders (1) 106:14</p> <p>home-equity (1) 142:3</p> <p>homeowner (5) 103:21;109:6; 158:24;161:2,25</p> <p>homeowners (3) 97:20;121:25;162:13</p> <p>homes (7) 63:22;64:2;103:25; 128:18;148:2;158:22; 165:19</p> <p>honest (1) 176:22</p> <p>honesty (1) 78:15</p> <p>honored (2) 17:11;97:14</p> <p>Hood (1) 155:21</p> <p>hoot (1) 75:12</p> <p>hope (5) 60:12;98:16;116:2; 142:25;144:14</p> <p>hopeful (1) 134:13</p> <p>hopefully (3) 26:22;51:21;166:12</p> <p>hoping (2) 167:21;181:8</p> <p>Hospitals (1) 77:17</p> <p>host (1) 78:21</p> <p>hot (1) 157:7</p> <p>hour (6) 65:22;105:14; 124:15,16;139:10; 171:20</p> <p>hourly (1) 104:10</p> <p>hours (22) 15:16;20:15;22:1,10, 13;24:22;34:11,24,25; 67:22;91:17;107:22, 23;139:9;152:25; 153:5;159:23;160:1,7, 8;171:21,23</p> <p>house (2) 24:19;113:3</p> <p>housed (5) 57:20;64:16;74:5; 76:21;81:17</p> <p>household (2) 32:8;113:10</p> <p>households (13) 57:10,13;64:14; 68:23;69:6;72:24; 76:15;80:11;81:9;88:8,</p>	<p>21;93:19;129:10</p> <p>houses (1) 103:24</p> <p>housing (11) 63:23;64:2;68:12,15; 69:3;73:21,23;110:18, 19;115:13;151:2</p> <p>huge (3) 99:15;135:17;142:3</p> <p>Humanity (4) 56:22,24;57:3,4</p> <p>husband (1) 82:7</p> <p>HVAC (1) 78:8</p> <p>hypothetical (1) 84:2</p> <p style="text-align: center;">I</p> <p>idea (9) 20:2;26:24;107:14, 15;110:11;116:20; 117:2,7;118:3</p> <p>ideal (1) 125:12</p> <p>ideally (1) 175:16</p> <p>ideas (2) 130:4,8</p> <p>identified (1) 156:16</p> <p>identify (4) 36:14;45:24;46:2; 49:2</p> <p>ignores (1) 156:21</p> <p>illustrate (2) 15:12;16:19</p> <p>illustration (1) 15:7</p> <p>illustrations (1) 15:20</p> <p>imagine (1) 28:15</p> <p>immediately (2) 149:25;150:4</p> <p>immersion (1) 110:5</p> <p>impact (15) 15:16,25;16:4,6; 35:3;41:8;73:1;107:10; 139:24,25;140:5; 141:10;147:16;155:7, 11</p> <p>impacted (2) 24:11;168:13</p> <p>impactful (2) 86:3;91:15</p> <p>impacts (3) 93:22;107:3;128:7</p> <p>impede (1) 148:23</p>	<p>impediment (2) 96:19;178:13</p> <p>Imperial (1) 128:19</p> <p>implement (2) 24:14;30:6</p> <p>implementation (1) 70:23</p> <p>implemented (6) 29:3,6,22;71:6,14; 97:23</p> <p>implementing (4) 30:7;34:21;132:14; 163:20</p> <p>implies (1) 154:3</p> <p>importance (3) 9:18;85:22;157:3</p> <p>important (36) 7:7,16;8:14;10:7; 11:9,24;14:5;16:8; 17:15;20:24;23:11; 36:14;57:21;62:15,22; 64:5,17;72:2;74:7; 76:22;84:6;91:22;93:3, 14,16;97:25;98:5; 100:14;128:6;135:8; 145:7,23;146:7;153:3; 155:25;168:3</p> <p>importantly (3) 54:21;102:6;163:14</p> <p>impose (1) 47:24</p> <p>imposes (1) 155:19</p> <p>imposing (1) 142:15</p> <p>impossible (2) 103:2;132:7</p> <p>Improve (4) 84:18,19;85:1;93:1</p> <p>improvements (1) 15:1</p> <p>improves (1) 145:15</p> <p>improving (1) 88:12</p> <p>inaudible (22) 8:19;12:17;16:9; 33:7;43:17;68:17; 104:9;105:15;110:7; 119:14;120:5,18; 128:10;177:15,20; 178:2,6,17,25;179:1,2; 183:5</p> <p>inbox (2) 119:20;120:15</p> <p>incent (1) 151:12</p> <p>incentive (18) 22:18;36:15;60:17; 69:4;91:1,1,3;102:20; 108:1;127:12,17;</p>	<p>152:6;153:10;156:2; 163:21,23;165:13,18</p> <p>incentives (18) 7:19;11:5;23:3;28:2; 29:18;30:7;31:17; 65:24;81:3;138:17; 140:13;145:16;148:10; 151:2,19;167:19; 168:17,19</p> <p>incentivize (1) 9:10</p> <p>incentivized (1) 30:14</p> <p>incentivizing (1) 36:2</p> <p>inception (1) 84:22</p> <p>inched (1) 65:15</p> <p>include (11) 14:14,25;56:2;67:25; 76:6;80:16;85:18; 115:11;133:3,5;151:1</p> <p>included (5) 111:25;112:10; 115:17;135:15;183:22</p> <p>includes (7) 7:22;39:5;51:5;87:9; 93:11;141:17;148:10</p> <p>including (12) 15:4;32:21;62:12; 89:21;93:10;95:25; 127:8;128:11;136:15; 153:1;157:4;158:7</p> <p>inclusion (1) 67:15</p> <p>inclusive (5) 59:19;71:10;72:2; 87:13;89:5</p> <p>income (14) 57:7;64:12;72:18; 76:13;80:8;100:16,17; 107:14;108:9;115:3; 129:10;134:21;155:11; 158:3</p> <p>incomes (1) 72:24</p> <p>incorporated (1) 148:9</p> <p>incorporation (1) 79:22</p> <p>incorrect (3) 102:9;110:1;173:18</p> <p>incorrectly (1) 102:7</p> <p>increase (21) 13:19;29:10,25;33:2; 45:17;47:12,25;48:3, 16;67:12;69:10;72:21; 73:2;92:22;94:4,14; 136:2;139:16;148:25; 158:18;165:7</p> <p>increased (7)</p>
--	---	---	---	---

15:3;23:2;80:18; 93:10;98:2;104:21; 146:9 increases (14) 13:18;14:21;15:7; 41:9;42:2;48:15;57:24; 58:2;69:8;76:16;80:14; 83:12;93:18;165:13 increasing (4) 23:5;31:2;69:12; 140:12 incredibly (3) 83:22;90:25;128:6 incur (1) 50:15 incurs (1) 50:12 Indeed (1) 155:16 independence (1) 137:10 Independent (5) 8:22;20:21;50:15; 80:1,25 indication (1) 159:10 indicative (1) 95:22 indirect (2) 25:10,11 individual (2) 75:5;159:2 individuals (2) 73:5,15 Indivisible (3) 133:23,25,25 industry (60) 8:4,7;9:13,14;10:1, 19;11:15;13:3;17:19, 21;18:11;19:2;20:14, 14;21:20;22:20;25:19; 27:16;28:21,23;37:17; 41:2,13;54:9;59:14; 60:7,8;63:7;65:18; 66:13;71:24;89:25; 90:18,20;97:18;98:2, 15;104:5,15;105:9; 106:19;107:17;112:24; 113:14;114:18,19,20, 24;126:13;127:2; 131:3;132:12;140:5; 141:5;142:10;147:25; 156:3,4,8;168:11 industry-leading (2) 7:6;10:5 industry's (1) 98:21 industry-scale (1) 105:15 inefficient (1) 104:17 inequality (2) 85:21;87:17	inequities (2) 62:3;93:24 inescapable (1) 128:7 inflated (1) 156:7 inflation (9) 13:22;58:3;69:13,16; 76:20;80:21;93:15; 94:2;165:5 inflationary (1) 139:21 information (17) 14:18;38:24;39:6,21, 23;40:3;42:6,6,10; 71:15;118:8,23; 120:25;152:11;159:14, 16;178:23 informative (1) 65:6 infrastructure (7) 15:1;47:13;68:18; 80:18;157:3;158:1,10 inherit (1) 150:21 initial (2) 36:8;147:25 initiative (2) 74:3;151:11 initiatives (2) 69:1;94:8 innovative (4) 32:16;36:22;67:8; 163:15 input (1) 13:1 inputs (1) 20:22 inquire (1) 66:8 inserting (1) 46:10 insincere (1) 147:17 inspired (2) 76:25;85:5 install (14) 27:17;78:19;121:25; 124:18,25;138:17; 140:14;142:12;163:24; 164:12;165:12,15,18; 178:7 installation (7) 29:11;90:24;123:10; 124:9;147:22;152:3; 177:24 installations (2) 131:11;167:9 installed (10) 27:21;68:20;109:6,7; 121:22;123:18;124:16; 131:16;138:13;149:14 installer (1)	90:10 installers (3) 89:21;109:8;140:11 installing (5) 65:13;103:23; 149:22;150:13;177:23 installs (3) 30:1,2;95:4 instead (9) 5:13;6:2;20:3;23:22; 73:8;104:16;110:25; 150:24;169:18 Institute (2) 33:19;60:13 instrument (1) 31:9 insufficient (1) 128:24 insurance (1) 69:13 integration (1) 93:12 intelligence (1) 136:25 intent (1) 152:1 intention (1) 169:11 intentional (1) 88:16 intents (1) 78:4 interconnected (2) 24:21;28:9 interconnecting (2) 23:19;149:5 interconnection (12) 24:15;30:8;60:13; 90:21;115:5;131:8; 141:18;143:20;148:25; 149:2;168:19;176:14 interconnects (1) 26:10 interest (9) 7:24;10:19;89:9; 99:13,15,24;141:6; 151:17;164:9 interesting (2) 21:18;61:15 Internal (2) 31:7;124:5 International (1) 97:11 interruptions (1) 113:4 into (37) 16:21;17:14,19,20; 18:4;19:1,3;20:17; 24:5;25:12,16,22;29:2; 33:11;34:12;39:7; 45:15;46:1,11;47:15; 49:5;71:13;78:4,11; 83:16;103:23;108:4;	142:19;144:22;148:9; 156:15;158:14;159:5; 169:9,12;176:17; 181:23 introduce (2) 6:3;179:12 introduction (3) 6:6;12:18;33:14 invaluable (1) 78:3 invest (8) 8:11;9:6;10:15; 103:24;124:2;142:1; 150:4;158:20 invested (5) 17:18;18:25;85:24; 113:18;139:5 investing (5) 9:24;90:23;102:24; 114:23;152:15 investment (20) 9:18;12:23;20:2; 31:14;34:19;78:18; 88:14;97:1;98:3;104:3; 125:2;127:1;132:7; 139:12,14,17,17; 152:12;154:14;175:10 investments (4) 9:16;31:10,11;56:4 investor-owned (4) 46:18;58:24;136:18; 144:11 investors (1) 165:2 invite (1) 39:15 involved (2) 31:25;86:13 involves (1) 12:6 IPCC (1) 143:25 irrelevant (5) 46:5,9,16,19,21 irreparably (1) 10:18 Irrigation (1) 128:19 issue (9) 27:5;45:5,6;46:6; 60:10;98:9;99:20; 100:5;148:19 issues (8) 54:13;79:6;87:25; 99:21,23;101:3;102:3; 155:5 Item (6) 4:7;7:12;58:15; 144:20;166:10;179:11 items (4) 10:20;14:18,19; 149:23 IYT (3)	84:21,22;86:4 <hr/> J <hr/> Jackson (4) 81:24;82:1,2,6 Jacobs-Robinson (1) 106:1 Jan (4) 53:10;61:3,5,7 Jane (2) 160:25;162:17 Janna (2) 133:9,13 January (10) 13:20,25;23:18; 24:17;29:12;30:2; 98:12,13,16,19 Jeff (8) 86:20,22,23;89:11, 13,16,19;169:1 Jennifer (19) 6:18;13:11;14:1; 19:2,13;25:14;35:9; 40:18;46:22;51:22; 133:14,15,17,20,23; 167:24;170:9,14; 172:16 jeopardize (1) 148:1 job (1) 63:8 jobs (2) 93:2;125:14 Johan (4) 103:10,12,15,16 John (3) 103:9;154:22,22 join (1) 32:7 Jonathan (4) 130:20,22,25;131:1 Jose (1) 79:11 JOSUE (25) 43:20;48:4,8;49:9; 53:12;74:14;92:3;96:5, 12;103:8;106:3;111:7; 114:1;116:7,12; 117:16,20;125:22; 127:22;133:11;137:22; 140:18;143:6;166:3; 177:14 journey (1) 20:11 judicious (1) 141:14 July (3) 21:5;29:13;30:2 jump (2) 17:14;172:15 June (8) 4:10,13;14:10;34:22;
---	---	--	--	---

44:24;152:17;179:15, 18 justice (1) 60:10 justification (2) 61:19;132:23 justified (1) 51:24 justify (2) 47:21;102:4	134:10;140:9 kilowatt (14) 15:15;25:7;29:7; 65:22;91:17;97:19; 105:14;124:15,16; 139:9;158:13;171:20, 21,22 kilowatts (2) 158:16;163:25 kind (19) 17:14;18:22;19:19; 22:14;25:24;26:8,22, 23;28:15;31:5,11; 52:24;83:20;111:22; 134:13;167:11,14; 169:6;181:15 kindly (1) 103:25 knew (1) 82:11 knowing (2) 21:7;132:8 knowledge (4) 83:1;132:1;145:17, 23 known (2) 45:9;72:10 knows (1) 158:14 kW (3) 15:22;149:1,2 kWh (5) 8:20;16:9;148:1; 153:9;157:12	7:10;70:4;71:10; 106:12;107:6;147:15; 154:14;158:6;159:23 larger (2) 105:19;142:12 largest (5) 30:18,19;90:5; 130:11,12 last (27) 11:25;12:9;17:9,18; 20:9;26:10;37:8;48:12; 65:14;70:17;78:2;82:8, 10;83:2;89:17;91:11; 94:23;97:13;105:1,6; 106:17;113:18;114:18; 124:23;131:3;148:5; 179:7 lasting (1) 131:6 Lastly (1) 144:8 late (3) 75:11;97:13;174:23 later (5) 12:15;14:6;32:20; 86:6;178:22 latest (2) 49:6;61:17 Lau (6) 99:16;161:1;168:5; 169:3,22;170:8 launched (1) 85:4 Laura (14) 4:24;5:16;49:17; 52:2,6;89:16;96:6; 103:9;133:12;177:10; 179:25;181:18;182:24; 183:7 law (5) 45:24;46:10;48:3; 158:22;183:15 lawsuit (1) 51:18 laying (1) 55:7 lead (4) 66:23;91:20;106:23; 147:19 leader (5) 33:24;93:13;130:10; 133:23;146:6 leaders (3) 33:15;36:22;39:17 leadership (10) 36:25;37:6;54:14,15; 59:9;88:2;92:10,20; 94:5;95:16 leading (2) 106:10;121:21 leads (1) 74:22 Leah (6)	53:9;56:13,15,15,18, 20 lean (1) 108:4 learn (3) 36:25;37:6;76:5 learned (1) 41:15 learning (2) 80:2;150:11 least (5) 4:19;109:14;120:7; 155:20;164:11 leave (1) 25:24 leaves (2) 135:6,8 Lee (1) 146:17 left (5) 28:6;44:13;48:5; 70:10;135:14 legacy (3) 9:20;14:4;130:1 legal (7) 4:14;45:6,23;46:2,9; 117:21;120:23 length (1) 71:8 less (13) 40:19;69:16;88:13; 100:17;101:17;111:2; 112:15;118:21;124:18; 144:5;150:9;158:19,23 lessons (1) 87:10 Let's (1) 158:9 Leten- (1) 122:19 Letendre (6) 122:13,15,18,24; 123:1,6 lets (1) 46:17 letter (3) 83:2,3,8 letting (1) 181:14 level (3) 31:25;35:23;37:18 levels (2) 72:18;107:14 leverage (1) 136:25 leveraging (2) 33:5;55:7 LEWIS (95) 5:1,18;49:18,24; 52:13,16;53:3,8,17; 56:12,17;58:9;61:2; 63:14;64:21;66:17; 68:7;69:17;72:5;74:11;	77:7;79:14;81:23; 84:10;86:18;89:10,15; 91:25;94:17;96:2,10; 97:5;99:1,6;101:18,22; 103:5,11,14;105:25; 108:24;109:4;111:4, 13,16;113:21;114:7; 116:5,15,18;117:4,9, 14;118:14;119:9,15, 19;120:3,8,11,19; 121:8,16;122:12,17,20; 125:19;126:4;127:19; 130:19,24;133:8,19; 136:4,9;137:19;138:7; 140:16,20,24;143:3; 144:17;165:20,25; 166:8;177:12,18; 180:1,19;181:19; 182:25;183:3,6,13; 184:7 liability (1) 65:5 life (11) 31:14,19;59:1;61:10; 76:5;78:3;86:1,16; 91:5;115:22;126:15 lifelong (1) 80:1 life's (4) 57:20;64:16;76:21; 81:17 light (1) 72:11 lighting (2) 78:8,19 lights (1) 156:25 likely (4) 9:23;114:13;158:20; 160:7 Likewise (1) 163:6 limit (3) 22:17;23:2;91:7 limitation (1) 174:14 limitations (3) 142:15;143:21,22 limited (1) 150:2 limiting (1) 141:18 limits (2) 18:20;22:21 Lindh (4) 53:10;58:10,12,14 Lindwall (1) 103:9 line (12) 8:9;15:21;21:10; 27:22;70:21;116:6,8; 125:7;127:10;147:7; 177:10;178:8
K				
Kaiser (1) 77:17 Kale (5) 137:20;144:18,24; 177:16,19 karate (1) 84:15 Karina (5) 140:21;143:11,12, 14,16 Kashmiri (4) 108:25;109:2,3,5 Kathleen (3) 136:5,7,10 Kathy (2) 136:8,13 keenly (1) 150:18 keep (22) 10:20;28:7;57:6,8, 19;64:9,15;65:9;72:17, 25;73:14,16;74:4; 76:12,14,20;80:7,9; 81:16;93:14;104:1; 166:24 keeping (8) 13:5,21;58:2;76:19; 80:20;88:23;94:1; 151:15 KEITH (3) 138:5,8,12 Keith's (1) 138:3 kept (2) 10:12;109:8 KERTH (3) 183:1,25;184:2 key (5) 8:15;10:21;23:16; 39:9;162:21 kick (1) 70:22 kicked (1) 11:13 kids (2) 84:15;89:2 kill (5) 9:25;134:9,16;151:8; 180:16 killed (2)	L			
	label (1) 70:5 labor (2) 15:4;85:23 lack (1) 12:11 LADWP (1) 135:21 laid (1) 101:7 Lake (1) 124:11 Lam (3) 79:15,17,18 Lamborn (2) 160:25;162:17 land (5) 25:11;61:22;62:6,8; 79:2 landlord (1) 103:22 language (2) 14:16;172:9 languages (1) 39:8 large (9)			

<p>lined (1) 52:19</p> <p>lines (5) 79:7;108:21;135:10, 11;137:3</p> <p>list (3) 49:17;99:12;149:23</p> <p>listed (1) 7:12</p> <p>listen (1) 54:15</p> <p>listening (3) 23:12;29:5;30:20</p> <p>LISTSERVs (1) 39:18</p> <p>literally (1) 19:5</p> <p>little (19) 5:21;6:23;19:18; 21:21;25:8;28:11;29:2; 32:20;34:3;35:19; 36:20;42:1;53:1;71:15; 82:23;83:19;127:16; 168:2;182:1</p> <p>livable (1) 92:25</p> <p>live (6) 37:23;44:16;108:10; 114:11,12;165:9</p> <p>lived (1) 82:17</p> <p>lives (3) 78:14,17;124:24</p> <p>living (13) 57:13;64:1;68:23; 69:6;72:25;79:24,25; 80:1,25,25;81:9;88:8; 111:19</p> <p>loads (3) 18:7;105:22;153:10</p> <p>loan (1) 139:7</p> <p>loans (1) 142:3</p> <p>local (13) 8:24;9:1;62:12; 72:11;93:1;97:18; 106:16;110:4,6;131:2; 137:10,10,11</p> <p>locally (3) 137:8,8,9</p> <p>located (2) 77:13;123:16</p> <p>location (1) 165:10</p> <p>locations (1) 145:13</p> <p>locked (2) 20:15;108:13</p> <p>locking (1) 132:10</p> <p>logged (1) 121:12</p>	<p>Lola (3) 101:19,21,24</p> <p>long (18) 26:4,7;62:23;67:5; 71:18;78:21;93:21; 121:13,14,18,20;137:4; 144:11;147:8;154:1; 159:25;168:4;181:12</p> <p>long-distance (2) 135:9,10</p> <p>longer (9) 27:17;70:5;83:6; 84:2;88:12;107:16; 122:21;150:17;154:3</p> <p>long-obsolete (1) 137:5</p> <p>longstanding (1) 129:24</p> <p>long-term (1) 77:25</p> <p>look (24) 19:19,22;21:9;26:12; 29:11;30:1;32:4;36:21; 37:3;54:20;55:20;56:6; 74:1;79:11;88:12; 95:21;107:20;108:22; 112:16;116:3;132:17; 168:21;169:6;176:17</p> <p>looked (5) 27:25;95:16;111:23; 169:4,15</p> <p>looking (9) 24:12;27:5;32:25; 50:10;89:8;112:19; 139:23;141:11;142:6</p> <p>looks (5) 43:8;104:15;111:10; 121:11;167:3</p> <p>lopsided (1) 59:25</p> <p>lose (1) 113:10</p> <p>losing (1) 154:18</p> <p>loss (4) 95:14;112:5,6,9</p> <p>lost (2) 125:15,25</p> <p>lot (27) 7:22,24;9:4;12:22; 26:20;41:17,21;42:13; 55:9;70:15;78:13; 82:13;96:20;104:12; 105:22;107:7;108:10; 112:15;129:2;141:16, 24;145:11;163:16; 166:17;168:9;169:10; 175:25</p> <p>lots (1) 110:1</p> <p>love (1) 22:6</p> <p>low (8)</p>	<p>10:21;65:9;68:25; 88:24;91:7;94:2; 105:18;134:21</p> <p>low-carbon (4) 93:5,11;145:12,24</p> <p>lower (14) 16:21;28:16;36:4; 63:10;65:16;97:19; 98:18;103:20;104:2; 129:9;137:11;153:4; 161:18;177:3</p> <p>lower- (1) 60:4</p> <p>lowered (1) 131:19</p> <p>lower-income (4) 83:14,15;89:6; 108:12</p> <p>lowering (2) 28:14;36:3</p> <p>lowest (2) 16:12,20</p> <p>low-income (33) 57:13,19,25;64:15; 68:23;69:6,9;72:13,24; 73:24;74:5;76:17,20; 80:15;81:8,16;84:24; 88:7;89:23;97:20; 99:21;100:16,23; 103:2;108:12;110:17; 115:13;127:8;139:2; 140:14;151:3;162:4; 165:6</p> <p>lows (1) 10:20</p> <p>low-to-moderate (1) 155:11</p> <p>luck (1) 56:9</p> <p>Luis (3) 72:6,8,9</p> <p>lump (2) 180:13;181:8</p> <p>luxury (1) 63:25</p> <p>Lynch (3) 84:11,13,14</p>	<p>making (11) 41:23;51:15;70:14; 71:25;102:21;139:22; 144:3,4;160:2;162:12; 163:25</p> <p>Malik (3) 99:2,4,7</p> <p>manage (1) 80:4</p> <p>management (3) 42:11;68:12;80:17</p> <p>manager (4) 38:7;45:16;49:16; 161:1</p> <p>Manager's (7) 4:8,11,22;5:24; 179:14,17;183:21</p> <p>mandate (3) 19:3,4;148:2</p> <p>mandates (1) 15:3</p> <p>manner (1) 121:5</p> <p>manufacture (1) 67:2</p> <p>manufacturers (3) 30:19;31:2;95:4</p> <p>many (41) 10:12;12:19;14:23; 38:10,16;39:14;40:8; 41:14;42:19;57:13; 64:13;71:8;72:15;81:9; 88:7;92:18;94:8;95:10; 99:22;106:14;107:11; 115:14;120:13,13,14, 14,17,17;121:4; 126:10;134:7;136:17, 23;138:14;141:23; 147:6;165:6,9,10; 171:16,17</p> <p>map (2) 7:20;87:16</p> <p>March (2) 13:18;47:17</p> <p>Marcy (4) 140:21,22,25;141:2</p> <p>marginal (13) 45:11;47:2;48:22; 50:4,6,8,10,11,14,22; 51:6,11;97:16</p> <p>Marie (2) 103:6,9</p> <p>MARK (14) 42:25;43:6,14;44:4, 9,14,16;48:6,10;49:11; 77:8,10,11;164:20</p> <p>market (34) 18:25;24:13;35:11; 55:23,23;65:20;97:17; 107:18;122:6;123:24; 124:2;125:9,9,10,12; 128:17,18,24;129:15, 16,17;131:18,21,23;</p>	<p>132:6;134:18;137:1; 142:7;143:23;146:19; 147:17;148:24;157:8; 165:3</p> <p>marketing (1) 98:20</p> <p>married (1) 114:15</p> <p>mass (3) 23:24,25;30:13</p> <p>massive (1) 107:18</p> <p>match (1) 51:12</p> <p>matches (1) 173:7</p> <p>material (3) 15:4;120:1,2</p> <p>materials (2) 38:23;39:7</p> <p>math (1) 53:5</p> <p>matter (11) 24:7;42:13;46:9,16, 20;47:1;57:11;70:5; 75:4;81:7;177:1</p> <p>matters (5) 5:7;130:14,14,16,18</p> <p>mature (6) 9:13;60:8;104:5,6, 16;105:9</p> <p>matured (1) 156:4</p> <p>maximize (3) 34:19;175:3,10</p> <p>maximum (1) 21:2</p> <p>May (14) 11:14,17;31:6;45:18; 47:24;57:17;59:6; 62:11,13;77:22;81:12; 88:10;154:4;180:17</p> <p>Maybe (5) 113:2;139:19; 140:12;170:9;171:20</p> <p>Meals (1) 80:4</p> <p>mean (13) 12:4;46:15,18; 104:23;108:20;112:7; 167:10;169:25;171:16, 22;175:14,19,20</p> <p>meaningful (1) 56:1</p> <p>means (8) 7:17;8:25;48:2; 64:13;75:18;108:22; 174:19;175:25</p> <p>meantime (2) 113:24;138:4</p> <p>meanwhile (1) 60:9</p> <p>measure (1)</p>
		M		
		<p>Madam (3) 44:15;84:16;94:20</p> <p>main (2) 46:6;100:12</p> <p>maintain (2) 15:1;129:25</p> <p>major (5) 13:3;54:7;82:17; 125:9;139:12</p> <p>majority (2) 26:18;71:12</p> <p>makes (3) 75:14;110:13;162:10</p>		

<p>9:10 measures (1) 72:13 med (1) 37:25 media (2) 39:5;75:11 medical (1) 73:16 medicine (1) 73:9 Meditz (2) 180:24;182:4 Meeks (3) 77:8,10,11 meet (16) 21:19;38:15;39:22; 40:3;52:9,10;58:6; 64:3;67:21;72:22;98:5; 110:24;137:14;154:12; 163:17,21 Meeting (24) 4:1,20;5:12;6:10; 11:19;18:7;35:14; 38:17,19;40:11,13; 49:4,6;94:23;116:17; 117:1,8;118:2,11,19; 119:4;147:4,7;179:21 meetings (5) 40:6,23;41:4,25; 97:13 Megan (3) 96:3,6;157:17 megawatt (1) 124:18 megawatts (3) 123:18,20;124:17 MEMBER (83) 42:25;43:6,14;44:4, 9,14;48:6,10;49:11; 53:15,18;56:15,18; 58:12;61:5;63:17; 64:24;66:20;68:10; 69:20;72:8;74:16; 77:10;79:17;82:1; 84:13;86:22;89:13,16; 92:6;94:20;96:15;97:8; 99:4,7;101:21,24; 103:12,15;106:6; 109:2,5;111:14,17; 114:5,8;116:11,16,20; 117:6,12,18,23;118:16; 119:12,17,24;120:5,9, 16;121:14,18;122:15, 18;123:1,6;126:2,6; 128:2;130:22,25; 133:17,20;136:7,10; 138:5,8;140:22,25; 143:14;148:20;177:16, 19 Members (28) 4:18;13:12;38:14; 44:16;56:11,20;58:13;</p>	<p>61:6;66:21;74:18; 86:23;87:20,23;92:7; 95:3;97:9;99:10;106:7; 126:8;133:21;134:1; 136:12;138:10;143:15; 146:17;162:20;180:6; 181:15 members' (1) 181:9 memory (1) 79:25 men (2) 84:20;86:11 mention (3) 58:20;77:18;142:5 mentioned (13) 9:12;10:5;14:1; 16:17;19:3,13;24:6; 25:14;35:19;37:9; 40:18;105:23;167:7 mentor (2) 86:8,8 mentoring (1) 85:18 mentors (1) 85:19 mess (1) 150:21 message (1) 143:9 met (3) 19:4;22:1;40:9 meter (3) 177:25;178:1,7 Metering (32) 9:9;14:3;17:6,17; 22:23;41:24;57:11; 58:17;59:20,25;60:6, 24;62:23;69:2;73:21; 79:5;81:7;88:20;96:23; 104:2;107:2;108:7; 109:23;110:23;138:16, 23;143:21;158:19; 162:10;163:7;178:6,25 metric (2) 32:8;102:16 Michael (7) 33:6;84:11,13,14; 96:8,13,15 microgrid (1) 136:24 microgrids (1) 136:24 microphone (14) 74:15;92:4;96:9,13; 106:5;111:12;114:4; 127:25;133:14,15; 137:23;138:4;143:8,12 mid (2) 86:6;168:14 mid- (1) 153:18 midday (1)</p>	<p>62:21 middle (4) 62:16;129:10; 134:21;165:4 middle-class (1) 103:1 middle-income (1) 60:4 mid-peak (2) 34:11;152:24 might (9) 66:8;87:11;112:16; 115:14;150:6;166:14; 173:19,20,23 mike (2) 121:13;122:25 miles (4) 171:17,17,19,20 milestones (1) 35:15 Miller (6) 53:9;56:13,15,18,21; 146:17 million (15) 11:5;16:22;17:19,25; 20:2;23:3;26:23;27:1; 29:17;30:21;35:18; 66:8;102:16;113:18,19 mind (7) 10:12;59:22;73:14; 122:24;166:24;177:10; 182:2 mindful (1) 72:24 mine (2) 117:1;171:6 minimum (1) 154:3 mini-solar (1) 76:3 minor (2) 14:16;34:4 minority (4) 70:3,6;83:14;99:22 minority's (1) 71:12 minus (1) 24:11 minute (5) 44:2,3,13;48:5,8 minutes (13) 4:21;6:22;42:23; 43:5,7;44:19,22;49:10; 117:11;119:23;121:6; 123:4;177:11 mirrored (1) 41:12 miscellaneous (2) 14:13;34:5 misplaced (1) 172:1 miss (1) 160:11</p>	<p>missing (2) 110:19;118:6 mission (3) 53:24;66:25;151:15 mistake (1) 135:23 mitigate (1) 95:25 mitigating (1) 161:10 mitigation (6) 15:1;50:18,21;51:8; 80:16;165:9 mix (1) 151:6 mixing (1) 99:20 Mo (4) 108:25;109:2,3,5 model (7) 18:10,12,13;62:25; 63:4;132:7;141:12 modeling (2) 102:12;175:4 models (2) 10:24;137:6 moderated (1) 41:14 modern (1) 63:1 modest (3) 78:18;90:25;93:6 Modesto (7) 19:20;29:1,3,5,16, 18;128:20 modified (1) 157:24 Mohit (1) 32:17 moment (4) 104:24;114:3; 127:24;180:23 moments (1) 82:5 momentum (1) 125:15 monetary (1) 111:25 money (8) 10:15;51:4;100:24; 104:12;109:15;135:2, 15;150:5 monitoring (1) 168:11 monopolies (1) 137:5 month (3) 15:16;158:12;171:22 monthly (4) 15:16,25;122:2; 170:20 months (6) 11:25;12:9;20:16,20;</p>	<p>168:8,9 more (75) 6:23;7:6;9:4,5;12:8; 13:14;14:6;18:22; 19:18;21:22;31:7;34:3, 25;35:19,20;36:25; 39:16,19,23;42:6; 52:17;53:1;59:3;62:19; 63:19;65:24;66:4; 70:24;71:17;72:1; 77:23;79:7;85:25; 88:14;89:2;100:16,19, 21;101:16;104:14; 105:11;106:18;107:21; 108:19,20,22;113:20; 122:9;127:10,16; 128:13;129:7;131:14; 140:14;144:3;151:1,9; 152:12;155:19;161:21, 22,23,24;162:2,10,13, 14;165:2,12;168:2; 169:7;177:1;178:23; 179:7,24 moreover (2) 10:22;62:2 Morris (5) 53:9,14,15,18,20 most (32) 7:9;24:15;27:14; 28:20;34:2;44:25; 54:21;57:9,21;64:13, 14;69:10;73:15;74:6; 75:24;76:15,22;80:10; 81:17;83:22;87:5; 89:20;91:15;97:20; 102:6;110:3;120:2; 135:8;143:25;145:24; 146:10;160:7 mostly (2) 12:2;96:17 mother (1) 82:7 mother-in-law (1) 150:9 motion (2) 183:2;184:3 motivated (2) 74:22;97:1 mounting (1) 102:10 move (17) 34:1;62:25;71:25; 113:24;121:7,13; 126:1,23;127:7; 129:21;131:18;166:14; 172:11;174:6;181:1, 13;182:23 moved (4) 63:4;98:13;126:24; 149:21 moves (1) 55:20 moving (7)</p>
---	--	--	--	--

<p>63:2;116:1;120:4; 137:3;145:7;157:18; 172:3 MPG (1) 171:24 much (41) 6:20;21:15;25:25; 34:17;35:1;42:17; 50:21;51:4;56:8,23; 58:8;61:6;65:22;69:21; 70:14,18;74:17;77:4; 79:13;82:11,15;84:16; 86:17,19;91:23;99:24; 100:24;105:19;122:11; 136:3;141:1;143:2; 150:9;158:14;166:17; 167:16;168:18,19; 170:20;171:18;173:7 Mueller (2) 121:9,12 multi-family (9) 37:14,19,23;68:21; 73:24;110:18,18; 115:12;163:8 multiple (3) 39:8;159:19;160:10 multiplier (2) 19:12;30:24 multi-prong (1) 162:21 multi-tenant (4) 108:7,11;115:12; 162:3 multi-unit (1) 151:2 municipalities (2) 131:25;134:17 municipality (1) 98:24 Murray (3) 94:18,20,24 must (9) 10:20;79:7,8;89:18; 151:5,18;158:22; 164:21;165:12 mute (1) 120:22 Mutual (1) 68:12 myself (1) 95:13</p>	<p>136:12;138:12;143:15; 154:22 namely (1) 135:9 names (36) 56:14;58:11;61:4; 63:16;64:23;66:19; 68:9;69:19;72:7;74:13; 77:9;79:16;81:25; 84:12;86:21;89:12; 92:2;94:19;96:4,11; 97:7;99:3;101:20; 103:7;106:2;109:1; 111:6;113:25;121:10; 122:14;125:21;127:21; 130:21;133:10;136:6; 137:21 Nancy (3) 64:22,24,25 nascent (2) 17:20;156:3 nation (2) 7:10;16:14 national (3) 102:11;123:9;130:9 nation's (1) 121:20 nationwide (1) 121:23 Natural (3) 32:15;67:22;110:9 nature (1) 176:18 near (3) 103:22;141:21; 142:14 nearly (1) 147:21 necessary (4) 13:3;60:14;73:8; 124:1 necessities (4) 57:21;74:6;76:22; 81:18 necessity (3) 64:6;89:25;151:17 need (40) 7:19;8:11;10:14; 11:7;46:8;47:4,19; 48:24;51:4;54:23,23; 59:23;69:10;70:18,21; 72:22;88:6;95:24; 97:17;98:18;99:9; 101:2;102:1;109:11; 110:12,14;116:23; 127:16;136:1;143:25; 156:6;159:6;163:4,10, 17;168:20;169:6,7; 183:1;184:3 needed (6) 10:20;14:22;70:9; 85:14;155:14;165:24 Needless (1)</p>	<p>156:3 needs (21) 26:5;33:14;44:10; 64:3,4;71:1,12;84:4; 85:23;93:20;107:1; 113:9;122:9;134:23; 137:14;141:19;142:13; 149:16;159:4;163:22; 168:21 negligible (1) 83:12 neighborhood (1) 40:1 neighborhoods (1) 84:5 neighbors (6) 19:20;57:20;64:15; 76:21;81:16;89:6 NEM (72) 9:20;10:14;19:6,21, 23;23:13,15;26:2;27:2; 29:3,6;31:13;32:1; 61:16,23,25;66:7; 97:12,22;98:11,14; 100:9;102:5;107:5; 113:12;115:1,4;116:1; 122:1,5;124:3,6,14,22, 23;125:3,7,11;126:21; 128:21;129:22;130:4; 131:5;134:4,16,17; 135:21;137:13;141:17; 146:18;147:1,18,22; 148:9;155:1,4,7,10,12, 19,24;156:1,9,13,19, 19,22;157:9,12;182:13, 13,18 NEM-generated (1) 157:15 Net (35) 9:8;14:3;17:17; 22:23;39:3;41:24; 57:11;58:17;59:24; 60:6,24;62:18,22,23; 69:2;73:20;79:5;81:7; 88:20;96:23;104:2; 107:2;108:7;109:23; 110:22;138:16,22; 143:21;146:8;158:18; 162:9;163:7,17;178:5, 25 Netherlands (2) 103:17;104:6 network (1) 136:23 neutral (2) 42:1;154:7 Nevada (1) 134:11 new (40) 5:14;7:15;8:5;11:2; 13:24;14:12,16;17:1; 18:24;19:6;22:1;23:17; 28:16;35:8;41:18;50:9,</p>	<p>13;61:12;66:9;67:9,9; 78:3;85:8;93:9,12; 98:19;102:5;128:23; 134:20;135:25,25; 148:2;149:25;152:13; 158:22;160:16,19; 161:24;162:25;165:15 news (1) 148:11 newsletter (1) 38:22 next (100) 7:1,20;11:12;13:15; 14:19,20;15:4;16:6,24, 25;18:21;20:7;21:22; 22:11;23:10;24:22; 25:13;27:11;28:18; 29:20;30:10;31:3; 32:12;33:2,8;34:2,25; 35:6,16;37:6;38:1,11; 39:10;40:4;42:2,11; 44:17;45:18,19,20; 47:5,9,22;48:1,11,17; 49:8;53:13;56:12;58:9; 61:3;63:15;64:22; 66:18;68:8;69:18;72:6; 74:12;77:8;79:15; 81:24;84:11;86:20; 89:11;92:1;94:18;96:3; 97:6;99:2;101:19; 102:15;103:6,10; 106:1;108:25;111:5, 10;114:3;118:2,18; 121:7,8;122:13; 125:20;126:25;127:20; 130:20;133:6,9; 134:25;136:5;137:20; 140:20;143:4,11; 152:17;164:12;170:13; 174:10;179:10 Nicholson (5) 136:5,7,8,10,13 night (2) 47:19;169:24 nighttime (1) 170:4 nine (3) 63:21;125:1;162:18 noise (1) 84:14 nomenclature (1) 14:16 non-carbon (1) 109:19 non-duplicative (1) 4:21 none (2) 46:7;71:20 non-marginal (3) 51:6,10,12 non-NEM (4) 154:23;155:9,15; 157:14</p>	<p>nonparticipants (1) 62:13 non-peak (3) 107:23;152:22,25 nonprofit (3) 53:22;72:11;92:10 non-reality (1) 135:6 non-solar (5) 8:8;19:16;32:25; 66:1;172:25 nor (1) 103:9 normal (2) 127:5,11 normally (1) 91:9 note (4) 10:8;11:25;16:11; 47:13 noted (3) 66:5,11;183:19 notes (1) 154:6 not-for-profit (1) 10:9 notice (1) 160:10 noticeably (1) 91:18 noticed (1) 46:7 notices (1) 39:7 notified (1) 160:6 noting (1) 163:19 notion (1) 132:20 Notwithstanding (1) 134:6 nowhere (1) 102:21 NRDC (2) 32:15;66:11 NRDC's (1) 144:9 number (30) 18:16;25:12;26:22, 23;27:20;29:12;30:1; 38:24;48:17;50:17; 113:23;126:21;127:5, 12;145:2;146:15; 147:23;149:8;151:23; 154:21;157:16;160:14, 24;162:18;164:18; 169:17,18;178:13,14; 179:11 numbers (9) 8:18;15:11;26:13,20; 27:6;66:7;129:5;133:1, 3</p>
N				
<p>name (29) 13:13;17:5;38:6; 44:16;53:20;56:20; 64:25;69:21;74:18; 77:11;79:18;82:6; 86:23;89:17,18;92:9; 94:24;97:10;103:16; 106:9;111:18;121:19; 122:19;126:8;131:1;</p>				

<p>nursing (2) 79:25;80:24 nurture (1) 62:24 nuts (1) 24:5 nutshell (1) 51:24 Nutting (2) 96:3,6</p>	<p>35:19;55:9;95:14; 117:6;146:20;160:9,12 on-demand (1) 155:14 one (75) 7:12;12:6;16:13,20; 18:22;19:10,11;21:24; 22:2;25:8,21;26:2,6, 22;27:15;28:19;30:18, 21;31:7;32:8;33:15; 34:23;35:1,24;36:20; 42:25;44:13;48:5,8,18; 50:20;59:3;64:3;68:19; 82:18,22,23;83:5; 91:16;95:17;104:4; 114:3;115:14;119:13; 125:7;126:10,21,24; 127:24;129:3;132:14; 136:18;139:3,4;145:3; 154:3;165:24;166:6; 167:6;169:5,11,11,14, 16;171:5;172:2; 178:13;179:7;180:5, 16,21;181:10,23; 182:1;183:8</p>	<p>183:17 operation (1) 175:8 operations (1) 123:12 opinion (3) 45:25;49:3;131:7 opinions (1) 157:20 opportunities (5) 77:20;87:2;89:5; 121:4;181:3 opportunity (22) 5:8;56:23;58:5,14; 60:25;68:5;69:21;70:2; 74:10;77:4;85:7,25; 98:24;101:15;114:16; 115:18;125:17;130:6; 133:22;138:10;141:1; 179:5 oppose (4) 110:22;112:11; 144:12;164:19 opposed (2) 94:23;111:20 opposing (1) 139:2 opposition (3) 90:1;126:16;151:10 opt (1) 34:12 optimistic (2) 33:22;145:19 opting (1) 63:25 option (4) 69:2;137:25;143:10; 166:5 optional (5) 14:8,12;34:6,9;163:3 options (5) 35:21;73:19;89:7; 107:12;122:9 oral (1) 144:19 orange (5) 15:14,21;16:13,18, 19 Orangevale (1) 124:25 order (7) 4:1;5:11;9:5;49:3; 67:12;93:15;106:25 ordering (1) 142:23 orderly (3) 123:23,25;125:8 ordinance (3) 4:17;6:9;44:23 Oregonville (1) 124:24 organization (3) 10:10;80:23;92:11</p>	<p>organizations (7) 22:2;39:2,17,20,25; 40:9;94:9 original (5) 45:12;48:22;49:1; 132:10;153:7 originally (1) 40:21 others (4) 39:10;41:23;95:17; 142:21 otherwise (5) 87:10;134:19; 152:10;165:15;178:7 ours (1) 129:20 ourselves (4) 20:15;51:20;57:12; 81:8 out (58) 7:12;12:8;14:24; 20:16,19;22:25;24:19; 25:10,25;26:14,21; 27:7;28:12,25;29:1; 30:17;31:7,22;32:8; 33:20,21;36:19,23; 37:5;41:7;42:9;48:15; 55:7;61:21,23;62:5; 75:6;82:9,14;89:8; 93:13;96:20;99:14; 100:2;101:7,15; 104:24;108:13,19; 112:8,21;128:9;135:6, 8,14;139:7,21;142:3; 144:23;166:2;173:19; 177:20;178:19 out' (1) 147:14 outages (2) 151:14;162:8 outlay (1) 139:13 outline (1) 20:9 outreach (13) 6:25;11:17;12:1,9, 15;38:3,8,9,13;39:1,13; 40:8,16 outright (2) 129:11,11 outside (2) 95:21;109:15 over (50) 5:10;12:18;13:8; 17:18,21;19:4;20:13, 15,16;22:8,9,11;27:21; 31:14;38:2;49:2;54:25; 57:3,16;60:9;61:8,25; 65:14;67:5;68:13; 72:14;77:16;78:5,23; 85:1,6;91:2;92:12; 95:17;98:17;102:15; 113:18;114:18;121:22;</p>	<p>122:24;123:4,18; 126:13;134:25;136:14; 137:4,7;139:5;147:4; 164:12 Overall (8) 41:24;45:11;61:24; 71:3;93:2;94:3;127:6; 176:9 overcast (1) 156:24 overhead (1) 104:13 overlooked (1) 88:19 overly (1) 145:19 overpayment (1) 65:17 oversized (1) 169:4 overview (2) 4:15;5:2 Owen (3) 86:20,22,23 own (8) 27:25;36:1;50:20; 102:8;108:3;112:8; 139:23;156:20 owner (1) 82:7 owners (2) 70:4;157:24</p>
O				
<p>Oak (4) 77:13;78:11,23;79:2 obviously (3) 18:2;21:12;100:23 occasion (1) 59:3 occupied (1) 150:8 occur (1) 162:8 October (3) 20:11;21:17;104:19 off (16) 11:13;26:15,18; 32:12;109:13,17; 110:8,14;129:22; 142:23;144:1;147:7; 156:22;157:25;159:8; 170:8 offends (1) 158:2 offer (2) 38:15;105:19 offered (3) 39:21;40:3;147:10 offering (1) 168:18 offers (2) 12:14;152:10 Officer (5) 4:8,14,22;84:18; 120:24 official (2) 11:13;35:4 officials (1) 40:4 off-line (1) 44:1 off-peak (6) 34:11;152:24;153:4, 8,18;160:1 often (6) 10:11;37:17;50:24; 68:25;77:23;159:25 old (4) 137:5;143:9;147:13; 149:13 older (1) 137:24 once (7)</p>	<p>one-minute (1) 44:13 one's (1) 10:19 one-time (2) 100:25;159:19 ongoing (8) 36:16;57:6;58:6; 64:9;72:17;76:12; 79:12;80:7 only (29) 16:11;27:8;30:23; 31:14;34:22;36:14; 48:18;54:22;65:25; 70:3;75:13;77:15,18; 78:22;85:21;91:2,11; 107:14;114:17;119:2; 127:6;129:17;139:24; 148:3;152:10;155:22; 158:25;160:8,9 on-site (1) 37:19 onto (3) 161:18;174:21; 175:25 oOo- (3) 4:2,4;184:10 Open (7) 4:11;5:17;6:15; 14:14;35:2;61:14; 179:17 opened (1) 107:13 operate (1) 105:18 operating (7) 15:3;68:14;69:11; 80:18;81:1;92:11;</p>	<p>183:17 operation (1) 175:8 operations (1) 123:12 opinion (3) 45:25;49:3;131:7 opinions (1) 157:20 opportunities (5) 77:20;87:2;89:5; 121:4;181:3 opportunity (22) 5:8;56:23;58:5,14; 60:25;68:5;69:21;70:2; 74:10;77:4;85:7,25; 98:24;101:15;114:16; 115:18;125:17;130:6; 133:22;138:10;141:1; 179:5 oppose (4) 110:22;112:11; 144:12;164:19 opposed (2) 94:23;111:20 opposing (1) 139:2 opposition (3) 90:1;126:16;151:10 opt (1) 34:12 optimistic (2) 33:22;145:19 opting (1) 63:25 option (4) 69:2;137:25;143:10; 166:5 optional (5) 14:8,12;34:6,9;163:3 options (5) 35:21;73:19;89:7; 107:12;122:9 oral (1) 144:19 orange (5) 15:14,21;16:13,18, 19 Orangevale (1) 124:25 order (7) 4:1;5:11;9:5;49:3; 67:12;93:15;106:25 ordering (1) 142:23 orderly (3) 123:23,25;125:8 ordinance (3) 4:17;6:9;44:23 Oregonville (1) 124:24 organization (3) 10:10;80:23;92:11</p>	<p>organizations (7) 22:2;39:2,17,20,25; 40:9;94:9 original (5) 45:12;48:22;49:1; 132:10;153:7 originally (1) 40:21 others (4) 39:10;41:23;95:17; 142:21 otherwise (5) 87:10;134:19; 152:10;165:15;178:7 ours (1) 129:20 ourselves (4) 20:15;51:20;57:12; 81:8 out (58) 7:12;12:8;14:24; 20:16,19;22:25;24:19; 25:10,25;26:14,21; 27:7;28:12,25;29:1; 30:17;31:7,22;32:8; 33:20,21;36:19,23; 37:5;41:7;42:9;48:15; 55:7;61:21,23;62:5; 75:6;82:9,14;89:8; 93:13;96:20;99:14; 100:2;101:7,15; 104:24;108:13,19; 112:8,21;128:9;135:6, 8,14;139:7,21;142:3; 144:23;166:2;173:19; 177:20;178:19 out' (1) 147:14 outages (2) 151:14;162:8 outlay (1) 139:13 outline (1) 20:9 outreach (13) 6:25;11:17;12:1,9, 15;38:3,8,9,13;39:1,13; 40:8,16 outright (2) 129:11,11 outside (2) 95:21;109:15 over (50) 5:10;12:18;13:8; 17:18,21;19:4;20:13, 15,16;22:8,9,11;27:21; 31:14;38:2;49:2;54:25; 57:3,16;60:9;61:8,25; 65:14;67:5;68:13; 72:14;77:16;78:5,23; 85:1,6;91:2;92:12; 95:17;98:17;102:15; 113:18;114:18;121:22;</p>	<p>122:24;123:4,18; 126:13;134:25;136:14; 137:4,7;139:5;147:4; 164:12 Overall (8) 41:24;45:11;61:24; 71:3;93:2;94:3;127:6; 176:9 overcast (1) 156:24 overhead (1) 104:13 overlooked (1) 88:19 overly (1) 145:19 overpayment (1) 65:17 oversized (1) 169:4 overview (2) 4:15;5:2 Owen (3) 86:20,22,23 own (8) 27:25;36:1;50:20; 102:8;108:3;112:8; 139:23;156:20 owner (1) 82:7 owners (2) 70:4;157:24</p>
P				
<p>pace (1) 72:25 Pacific (1) 16:23 packet (1) 40:3 page (10) 117:1;118:2,5,6,11, 19;119:4,5;161:14; 179:21 paid (5) 26:15,18;65:15; 112:7;155:9 painstaking (1) 156:10 pair (1) 55:16 paired (8) 7:14,16;8:11;11:9; 60:1;65:4;163:24; 164:3 pairing (2) 10:6;11:10 pandemic (3) 38:18;41:8;165:5 panel (5) 61:21;102:23; 138:13;147:10;169:9</p>	<p>one-minute (1) 44:13 one's (1) 10:19 one-time (2) 100:25;159:19 ongoing (8) 36:16;57:6;58:6; 64:9;72:17;76:12; 79:12;80:7 only (29) 16:11;27:8;30:23; 31:14;34:22;36:14; 48:18;54:22;65:25; 70:3;75:13;77:15,18; 78:22;85:21;91:2,11; 107:14;114:17;119:2; 127:6;129:17;139:24; 148:3;152:10;155:22; 158:25;160:8,9 on-site (1) 37:19 onto (3) 161:18;174:21; 175:25 oOo- (3) 4:2,4;184:10 Open (7) 4:11;5:17;6:15; 14:14;35:2;61:14; 179:17 opened (1) 107:13 operate (1) 105:18 operating (7) 15:3;68:14;69:11; 80:18;81:1;92:11;</p>	<p>183:17 operation (1) 175:8 operations (1) 123:12 opinion (3) 45:25;49:3;131:7 opinions (1) 157:20 opportunities (5) 77:20;87:2;89:5; 121:4;181:3 opportunity (22) 5:8;56:23;58:5,14; 60:25;68:5;69:21;70:2; 74:10;77:4;85:7,25; 98:24;101:15;114:16; 115:18;125:17;130:6; 133:22;138:10;141:1; 179:5 oppose (4) 110:22;112:11; 144:12;164:19 opposed (2) 94:23;111:20 opposing (1) 139:2 opposition (3) 90:1;126:16;151:10 opt (1) 34:12 optimistic (2) 33:22;145:19 opting (1) 63:25 option (4) 69:2;137:25;143:10; 166:5 optional (5) 14:8,12;34:6,9;163:3 options (5) 35:21;73:19;89:7; 107:12;122:9 oral (1) 144:19 orange (5) 15:14,21;16:13,18, 19 Orangevale (1) 124:25 order (7) 4:1;5:11;9:5;49:3; 67:12;93:15;106:25 ordering (1) 142:23 orderly (3) 123:23,25;125:8 ordinance (3) 4:17;6:9;44:23 Oregonville (1) 124:24 organization (3) 10:10;80:23;92:11</p>	<p>organizations (7) 22:2;39:2,17,20,25; 40:9;94:9 original (5) 45:12;48:22;49:1; 132:10;153:7 originally (1) 40:21 others (4) 39:10;41:23;95:17; 142:21 otherwise (5) 87:10;134:19; 152:10;165:15;178:7 ours (1) 129:20 ourselves (4) 20:15;51:20;57:12; 81:8 out (58) 7:12;12:8;14:24; 20:16,19;22:25;24:19; 25:10,25;26:14,21; 27:7;28:12,25;29:1; 30:17;31:7,22;32:8; 33:20,21;36:19,23; 37:5;41:7;42:9;48:15; 55:7;61:21,23;62:5; 75:6;82:9,14;89:8; 93:13;96:20;99:14; 100:2;101:7,15; 104:24;108:13,19; 112:8,21;128:9;135:6, 8,14;139:7,21;142:3; 144:23;166:2;173:19; 177:20;178:19 out' (1) 147:14 outages (2) 151:14;162:8 outlay (1) 139:13 outline (1) 20:9 outreach (13) 6:25;11:17;12:1,9, 15;38:3,8,9,13;39:1,13; 40:8,16 outright (2) 129:11,11 outside (2) 95:21;109:15 over (50) 5:10;12:18;13:8; 17:18,21;19:4;20:13, 15,16;22:8,9,11;27:21; 31:14;38:2;49:2;54:25; 57:3,16;60:9;61:8,25; 65:14;67:5;68:13; 72:14;77:16;78:5,23; 85:1,6;91:2;92:12; 95:17;98:17;102:15; 113:18;114:18;121:22;</p>	<p>pace (1) 72:25 Pacific (1) 16:23 packet (1) 40:3 page (10) 117:1;118:2,5,6,11, 19;119:4,5;161:14; 179:21 paid (5) 26:15,18;65:15; 112:7;155:9 painstaking (1) 156:10 pair (1) 55:16 paired (8) 7:14,16;8:11;11:9; 60:1;65:4;163:24; 164:3 pairing (2) 10:6;11:10 pandemic (3) 38:18;41:8;165:5 panel (5) 61:21;102:23; 138:13;147:10;169:9</p>

panels (5) 68:20;112:18; 124:25;149:14;161:24	partnerships (1) 99:19	penalized (2) 115:7;157:13	permitted (1) 182:16	planet (3) 110:11,13;130:18
paragraph (1) 32:20	passed (2) 120:23;173:15	penalizing (1) 156:19	permitting (1) 104:10	planned (1) 152:4
parallel (1) 140:8	past (9) 19:5,18;61:25;76:5; 79:21;80:13;113:17; 123:19;150:2	pencils (1) 112:21	person (7) 24:21;86:3,12;114:3; 138:14;166:6;172:3	planning (7) 47:8;55:6;70:22; 87:17;135:22;141:20; 142:14
parameters (1) 24:10	Pastor (4) 77:8,10,12,15	pending (2) 51:18;161:15	personal (3) 39:1;40:8;139:23	plans (4) 71:5,11,25;134:16
pardon (1) 48:7	path (10) 29:9,10,24,24;74:23; 98:1;107:10,19; 132:14,15	pension (1) 141:3	perspective (5) 15:23;16:21;26:8; 27:4;30:23	plant (12) 18:8;28:3;31:18; 32:7;35:23;36:13; 67:19;115:22;148:13; 152:5;159:12;163:15
parent (1) 150:20	patient (1) 177:20	people (40) 12:19;38:24;39:2,14; 40:22;42:18;52:21; 53:7;57:18;64:1,10; 78:13,23;85:2,5,14,25; 100:15,18;101:16; 114:19;115:14,15,16, 23;134:23;141:10; 147:5,9;151:1,12,21; 157:25;158:20;161:22; 162:2;165:7,12; 170:19;172:14	pertinent (1) 81:18	plants (4) 25:3;56:6;67:23; 148:8
Park (3) 77:13;78:11,23	Patrick (7) 66:18,20,22;106:5,6, 9;126:18	people's (1) 12:23	PG&E (4) 90:22;96:17;112:15; 149:19	play (2) 31:21;145:23
Parks (2) 79:2,2	Paul (16) 21:24;35:12;56:10; 99:15;125:24,25; 126:2,3,4,5,6,9;161:1; 167:13,24;174:13	per (18) 8:20;15:16;16:22; 25:7;27:1;29:7;30:22; 34:25;65:22;105:14; 108:2;119:7;124:14, 15;147:21;166:19; 171:20,21	phase (1) 144:1	playing (1) 84:15
Parkway (1) 123:17	pause (2) 38:17;150:4	percent (31) 13:18,19;16:15; 22:18;23:3;24:11; 26:14;30:9;31:15,20, 21;45:10;46:1;48:16, 23;49:2;73:1,1,91:11; 109:18,19,19;128:17; 134:20;136:21;169:5, 14,17,18;175:5,7	phone (9) 21:7;23:12;42:9,13; 140:17;143:5;144:24; 166:6;177:10	please (37) 5:12;7:2,20;11:12; 13:15;14:20;15:5;16:7, 24;18:21;20:7;22:3; 44:17;45:2,3,19,20; 47:6,9,18,22;48:1,11, 17,20;49:8;53:19; 71:22;89:4;95:20,23, 23;117:14;118:15; 120:22;160:18;179:2
part (16) 14:5,7,20;16:19,25; 17:1,35:4,5;47:23; 70:20;75:19;151:5; 160:15;167:2;174:17, 23	pay (12) 8:19;9:7;33:1;41:9; 47:11;51:9;81:2; 104:14;109:13;132:21; 139:21;155:13	per-event (1) 153:14	phonetic (1) 100:10	pleased (4) 58:2;75:18;76:19; 80:20
participant (1) 147:10	payback (21) 26:12;27:13,17,23, 23;28:4,9,16;31:22; 90:8,16;91:4,6,17; 113:16;129:4,6;144:7; 149:17;150:5;154:10	perfect (3) 12:12,13;183:24	photovoltaic (1) 123:24	pleasure (1) 126:13
participants (2) 154:10,11	paybacks (1) 131:13	perfectly (1) 139:1	phrase (2) 12:17;33:7	plug-and-play (1) 38:22
participate (8) 34:9;36:16;41:18,22; 76:1;97:14;155:16; 159:16	paying (9) 9:2;19:11,13,15; 64:5;73:7;109:15; 157:14,25	perhaps (1) 144:22	physics (1) 61:19	plummeted (1) 9:13
participated (1) 97:12	payment (2) 36:18;72:15	period (16) 6:8;27:13,17,23; 28:4,10;31:23;78:22; 113:17;116:19;129:4; 153:16;154:4;166:9; 172:5,6	piece (4) 19:10,11;36:11; 110:19	plus (8) 14:16;24:11;48:14; 60:17,19;65:23; 100:20;154:17
participation (7) 56:1;153:24;154:1, 17;156:12;159:11; 164:7	payments (4) 25:6;36:16;73:6; 100:25	periods (5) 56:1;107:21;129:6; 144:7;152:24	pilot (1) 153:7	pm (3) 4:1;139:11;184:8
particular (6) 25:8;67:15;79:10; 88:18,23;114:25	payors (1) 139:2	permanent (1) 63:22	pioneered (1) 123:22	pocket (2) 109:16;112:8
particularly (8) 54:12;55:10;57:8; 76:13;80:9;97:16; 153:3;154:15	pays (1) 102:7	permission (1) 178:5	pioneers (1) 9:18	Poff (10) 14:6,19;17:2,4,5; 54:11;112:1;129:1; 167:6,13
partner (10) 57:3;63:19;68:13; 72:14;75:23;78:1,3,20; 79:21;84:21	Peak (30) 14:9;18:7;33:25; 34:4,6,13;36:2,4,4,6, 10;62:18,22;67:16,18, 21;73:13;107:21,22; 146:5,8;148:12; 151:25;152:1;153:6, 16;159:23;163:3,18; 164:1	permit (2) 57:14;81:10	pit (1) 139:3	point (17) 12:17;28:12;29:16; 61:23;62:5;105:13,14; 108:19;114:22;115:10, 19;127:2;138:21; 146:1;172:22;175:17; 181:13
partnered (1) 63:20	pedal (2) 35:13,13		pitch (1) 85:8	points (6) 5:14;54:18,19;59:21; 126:20;180:10
partnering (4) 18:5;20:6;24:1; 92:17			place (10) 9:9;71:12;83:11,18; 84:8;116:25;119:3; 148:8;172:18;177:15	
partners (7) 28:3;31:18;32:7; 36:13;39:24;87:4,15			placed (1) 124:22	
partners' (1) 38:17			placement (1) 116:24	
partnership (8) 12:25;40:15;85:4,6, 17;86:3,15;92:19			Placerville (1) 149:13	
			Plan (30) 18:4;21:13,16;33:8; 53:7;54:6;69:2;71:17, 18;88:20;93:3,7;98:13; 109:21,22;110:10,22; 115:17,21;124:1; 126:17,24,25;138:19; 141:14,17;147:19; 168:10;173:16;174:5	

<p>policies (2) 75:8;142:6</p> <p>policy (9) 9:8;33:17;54:9; 66:23;122:3;123:8; 145:7;159:4;162:23</p> <p>pollutants (1) 59:12</p> <p>pollute (1) 75:12</p> <p>pollution (1) 102:16</p> <p>pool (1) 95:5</p> <p>poor (1) 158:2</p> <p>populate (1) 119:5</p> <p>population (1) 155:12</p> <p>porting (1) 101:15</p> <p>portion (5) 5:9;16:6;105:11; 166:23;182:23</p> <p>portraying (1) 95:6</p> <p>positive (3) 41:25;97:21;127:13</p> <p>possibility (2) 84:4;115:20</p> <p>possible (9) 38:23;39:14;65:10; 85:15;109:18;110:10, 11,15;132:13</p> <p>possibly (4) 103:23;138:2; 159:19;160:8</p> <p>post (3) 104:20;118:10; 152:12</p> <p>posted (1) 179:21</p> <p>posts (1) 39:5</p> <p>post-successor (1) 30:4</p> <p>potential (3) 142:20;154:9;163:16</p> <p>potentially (3) 142:6;173:18;174:5</p> <p>power (37) 8:13;9:1;13:6;16:16; 18:8;25:2;28:3;31:18; 32:7;35:22;36:13;56:6; 64:12;65:21;67:18; 76:7;96:16;113:4; 136:25;139:8;148:7, 13;152:5;153:19; 155:14;156:20,25; 157:2,10,11;159:12; 160:4;161:8,21;162:7, 13;163:15</p>	<p>powered (1) 86:14</p> <p>Powerwall (1) 102:20</p> <p>Powerwalls (1) 30:21</p> <p>prayerfully (1) 78:24</p> <p>precedent (2) 114:9,14</p> <p>premium (1) 34:14</p> <p>preparatory (1) 74:22</p> <p>prepared (3) 52:21;118:24;180:24</p> <p>pre-professional (1) 74:24</p> <p>present (5) 17:11;42:24;121:4; 128:7;134:8</p> <p>presentation (10) 6:23;7:22;12:15; 14:20;42:12;45:4;65:6; 100:8;119:21,25</p> <p>presentations (4) 6:17;42:18,19;98:21</p> <p>presented (8) 39:25;90:19;95:11; 96:21;129:2,3;143:1; 148:22</p> <p>presenting (2) 6:24;121:1</p> <p>PRESIDENT (58) 4:5;5:3;6:13,21; 42:15,16;43:2,8,16,22; 44:6,11,15,18,21; 49:13,23;52:1,17,23; 53:4;56:19,21;58:12; 66:21;69:22;74:17; 79:19;82:3;84:16; 89:20;92:7;94:21,24; 95:1;97:9,10;106:7; 120:21;122:22;123:3; 136:11;165:23;166:11; 167:4;170:12;171:12; 174:9,12;177:6;179:4; 180:2,4;181:5,20; 182:20;183:4;184:5</p> <p>press (1) 39:5</p> <p>pressured (1) 148:18</p> <p>pre-successor (1) 30:3</p> <p>pretty (5) 70:18;112:14; 121:24;171:23;176:15</p> <p>prevent (1) 75:13</p> <p>prevention (1) 14:25</p> <p>prevents (1)</p>	<p>91:12</p> <p>price (8) 26:25;27:1;34:15; 104:9,20;153:12,14; 163:3</p> <p>prices (11) 9:12;61:24;65:21; 97:20;98:18;104:7,9; 105:7;152:23;153:4,13</p> <p>Pricing (19) 14:9;33:25;34:4,6, 14;36:7,10;67:16; 72:25;73:13;146:5; 148:12;151:25;152:2, 18,23;153:6,18;154:19</p> <p>Primarily (1) 157:21</p> <p>primary (1) 52:10</p> <p>principle (3) 124:4;125:8;129:24</p> <p>prior (4) 40:25;49:7;75:3; 173:3</p> <p>priorities (1) 70:22</p> <p>private (1) 124:1</p> <p>private-pay (1) 80:24</p> <p>privilege (2) 17:10;160:3</p> <p>privileged (1) 77:11</p> <p>pro (1) 119:3</p> <p>proactive (1) 40:15</p> <p>probably (8) 6:22;28:20;91:5; 112:17;145:18;160:9; 167:13;170:23</p> <p>problem (1) 107:5</p> <p>problematic (3) 62:19,19;168:4</p> <p>problems (3) 77:20;129:2;176:7</p> <p>procedural (1) 180:17</p> <p>proceed (1) 54:20</p> <p>proceeding (2) 19:23;107:8</p> <p>proceedings (1) 184:9</p> <p>process (22) 4:15;5:20;6:12;7:1; 11:13;32:19,23;38:3; 54:13;59:19;61:15; 67:6;68:6;70:13;71:2; 95:8;97:17;103:23; 113:22;155:1;167:17;</p>	<p>182:11</p> <p>processes (2) 54:9;180:17</p> <p>produce (1) 158:15</p> <p>produced (1) 160:21</p> <p>producers (1) 159:1</p> <p>produces (1) 37:21</p> <p>producing (1) 170:1</p> <p>product (1) 62:21</p> <p>production (3) 30:21;31:2;91:12</p> <p>products (2) 85:8,9</p> <p>professional (3) 59:1;61:9;86:13</p> <p>professor (2) 33:18;66:12</p> <p>profit (2) 104:13;165:2</p> <p>program (44) 11:3;22:22;23:9; 35:18;36:17;37:1,9; 68:16,17;69:4;72:12; 74:22,25;86:4,25;90:7, 10;98:4;110:17; 125:11;131:5;140:8; 148:13;152:2,7,16; 154:2,7,10,18;155:4; 162:10,21;163:7,10,12, 13,15,16,21,22;167:20; 168:21,21</p> <p>programs (21) 7:13,14,16,18;10:7; 14:18;35:8,10,15; 41:18;69:5,5;78:17; 80:2;101:2;128:21,23; 167:15,15,18,23</p> <p>progressive (2) 98:23;140:3</p> <p>Project (2) 72:10;158:8</p> <p>projecting (1) 147:18</p> <p>projections (1) 90:12</p> <p>projects (5) 106:12,13;129:5; 147:21,24</p> <p>prominent (4) 27:14;28:20;37:11; 70:13</p> <p>promised (1) 148:16</p> <p>promising (1) 79:4</p> <p>promote (4) 65:5;75:8;125:24;</p>	<p>156:2</p> <p>promoting (1) 61:9</p> <p>pronounced (1) 89:19</p> <p>pronouncing (1) 89:17</p> <p>pronunciation (1) 89:19</p> <p>Prop (8) 49:22;50:1;51:16,25; 98:9;132:16,18,20</p> <p>properly (1) 55:24</p> <p>properties (3) 108:7,11;115:12</p> <p>property (2) 68:21;177:25</p> <p>proponent (2) 90:12;95:10</p> <p>proposal (101) 7:4,25;10:13;11:23; 12:5,12;13:22;14:2; 18:24,24;21:11;23:1; 39:9,21;54:3;58:16; 59:16,18,21;60:13; 63:12;65:3,25;66:6,10, 13;67:5,8,9,9,24;69:15; 72:21;81:21;83:17; 84:8;90:1,17;91:19; 94:15;95:9,23;102:4; 107:2,6,25;108:5,17; 111:20;112:14,20,23; 114:21;115:1,11; 116:1,25;117:10,15; 118:1,21,22,24;119:1; 122:2;124:3,6,8,21; 125:3,7;128:16; 129:13,20;130:4,7,13; 131:20;134:2;138:22; 139:3,18,22;143:19; 144:16,145:6,15; 146:6,22;147:1,23; 148:10;153:11;158:18; 160:16,19;162:20; 180:22;181:11;182:3, 18</p> <p>proposals (9) 6:25;42:22;55:21; 66:15;116:1;134:8,9; 148:22;161:15</p> <p>propose (3) 9:19;42:23;182:10</p> <p>proposed (33) 7:11,13,23;13:16; 14:22;15:7,10;38:24; 39:15;40:17,21,25; 41:11;42:1;44:20; 45:16;46:23;47:21; 49:7;52:8,11;65:23; 92:21;109:23;126:17; 137:13;146:1;147:18; 149:10;151:25;155:3;</p>
--	---	---	--	---

<p>179:13;182:5 proposing (12) 63:5;128:23;142:11, 11;149:25;150:16; 151:8;161:22;162:1; 163:6,14;167:11 prospective (1) 152:14 prosperity (1) 92:15 prosumers (1) 137:12 protect (5) 55:1;56:3;113:3; 151:14;162:6 protecting (1) 144:2 protections (1) 129:25 proud (9) 7:5;33:12;57:2;61:7; 63:19;64:19;78:1; 79:20;111:18 proudly (2) 64:5;95:13 proven-effective (1) 146:11 proves (1) 48:21 provide (40) 4:14,21;5:2,10,19; 7:25;13:14;14:6,23; 15:6;17:2;25:5;36:7; 37:22;38:10;42:5,21; 55:2,12,23;68:5;73:18; 78:18;81:3;117:10,15; 118:22;125:17;140:13; 152:9;154:8;156:1; 159:3;162:4;165:13, 14;166:21;180:12,21; 181:3 provided (13) 6:4;38:20;39:22; 40:10;46:4;78:6;118:9; 119:21,22;120:12; 132:13;166:4;179:20 provider (4) 82:12;106:11; 111:19;121:21 providers (1) 67:11 provides (6) 60:19;91:1;93:3; 123:25;163:22;183:15 providing (14) 15:20;18:13;34:10; 48:23;59:9;63:8;72:15; 79:23;89:5;106:22; 108:3;126:11;138:17; 151:19 provision (2) 81:4;124:21 provisions (1)</p>	<p>56:3 prudent (1) 146:2 PSE (1) 100:10 public (147) 4:6,7,15,15,18;5:9, 10,17,23;6:8,16,16,25; 9:22;11:17,18;13:13; 32:14;33:11,12,17; 38:3;39:7,13;40:23; 41:25;42:25;43:6,14; 44:4,9,14;46:17;48:6, 10;49:11,16;53:15,18; 54:13;56:15,18;58:12, 21;59:4;61:5;63:17; 64:24;66:20;68:10; 69:20;72:8;74:16; 77:10;79:17;82:1; 84:13;86:22;89:13,16; 90:4,9;92:6;94:20,22; 96:15;97:8;99:4,7,11; 101:21,24;103:12,15; 106:6;109:2,5;111:14, 17;114:5,8;116:11,16, 19,20;117:2,6,12,18, 23;118:16;119:12,17, 20,24;120:5,9,14,16; 121:3,14,18;122:15,18; 123:1,6;124:13;126:2, 6;128:2;130:12,22,25; 132:1;133:17,20; 136:7,10;138:5,8; 140:22,25;143:14; 145:2;146:15;147:2,5; 148:20;150:23;151:15, 16;156:12;165:1; 166:9,22;167:2;177:7, 16,19;179:8,25;180:3, 15,20;183:2,8;184:3,8 publicly (2) 32:16;33:4 published (1) 152:18 PUC (1) 119:7 Pudinski (3) 101:19,21,24 pull (1) 26:21 pumps (1) 76:3 punitive (1) 122:2 purchase (7) 73:8;102:22;141:20; 150:7;151:12;182:7,10 purchases (2) 11:11;156:7 purchasing (1) 62:7 purifiers (1) 142:23</p>	<p>purpose (2) 18:1,9 purposeful (1) 34:15 purposes (2) 18:1;78:5 pursuant (1) 6:9 push (1) 96:20 pushed (1) 148:5 pushing (1) 175:24 put (20) 9:9;10:12;20:19; 25:16;27:15;30:22; 32:17;38:17;49:4; 63:25;90:1;93:4;113:9; 123:4;128:14;139:9; 169:17;172:17,18,22 putting (4) 24:10;81:21;91:13; 112:19 puzzling (1) 147:17 PV (4) 28:14,15;67:3;90:8 PV-only (1) 147:23</p>	<p style="text-align: center;">R</p> <p>racking (1) 175:13 Rader (3) 64:22,24,25 radically (1) 125:2 raging (1) 70:12 raise (1) 49:19 raised (3) 164:25;165:17; 172:15 raises (1) 148:19 ramp (1) 176:6 ramping (1) 174:23 ran (2) 26:13;129:5 Rancho (1) 94:25 range (8) 15:22;20:23,24;39:2; 41:4;65:21;149:3; 173:25 ranging (1) 73:3 rank (1) 27:14 rapidly (1) 144:1 rate (170) 4:6,15,17;5:6;6:2,4, 5,6,9,11;7:4,11,23;8:6; 9:8,20;10:20;11:13; 12:7;13:14,17,19,22, 22,25;14:4,9,12,13,15, 21;15:7;17:2,8,15; 18:24;19:7;21:4,9,11, 13;23:17,20;24:7,10; 26:3;28:17,22;29:22, 23;30:4,4;31:7,19; 33:1,5,13,15;34:5,7,12, 13;35:4;36:22;37:1,25; 38:25;39:4,9,13,21; 40:2,10,20,25;41:3,9, 12,15;42:2,6,22;44:22; 46:4;47:16,20;48:18, 25;50:7;51:14;58:3; 61:13,16,17,23,25; 62:3,11;65:23;67:9; 69:4,8,12,15,16;72:21; 73:13,18;76:20;80:20; 92:22;93:6,18,23;94:1, 2,4,14;97:22;102:5; 104:2;107:6;112:11; 113:12;115:1;116:25; 118:1,20,21;124:14,22,</p>	<p>23;126:17,24,25;131:8, 19;132:4,5,11,22,24; 133:4;139:2;145:6; 147:22,25;153:7,9,15, 22;155:22;157:9; 160:16;163:3,4; 164:19,24;165:7; 167:8,16;168:12; 179:12;180:14;181:2, 17;182:3,9,13,17 ratepayers (4) 62:12;151:3,21; 154:8 Rates (79) 4:9;5:24;7:14,15,17; 10:6,21;11:2;13:5,17, 21;14:16;16:11,11,21; 17:8;40:7;44:20;45:7, 12,15,17;46:2,11,23; 47:4,10,22;48:16,19, 22;49:2,5,7,50:2;52:7; 57:24;65:3,9,15;69:10, 13;76:16;80:14,23; 90:6;93:14;94:3;98:1; 103:20;104:1,10; 107:21;109:14;118:4, 5;129:22;132:1,2,18; 137:13;139:21;141:17; 149:11,12,18;150:1; 152:8,10;155:7; 164:21,25;165:11,17; 167:21;172:19,23; 179:13;183:17 rather (3) 60:18;75:5;129:15 Ravenhorst (4) 103:10,12,15,16 reach (5) 37:5;38:23;39:13; 42:9;68:3 reached (8) 28:25;29:1;36:23; 38:10;97:16;98:11; 115:19;156:5 reaching (1) 166:2 react (1) 35:10 reacting (1) 180:15 reactions (2) 181:16,17 read (12) 26:21;33:9,11;45:1, 2;47:16,19;48:20; 118:18;144:22;156:18; 172:9 readily (2) 57:14;81:10 reading (2) 4:25;88:20 reads (1) 161:14</p>
		<p style="text-align: center;">Q</p> <p>Q2 (1) 30:20 quality (1) 93:1 quarter (2) 9:1;19:1 quest (1) 84:24 questionable (1) 139:18 queue (1) 144:25 quick (8) 18:22;20:1;29:16; 31:4;32:4,13;35:7; 171:16 quicker (1) 173:24 quickly (9) 20:10;107:9;163:5, 11;167:7,10,10; 168:24;182:5 quite (10) 7:4;17:24;25:21; 51:15;52:18;57:2,12; 62:9;145:11;171:2 quoted (1) 105:8</p>		

<p>ready (5) 30:12;92:5;96:14; 133:16;177:13</p> <p>real (13) 20:1;31:4;32:13; 35:7;73:11;84:3;100:5; 101:7;135:7,8;171:16; 174:22;175:1</p> <p>realistic (2) 90:7;129:6</p> <p>reality (3) 101:12;134:15;136:1</p> <p>realize (3) 11:24;42:18;111:21</p> <p>real-life (1) 134:14</p> <p>really (82) 8:18;10:25;12:24; 17:25;18:3,5,9;19:9; 20:8,9,24;21:18,23; 22:14;23:3,5,11,16,16; 24:12,16,24;31:15; 32:2,14,17;33:7,25; 34:1;35:8,11;36:1,12, 14,18;51:23;55:5,17; 59:1;60:10;62:19;72:2; 75:18;76:25;82:11,19, 24,25;83:6,9,10,13,23, 24;84:6;85:13;91:1; 94:21;96:19;99:9,11, 17;100:2;101:2,5,14; 107:15;109:7;112:2, 11,21;114:20;115:17; 122:1,9;130:13; 174:18,24;175:3,6,9; 178:18</p> <p>realities (1) 173:8</p> <p>reason (8) 52:10;60:22;90:3; 91:15;100:13,18; 170:2;174:14</p> <p>reasonable (5) 47:5;56:2;65:16; 94:4;164:21</p> <p>reasoning (4) 58:1;76:18,19;80:16</p> <p>reasons (4) 60:22;73:11;90:20; 94:14</p> <p>rebalance (1) 10:14</p> <p>rebates (1) 67:16</p> <p>recall (1) 123:22</p> <p>receive (3) 88:13;148:13;161:16</p> <p>received (11) 5:10;7:1;38:11; 40:18,24;41:17;42:20; 120:24;165:22;166:6; 183:9</p>	<p>receiving (1) 132:9</p> <p>recent (4) 50:19;120:2;143:25; 159:10</p> <p>recently (6) 86:12;103:16;115:8; 116:21;157:5;177:2</p> <p>recognize (6) 9:17;31:1,13,20; 35:20;38:16</p> <p>recognized (3) 25:9;55:15;89:1</p> <p>recognizing (1) 85:22</p> <p>recommend (2) 107:21;169:23</p> <p>Recommendation (15) 4:9,11;5:24;14:6,7; 16:6;17:1,3;26:3,25; 29:8;35:5;48:13;64:20; 182:7</p> <p>recommendations (5) 13:15;29:20;58:19; 60:24;166:21</p> <p>recommended (1) 22:16</p> <p>recommending (12) 13:17,24;14:2,8; 21:2;23:13,18;29:9,17, 18,24;178:15</p> <p>recommends (1) 30:10</p> <p>reconsider (4) 95:23;108:23; 142:25;150:13</p> <p>record (7) 33:11;49:25;59:8; 95:8;144:22;171:5; 180:24</p> <p>records (2) 46:25;148:20</p> <p>recoup (1) 149:4</p> <p>recover (1) 183:17</p> <p>recovers (1) 51:2</p> <p>recovery (1) 24:18</p> <p>RECs (3) 182:7,10,11</p> <p>redo (1) 173:21</p> <p>reduce (14) 28:22;36:2,8;76:8; 84:4;100:15;102:2,15; 124:14;134:16;138:19; 161:8,15;162:6</p> <p>reduced (5) 91:16;93:1;96:23; 125:2;141:17</p> <p>reduces (2)</p>	<p>65:25;102:13</p> <p>reducing (5) 68:2;126:15;138:24; 161:11;162:12</p> <p>reduction (6) 60:21;107:6,16; 124:9,12;147:16</p> <p>reevaluate (1) 107:1</p> <p>reference (3) 5:13;167:7,15</p> <p>referred (3) 37:17;50:8,24</p> <p>refers (7) 32:20;33:6,22,24; 50:23;51:1;160:20</p> <p>reflected (2) 15:8;51:5</p> <p>reflective (1) 176:25</p> <p>reflects (2) 156:14;173:3</p> <p>reform (2) 60:25;65:3</p> <p>regard (3) 69:8;96:22;178:20</p> <p>regarding (6) 60:24;73:13;95:12, 14;147:2;165:11</p> <p>regardless (3) 88:22;107:12;134:19</p> <p>region (14) 13:7;68:15;69:7; 87:18;88:17;92:11,16, 20;96:20;122:8; 130:16;131:12;151:20, 22</p> <p>regional (1) 56:2</p> <p>regions (1) 125:14</p> <p>region's (1) 87:5</p> <p>register (1) 182:11</p> <p>registered (1) 182:16</p> <p>regressive (1) 155:20</p> <p>regulates (1) 58:23</p> <p>regulations (3) 80:19;152:9;179:13</p> <p>regulatory (2) 54:9;123:25</p> <p>reimbursed (1) 157:10</p> <p>reimbursement (1) 112:11</p> <p>reinvested (1) 78:10</p> <p>reject (2) 52:11;109:22</p>	<p>related (4) 14:18;61:24;80:17; 148:23</p> <p>Relations (1) 38:8</p> <p>relationship (1) 27:10</p> <p>relatively (2) 94:2;154:14</p> <p>release (1) 148:15</p> <p>released (1) 151:10</p> <p>releases (1) 39:5</p> <p>relevant (2) 46:12;156:16</p> <p>reliability (2) 15:2;67:13</p> <p>reliable (4) 63:8;106:22;126:11; 157:4</p> <p>reliably (2) 8:13;11:8</p> <p>reliance (1) 161:9</p> <p>relocated (1) 149:12</p> <p>re-looking (1) 24:9</p> <p>remained (1) 154:25</p> <p>remaining (3) 26:16;66:6,9</p> <p>remains (3) 70:15,18;130:9</p> <p>remarks (1) 56:9</p> <p>remember (8) 21:23;26:22;70:9; 75:10;83:2;155:25; 172:19;173:24</p> <p>remove (1) 32:8</p> <p>removed (2) 113:8;143:23</p> <p>removing (1) 32:11</p> <p>renewable (5) 109:19;120:6; 136:22;182:11,14</p> <p>renewables (1) 37:5</p> <p>renters (2) 71:16;151:3</p> <p>rep (1) 96:16</p> <p>repair (1) 81:14</p> <p>repairs (1) 80:17</p> <p>repayment (1) 139:16</p>	<p>repeat (2) 5:12;46:11</p> <p>repeated (2) 120:25;142:9</p> <p>replace (1) 105:2</p> <p>replacing (2) 129:14,16</p> <p>replies (1) 120:14</p> <p>Report (17) 4:8,11,23;5:6,24; 111:23;143:25;146:25; 152:8;154:2,6;156:12; 157:22;179:14,17; 183:21,23</p> <p>reporter (1) 4:16</p> <p>reports (1) 49:16</p> <p>represent (4) 61:10;106:19; 126:10;130:14</p> <p>representative (1) 154:23</p> <p>representing (2) 121:20;134:1</p> <p>represents (2) 31:12;95:2</p> <p>reputation (1) 90:11</p> <p>request (5) 4:19;103:25;121:2; 125:6;148:21</p> <p>requesting (2) 6:11;178:4</p> <p>requests (2) 5:10;42:21</p> <p>require (3) 163:1;167:17;182:15</p> <p>required (6) 9:7;14:21;35:5; 119:7;154:4;159:20</p> <p>requirement (4) 47:3,7;51:3;183:21</p> <p>requirements (8) 15:3;52:10;110:25; 120:6;137:14;148:3; 163:18;164:1</p> <p>requires (3) 10:11;118:22;182:14</p> <p>requiring (1) 172:10</p> <p>research (5) 28:25;30:16;92:13; 139:8;149:24</p> <p>reside (1) 73:24</p> <p>residence (5) 149:14,16,22;150:3, 8</p> <p>resident (2) 23:7;161:4</p>
---	---	---	--	---

residential (20) 14:9,11;15:14;24:15; 27:7;34:6;35:3;40:7; 42:9;48:19;90:8,23; 95:25;102:18;103:18; 106:12;121:21;123:10; 124:6;148:24	retail (3) 35:3;67:17;175:7 retain (1) 81:4 retire (1) 67:22 return (12) 31:7,15,19;34:19; 42:14;98:3;139:13,17; 142:2;151:18;158:4; 159:24 returned (1) 140:19 returns (1) 31:10 revenue (7) 24:18;51:3;52:10; 81:2;112:5,6,9 revenues (1) 51:12 reverse (2) 151:18;155:21 review (1) 24:20 revisions (1) 21:10 rewarding (1) 37:2 Rhonda (3) 38:2,4,6 Rich (6) 97:6,8,10;134:22; 157:25;158:5 Rick (1) 151:24 ridiculous (1) 105:3 ridiculously (1) 91:7 right (52) 10:10;11:1;12:4; 18:21;19:10,24;20:1; 26:6;27:7;28:15,18; 30:4;32:5;33:6;35:7; 44:15;48:10;49:11,17; 74:16;77:17;79:8;86:9; 93:9;96:18;99:7; 100:17;103:13;109:2, 11,15;114:21;117:19; 127:16;128:6,9; 129:20;130:15;141:24; 142:23;146:2;149:15; 150:23;151:22;157:18; 168:16;169:14,25; 170:22;171:17;179:24; 180:14 rising (3) 72:22;162:7;165:6 risk (1) 93:10 Riverside (1) 123:16 road (4)	7:20;23:23;32:12; 93:5 Robin (3) 155:21;164:19; 165:19 robust (2) 98:4;156:12 role (2) 145:21,23 roll (3) 22:4;24:19,22 rolled (1) 25:12 rolling (2) 36:19;162:9 Rome (1) 95:20 roof (5) 61:21;104:19;105:4, 10;125:1 roofs (4) 63:25;104:22,23; 105:1 rooftop (45) 9:2,3,24;19:1;24:25; 60:1,18;62:24;65:3,13, 15,23;67:2;95:18; 102:13,24;111:24; 123:18;124:19;134:3, 10,16,21;135:1,2,7,13, 22,23;136:2;144:2,12; 148:8;150:25;151:4,8, 19;155:17;157:24; 158:20,21;159:3,7; 161:2;182:8 room (2) 20:15;98:10 roots (1) 178:9 Rose (11) 52:3,5,15;170:15; 171:13,14;173:4,12; 174:8;183:7,24 Rose's (1) 170:13 Roseville (7) 19:20;29:1,21;30:6; 96:24;128:17;168:14 rough (1) 149:17 roughly (2) 104:10;127:11 route (1) 113:6 row (1) 15:13 RT02 (1) 48:20 rules (2) 14:17;179:13 ruling (1) 178:19 run (4)	6:8;11:7;43:18;73:9 running (3) 43:21;73:10;147:8 S SAAs (1) 40:8 Sac (2) 85:7;86:12 Sacramento (40) 13:7;56:22,25;57:5; 68:15;69:7,23,24; 70:10;71:23;74:20; 77:6,12;79:24;85:2,18; 86:7,8,9,24;92:11; 94:6;107:18;111:19; 114:11,13;115:24; 122:8,8;123:16;128:9; 130:12,16;141:9; 146:19;149:12,21; 153:7;164:16;177:21 Sacramento's (9) 57:9,12,25;64:13; 76:15,17;80:10,15; 81:8 sadly (1) 75:13 safe (1) 73:16 safeguards (1) 93:22 safely (6) 11:8;57:20;64:16; 74:5;76:21;81:16 safety (1) 80:3 sake (1) 33:10 sale (2) 67:2;154:19 sales (3) 96:15;97:17;98:21 salesman (1) 114:16 Salt (1) 124:11 Salzmann (2) 125:20,23 Same (21) 29:21;31:16;44:7; 47:3;51:18;61:20; 70:15,18;73:11;83:21; 84:25;86:9;88:10; 100:4;104:9,11; 109:14;143:9;146:21; 166:5;181:13 Sanborn (9) 167:3,4;168:1,23; 169:20;170:5,10; 171:4,10 Sanchez (3) 72:6,8,9	Santa (1) 141:8 Sara (4) 121:13,14,18,19 satisfy (1) 77:23 save (5) 16:23;78:10;110:12; 134:24;135:2 saved (3) 78:9,17;135:3 saves (1) 105:22 saving (2) 78:13;158:16 savings (3) 153:5;154:9;161:3 saw (5) 43:17;112:22; 128:17,20;183:8 saying (8) 17:7;26:5;112:4; 128:5;132:15;139:19; 147:14;183:9 SB (1) 138:16 scalar (12) 45:9,12,24;46:1,1; 47:15;48:14;49:4;51:1, 11,13,24 S-C-A-L-A-R (1) 45:10 scalars (2) 46:15,18 scale (1) 61:17 scaleable (1) 105:18 scaling (1) 123:14 scant (1) 152:10 scarcity (1) 176:5 schedule (1) 42:3 schedules (1) 38:17 Schmidt (3) 92:1,6,9 School (6) 33:18;86:5;89:3; 110:4,5,6 science (1) 111:1 screen (1) 43:12 script (1) 100:4 SD2 (1) 21:7 se (1) 166:19
---	--	--	---	---

Sean (1) 149:9	serious (1) 132:17	158:23	80:22;128:19,21; 134:17;140:4,8; 182:13,18	37:7,8;38:1,11,12; 39:11,12;40:4;42:2,11; 43:23,24;44:17;45:19; 20,20;47:5,9,22;48:1, 11,12,17,17;49:8;95:7
season (2) 24:8;153:1	seriously (1) 157:23	sharing (4) 76:9;158:3;160:3; 161:16	similarly (2) 51:19;129:14	slides (6) 16:25;43:13;44:7,8, 10;112:22
second (12) 8:3;10:7;13:24;16:2; 17:1;18:9;28:20;43:1; 60:12;82:21;157:8; 168:24	serve (8) 50:3;56:25;61:13; 63:22;64:11;77:11; 84:17;88:22	Shark-Tank-style (1) 85:9	simple (2) 75:16;79:7	sloping (1) 28:13
secretary (2) 116:24;119:14	served (2) 80:12;86:10	sheets (2) 38:22;39:23	simply (6) 102:8;122:5;131:9, 22;156:6;182:13	small (7) 15:22,24;71:3; 103:22;129:17;136:23; 150:7
section (1) 181:24	server (2) 53:23;85:1	shift (8) 65:11;66:1,2,6,9,15; 135:6;168:4	Simultaneously (2) 120:18;128:22	smart (5) 34:7,16;122:3; 136:24;153:7
Sedio (2) 127:20,23	service (17) 10:1;20:25;47:5; 50:3;57:22;63:12; 64:17;74:7;76:23; 81:19;87:22;90:5; 94:10;108:3;123:21; 124:10,13	shifting (1) 155:15	sincerely (2) 12:24;146:13	smartly (4) 53:25;54:1,5;55:7
seeing (4) 35:14;119:4;142:3; 181:9	Services (12) 4:9;5:25;14:24; 68:17;79:19,20,23; 80:13;81:5,6;88:5; 121:22	Shiloh (1) 79:11	single (1) 50:9	Smeloff (1) 162:19
seem (2) 65:24;159:22	servicing (6) 77:14;85:20;89:21; 99:21;124:2;164:1	Shine (2) 68:16;156:23	single-family (1) 103:25	smirk (1) 75:15
seems (3) 104:5;112:14;183:11	session (1) 85:10	shingles (1) 104:23	sister (1) 37:3	smoke (3) 70:12;75:15;128:8
Seger (1) 100:10	set (4) 58:18;153:14; 164:16;176:24	shock (1) 107:17	sit (1) 22:3	smoke-filled (1) 142:22
self-consume (1) 174:25	sets (1) 55:10	shocked (1) 95:19	sitting (1) 61:21	Smokey (1) 75:13
self-consumption (6) 22:22;23:5,6;153:5; 175:3,5	setting (5) 114:10,14;116:4; 164:2,5	shop (1) 15:24	situation (2) 155:21;160:4	SMUD (386) 5:1,7,18;6:20;7:9; 8:9,21;9:7,15,15;10:1, 8;13:10,16;14:23; 16:18;17:4;19:9;22:16; 23:13;24:19;25:4;27:9, 19;33:24;34:13;35:3; 37:20;38:4,8,13;43:20; 45:7,10,18,24,25; 46:10,15,24;48:4,8; 49:4,9,18,24;50:2,12, 19;51:2;52:5,13,15,16; 53:3,8,12,17;54:11,20; 55:6,20;56:12,17,20; 57:3;58:5,9;59:4,8; 61:2,7;62:7;63:3,7,14, 20;64:21;66:17,22; 67:22;68:3,7,13;69:17; 71:5,24;72:5,14,16,23; 73:3,6,14,18,20;74:4, 11,14;75:19,21,22; 76:6,19;77:7;78:2,2,6, 15,18,24;79:6,10,14, 21;81:20,23;82:12,16, 18,25;84:3,10,21;85:3, 7,11,17,22;86:14,18; 87:4,12;88:1,15;89:10, 15,22;90:1,6;91:25; 92:3,8,17;93:12,21; 94:17,21,21;95:10,13, 14,16,19;96:2,5,10,12, 18,19;97:4,5,9,14,16; 98:4,7,20;99:1,6,13; 100:8;101:1,5,14,18,
self-generation (1) 68:2	several (10) 6:17;14:24;15:11; 23:23;90:15;119:10, 11;120:25;180:9,16	Short (1) 158:3	situations (4) 57:14;81:9;82:13; 88:8	
self-reliance (1) 137:11	severely (4) 107:10;115:6;127:1; 159:12	shortage (2) 98:17;157:6	six (3) 20:20;123:15;157:16	
self-serving (1) 159:4	Severin (5) 33:13,16;66:12; 145:4;146:14	shortcomings (1) 157:22	sixth (1) 130:12	
sell (1) 8:21	shall (1) 125:3	show (4) 8:18;10:3;125:23; 140:19	size (9) 16:5;60:9;91:8; 128:24;141:18;145:21; 149:15;174:15;176:9	
selling (1) 96:19	shaped (1) 12:12	shown (1) 146:20	sized (1) 129:15	
semesters (1) 86:6	share (15) 36:20;38:9,10,21; 39:24;75:3,10,19;76:7; 78:13;115:16;154:5; 155:13;158:1;159:20	shows (4) 39:12;49:1;102:12; 175:4	sizes (2) 142:16;143:22	
semiretired (1) 77:15	shared (9) 40:2;41:12;57:22; 64:18;71:9;74:8;76:23; 78:12;81:19	Shumway (1) 157:17	sizing (6) 22:17,21;23:2;150:1; 169:9,13	
Senator (1) 138:15	shares (1)	side (2) 36:20;105:6	skilled (2) 79:25;80:24	
Senior (6) 79:19,20,24;80:2,3, 13		sidenote (1) 83:5	slash (1) 159:12	
seniors (1) 80:12		signal (3) 34:15;55:11;174:24	Slater (4) 113:24;114:4,5,8	
sense (5) 60:7;80:13;110:13; 150:6,17		signals (1) 55:23	sleeves (1) 22:5	
sent (6) 39:16;43:14;98:1; 120:12,14;178:24		signed (1) 124:23	slice (1) 106:19	
separate (1) 101:3		significant (12) 7:24;21:6;40:11; 46:1;50:19;98:5;124:9, 12;130:5;132:2; 134:18;155:8	slide (59) 7:2,20;11:12;13:15; 14:20;15:4,8;16:5,7, 24;18:21,22;20:7,8; 21:22;22:3,12,15; 23:10;24:22;25:13; 27:12;28:18;29:20; 30:10;31:3;32:12;33:2, 8;34:2,25;35:6,17;	
separately (3) 43:12,18,21		significantly (3) 40:19;60:19;149:6		
September (5) 6:10;11:20;34:23; 42:4;49:8		signing (1) 104:20		
		similar (8)		

<p>22;102:4,7;103:5,8,11,14,18;105:17,20,25;106:3,7,13,15,17;108:4,24;109:4,9,11;110:16,21;111:4,7,13,16,19;112:4,7;113:21;114:1,7,10;116:5,7,12,15,18;117:4,9,14,16,20;118:14;119:9,15,19;120:3,8,11,19;121:8,11,16;122:6,12,17,20;123:22;125:19,22;126:4,9,11;127:19,22;128:14,22;129:19,25;130:6,9,11,19,24;132:15,16;133:2,4,8,11,19;134:6;136:4,9,12;137:14,19,22;138:7,12,18;139:5,25;140:2,6,15,16,18,20,24;143:3,6;144:17;145:5;146:6,17,22;147:1,4,8,15;148:5,14,22,24;149:25;152:12;153:25;154:5,7,10;157:17,21,21;158:3,7,9,12,13,14,16,23,24;159:13;160:6,16,18,25;161:20;162:1,16,19,20,24,25;163:6,11,14;164:2,4,10,13;165:14,20,25;166:3,8;167:4,13;168:1,5,2,3;169:3,20,22;170:5,8,10,17;171:2,4,9,10,14;172:13;173:4,9,12,22;174:8,11,16;175:11,15,18,22;176:10,12,20;177:4,12,14,18;179:2;180:1,19;181:19;182:4,7,25;183:1,3,6,7,13,24;184:2,7</p> <p>SMUD's (5) 152:4,6;161:11;163:21;164:21</p> <p>SMUDorg (1) 42:11</p> <p>SMUDorg/RateInfo (1) 42:7</p> <p>SMUD-proposed (1) 149:5</p> <p>SMUD's (51) 7:3,8;20:25;36:24;37:12;40:15;45:15;48:22;54:3,5;55:14;57:6;60:15;61:17;63:19;64:9;67:4,14;68:4;72:17;76:11;77:1;80:7;84:23;86:2,15;87:9,15;90:17;92:19,21,23;94:3,5,12,14;97:19;98:5;102:6;107:3;123:21;124:10;125:15;137:13;138:23;</p>	<p>147:1,22;148:9;151:24;179:13,21</p> <p>Smutny-Jones (4) 53:10;61:3,5,7</p> <p>snuffing (1) 159:1</p> <p>soapbox (1) 70:17</p> <p>social (9) 39:5;60:10;62:2;75:9;79:1,23;87:6;92:16;94:9</p> <p>societal (2) 111:24;132:24</p> <p>society (2) 135:12;177:21</p> <p>solar (335) 8:4,8,10,11,12,19,21,24;9:1,2,4,6,11,13,17,19,24,25;10:19;11:4,4,9,10,15,16;12:7;13:2;17:19,22;18:3,10;19:1,12,14;20:7,14,18,21,25;21:3,20;22:17,19;23:2,14,17;24:25;25:11,19;26:10,17;27:7,16,17,21;28:21,22,23;29:11,19,25;31:13,16;32:6,22;34:8;37:8,17,19;40:21;41:2,13;55:17,25;57:15;60:1,7,14,17,19;61:9,10,17,21,24;62:1,8,16,21,24;63:1,7,25;65:3,5,13,15,21,23;66:1,3,4,13,14;67:3,25;68:19,20;69:1;71:24;73:22;76:2;78:8;79:5;81:11;82:19,20,21;88:4,10,23;89:20,25;90:9,13,16,24;91:7,12,14,20,94;25;95:1,3,4,4,7,8,12,18;96:1;97:3,10,17,18,18,21,25;98:2,14,21;99:20;100:14,18,20;101:13;102:6,7,8,13,18,22,23,24;103:2,21,23;104:2,5,15,18;105:10,15;106:10,19;107:13,14;108:9,18,20;109:6,8,9,25;110:12,13;111:18,24;112:6,24,24;113:14;114:15,17,20,23;115:2,3,8,18;121:21,23,25;122:5;123:10,14,19;124:7,19,21,25;125:9;126:12,12,23;127:7;128:3,10,14,18;129:14,16,22;131:2,2,3,6,10,12;132:4,6,10,12,23,25;133:1,6;134:4,10,16,21;135:1,2,7,13,22,24;136:2,16;</p>	<p>138:13,17;139:9;140:5,11,14;141:6,15,25;142:1,7,10,10,12,18;143:19;144:2,3,6,12,15;146:10,19;148:2,8,23;149:14,22;150:14,16,25;151:4,8,20;153:2,5;154:15,16,24;155:17;156:3,4,8;157:11,24;158:15,21,21,23,23;159:6;160:22;161:2,8,16,17,18,21,24;162:2,12;163:2,24;164:4,12;165:11,12,16;167:8,18,20;170:1;172:10,19,24,25;173:17;174:4,21;175:16;177:23;178:7,11,16;179:3;182:8</p> <p>solar-and-storage (25) 7:23;8:7;13:25;17:2,15,23;18:16,17;19:7,21;11,13;23:20;28:1,17;41:12;61:13;69:4;90:18;107:11;129:4,15;149:11;182:9,12,17</p> <p>solar-generating (1) 105:10</p> <p>solar-heavy (1) 54:24</p> <p>solar-only (4) 18:18;34:9;98:3;147:20</p> <p>solar-plus-storage (2) 60:2;122:7</p> <p>solar-powered (2) 76:2;161:4</p> <p>solars (1) 103:24</p> <p>SolarShares (1) 69:3</p> <p>sold (2) 96:17;105:4</p> <p>solution (12) 13:2;21:21;22:5,11;28:1;32:16,19;36:5;77:24;132:14;135:19;144:5</p> <p>solutions (7) 54:17;55:22;59:13;106:11;132:13;143:17;179:12</p> <p>solve (1) 151:4</p> <p>somebody (7) 37:2;89:18;91:12;116:22;119:1;168:1;178:22</p> <p>someone (6) 43:9,11;44:1;148:19,20;150:18</p> <p>sometimes (1) 176:7</p>	<p>somewhere (1) 61:22</p> <p>son (1) 110:4</p> <p>sons (1) 150:20</p> <p>soon (2) 98:14;110:9</p> <p>sophomore (1) 86:5</p> <p>Sorry (5) 84:14;126:6,7;172:25;183:8</p> <p>sort (3) 75:6;127:3;175:13</p> <p>sound (1) 121:15</p> <p>sounded (2) 99:11;100:3</p> <p>source (1) 62:11</p> <p>sources (1) 120:6</p> <p>South (2) 85:18;86:9</p> <p>Southern (1) 114:12</p> <p>space (1) 79:24</p> <p>speak (16) 5:8;56:24;58:14;59:4;70:2;77:5;84:17;91:24;98:25;99:10;121:1;125:24;133:22;141:2;166:13;181:14</p> <p>speaker (2) 121:7,8</p> <p>speakers (5) 5:5,13;6:24;52:18,20</p> <p>speakers' (36) 56:14;58:11;61:4;63:16;64:23;66:19;68:9;69:19;72:7;74:13;77:9;79:16;81:25;84:12;86:21;89:12;92:2;94:19;96:4,11;97:7;99:3;101:20;103:7;106:2;109:1;111:6;113:25;121:10;122:14;125:21;127:21;130:21;133:10;136:6;137:21</p> <p>speaking (5) 66:24;90:3;120:18;134:5;183:25</p> <p>special (3) 47:25;148:6;178:5</p> <p>special-interest (1) 75:7</p> <p>species (1) 150:20</p> <p>specific (2) 63:3;168:2</p>	<p>specifically (7) 21:23;23:9;41:8;55:9;78:16;99:14;168:6</p> <p>spend (3) 50:21;89:3;100:16</p> <p>spending (2) 22:9;100:24</p> <p>spent (3) 21:25;22:13;130:5</p> <p>Spies (6) 89:11,13,16,19,19;169:1</p> <p>spirit (1) 129:23</p> <p>spite (1) 142:9</p> <p>spoke (3) 46:7;59:5;95:13</p> <p>spreadsheet (1) 139:9</p> <p>spring (1) 62:16</p> <p>spur (1) 156:8</p> <p>stacked (1) 100:3</p> <p>staff (102) 6:4,10;13:10;17:4;21:2,8,19,19;22:4,10;24:14;25:22;26:24;30:9;38:4;39:8;43:20;44:16;46:2,4,8,12;48:4,8;49:9;53:12;54:11;56:20;58:16,18;59:15,21,23;60:16,23;63:5;66:5,9,11,22;67:4;68:5;74:14,18;81:4,20;82:4;85:12;87:23;90:2,17,19;92:3,8,22;94:21;96:5,12;97:10,15;98:5,7,20;103:8;106:3,8;111:7;112:4;114:1;116:7,12;117:16,20,21;120:17;121:11;125:22;127:22;130:5;132:15,16;133:11;136:12;137:22;140:18;142:11;143:6;146:20,23;147:15,18;148:17,23;154:8;162:20;166:3,5;167:13;169:8;174:13;177:14;180:21</p> <p>staff's (7) 27:4;46:21;60:12;64:20;65:2;66:12;140:10</p> <p>stakeholder (2) 54:8;59:19</p> <p>stakeholder'd (1) 54:4</p> <p>stakeholder-driven (1) 32:18</p>
--	---	--	--	--

stakeholders (9) 11:16;20:13;38:15, 20;39:4;40:6;54:16,20; 156:17	7:19;9:20;14:4; 41:15;115:4;173:1,2	131:10;136:16,23; 144:3,15;148:11; 151:20;152:3,15; 154:17,25;155:17; 159:21;163:24;164:12; 167:19,19;178:16,21	submitted (1) 4:19	supply (4) 8:13;13:6;16:16; 98:17
STALEY-BROOKS (2) 38:4,7	staying (1) 109:14		subscribe (1) 39:18	support (36) 7:7,8;8:6;13:5; 32:13;35:8;54:3;57:5; 61:12;63:11;64:9,19; 69:1;72:17;77:19;78:6; 80:3,7;84:7,23;85:12, 13;87:7;88:15,17; 92:18,21;93:6;94:14; 122:5;135:3;144:9,14; 152:1;159:7;164:20
stand (3) 89:25;118:25;141:7	steady (2) 29:10,25	storage-only (1) 34:8	subsides (16) 18:11;19:10;26:20; 31:25;60:3,9;93:25; 110:12,14;128:23; 129:7;131:17;140:13; 141:22;142:4;162:4	supporters (2) 32:14;100:3
standalone (1) 129:14	STELLING (1) 121:11	story (4) 36:21;86:2;105:12; 135:17	subsidy (1) 66:4	supporting (8) 32:16;33:5;54:18; 87:5;94:6;120:1,2; 144:13
stand-alone (1) 60:18	STEM (4) 76:1;85:4,15;87:9	Strategic (2) 21:6;87:16	subsidizing (1) 139:2	supportive (4) 63:22;65:2;79:23; 94:12
standard (2) 115:6;127:1	step (4) 6:18;33:6;145:7; 146:2	strategy (1) 38:9	subsidy (2) 19:11;139:15	supports (5) 8:9;13:2,5;45:25; 163:2
standards (1) 157:8	stepping (1) 133:7	streamed (1) 117:8	Substations (1) 17:6	supposed (2) 26:1;71:19
stands (2) 127:16;129:21	steps (1) 84:3	Street (1) 77:14	success (1) 74:23	surcharge (1) 158:11
start (15) 17:7;43:25,25;44:12; 45:2;52:18;98:11,13, 14;110:11;117:24; 123:4;128:5;150:22; 167:8	Sterns (3) 106:5,6,9	stress (2) 146:13;174:22	successful (4) 9:14;20:20;135:24; 162:9	sure (20) 27:3;32:24;39:3; 40:16;49:23;51:21; 75:14;84:4;85:24; 86:10;109:16;110:16; 130:9;170:5,18;171:2, 7,8;174:18;182:4
started (6) 17:13;20:11;55:3; 60:8;86:4;118:15	Sterns's (1) 126:18	stressed (1) 34:2	successor (4) 29:22;58:16;122:1,5	surplus (3) 176:1,2,3
starting (2) 122:24;156:10	Steve (29) 53:9;96:7;111:9,9; 113:22;116:6,11,16,20; 117:6,12,18,23;118:16; 119:12,17,24;120:5,9, 16;122:13,15,18,19; 123:1,6;126:1;127:20, 23	stretch (1) 164:10	sudden (1) 176:5	surprised (1) 176:21
starts (2) 104:24;118:13	Steven (1) 114:2	strong (10) 57:5;64:8;72:14,17; 80:6;84:21,23;85:23; 87:14;90:12	suffering (1) 114:21	surrounding (1) 76:1
stat (1) 24:24	sticks (1) 26:23	strongly (6) 69:1;92:24;107:1; 129:25;151:25;163:2	suggest (5) 107:19,20,25;132:9; 139:3	survey (1) 159:10
state (21) 9:8;19:3,4;54:10; 58:23;77:16;80:19; 86:7,12;102:1;106:14; 114:10;115:6;124:17; 126:16;130:2;141:10; 148:6;158:11,22; 176:17	still (18) 32:23;42:5;45:14; 66:7,13;70:15,21;71:8, 15,22;72:2;83:3;110:5; 111:8;114:2;140:18; 145:18;163:4	structure (3) 8:6;62:4;155:22	suggested (1) 131:19	sustainable (8) 18:12;40:7;67:1; 68:16;78:1;89:7;92:25; 94:7
stated (3) 119:25;142:21;156:6	stock (2) 31:11;165:3	struggle (1) 73:5	Sullivan (4) 125:24;126:2,6,9	sustainable- (1) 85:16
statement (2) 46:24;169:2	stone (1) 180:16	students (7) 74:25;75:25,25;76:7; 82:9;87:2,10	summer (7) 14:10;34:25;62:16; 75:25;76:6;153:1; 177:23	sustainable-communities (2) 78:16;87:16
Statements (2) 5:8;161:13	stop (2) 101:15;126:21	students' (1) 87:8	summertimes (1) 34:22	sustainably (1) 143:20
states (6) 46:14;95:12;103:18; 104:23;105:2;123:12	storage (103) 8:4,12,12,14;10:16; 11:2,5;13:2;18:3,6; 20:7;22:18;23:7,17,22, 24,25;24:2,3;28:4,15; 29:17;30:6,8,12,14,15, 23,25;31:2,16;32:2,6; 34:8,18,18,20;35:25; 36:8,9;37:1;53:21,23, 25,25;54:8,22,22;55:3, 4,8,10,15,24,25;60:17, 18,19;61:14;63:1;65:4, 21,24;67:3,16,21,25; 73:23;91:4,20;95:1; 100:14;105:22;106:11; 107:24;108:5;121:21; 126:12;127:12,14,15; 128:4,11;129:17;	studied (1) 54:5	sun (7) 55:10;62:17;96:16; 156:23;159:3;176:4,8	sustained (3) 123:23,24;125:8
static (1) 126:22		Study (26) 19:14;20:18,22; 47:17,18,21;48:18,20, 21,25;50:7;51:11; 102:4,6,10;109:25; 132:23;133:1;134:24; 147:3,6;173:17,17,21; 176:15;177:1	sunlight (1) 61:20	SWAY (28) 43:20;48:4,8;49:9; 53:12;74:14;92:3;96:5,
stating (1) 160:16		stuff (1) 169:6	sunny (1) 141:23	
station (1) 15:24		Subhash (13) 137:20,22;140:17, 19;143:4,8,8;166:1,4; 177:9,15,16,19	Sunpower (2) 106:9;126:18	
statistics (1) 134:14		subject (2) 42:13;90:14	sun-powered (1) 126:10	
status (2) 113:11;154:19		subjects (1) 70:3	Sunrun (1) 121:20	
statute (1) 46:10		submit (1) 155:2	sunshine (1) 142:20	
stay (7)			super (4) 99:17,25,25;100:5	
			super-high (1) 37:18	
			supplied (1) 156:25	

<p>12;103:8;106:3;111:7; 114:1;116:7,12; 117:16,20;120:21; 125:22;127:22;133:11; 137:22;140:18;143:6; 165:25;166:3;177:13, 14 switch (2) 156:24;173:6 switched (1) 115:8 system (41) 11:11;24:21;26:14; 31:19;47:13;50:9;55:5; 57:19;60:15;65:5,8; 81:13;91:4,8,12,14; 97:21;107:24;108:2; 109:13;112:6;113:9; 119:3;129:11;137:7,9; 141:18;142:12,15; 143:22;150:2,5,7; 158:10,15;161:19; 162:15;164:1;174:15; 176:9;182:16 systemic (1) 155:5 systems (20) 9:4,7,17;26:17; 27:21;67:3;88:12;90:9; 95:12;112:24;115:9; 126:12;131:15;148:11; 149:1,1,5;161:4;164:3; 176:6</p>	<p>TANNER (3) 133:17,20,23 Tanner's (1) 133:14 tap (1) 142:19 tapping (1) 22:16 taps (1) 23:4 target (2) 164:5,14 targeted (1) 23:9 targeting (3) 30:21;110:17,18 targets (1) 18:19 Tariff (10) 4:12;14:14;35:2; 58:16;115:5;152:13, 17;179:18;182:13,19 tariffs (2) 14:17;60:7 tasked (1) 151:16 tasks (1) 21:25 taught (1) 90:14 tax (7) 47:11,25;48:3;55:18; 155:20;158:3,11 taxes (2) 45:7;47:11 teach (1) 90:11 teacher (2) 82:7;141:3 teaching (1) 90:7 team (4) 17:8;35:12;54:15; 133:24 teams (1) 40:6 Technical (5) 12:22;20:12,22; 61:14;154:24 technically (1) 54:4 techniques (1) 76:8 technological (2) 85:8,14 technologies (7) 32:6;37:10,15;61:11; 63:2;93:12;128:11 technology (7) 57:15;60:5;81:11; 85:5;88:10;95:17; 101:16 technology's (1)</p>	<p>10:25 Telecommunications (1) 17:6 telling (1) 109:9 tells (1) 12:11 Temecula (1) 123:11 tempered (1) 105:5 temporary (1) 9:10 ten (10) 4:19;6:8;22:2,6; 44:19,22;82:21;90:3; 115:9;164:18 tenants (2) 68:22;103:24 tens (2) 80:12;129:21 tenure (1) 58:25 term (3) 22:24;83:7;160:18 terms (2) 149:11;153:23 territories (1) 21:1 territory (9) 10:1;89:22;96:17; 106:13,15,18;123:21; 124:10;140:6 Tesla (9) 30:17;31:1;66:23,24; 67:11;102:19;104:18; 105:4;171:19 Tesla's (2) 30:20;66:25 tested (1) 157:8 testifying (1) 138:21 testimony (2) 4:21;119:7 testing (1) 122:25 thankful (1) 29:5 thanking (2) 67:4;70:1 Thanks (4) 52:2;58:8;72:3; 81:20 themes (2) 25:17,18 theoretically (1) 141:23 therefore (3) 102:5;124:7;133:4 thermal (3) 25:1;174:1,2 thermostat (2)</p>	<p>34:7,16 thinking (6) 36:22;37:4;67:7; 171:1;172:20;177:22 Third (3) 14:8;45:20;60:16 thorough (1) 156:10 though (1) 141:22 thought (9) 21:18;26:9;31:6; 33:15;65:5;98:11; 170:25;180:8;181:6 thoughtful (3) 65:2;77:21;97:14 thoughts (1) 173:20 thousands (6) 28:8,8,8;80:12; 126:14;129:21 threatening (1) 150:19 threatens (2) 114:22,24 three (17) 4:21;9:5;19:21; 52:20;59:21;78:2;82:8; 90:22;119:22;121:6; 123:4;127:12;149:8; 168:7,9;171:20;177:11 thriving (1) 17:20 throughout (12) 12:1;57:22;64:18; 68:15;69:7;74:8;76:23; 81:19;87:21;89:21; 94:9;141:10 TID (1) 168:14 tied (3) 28:14;41:8;126:22 tier (1) 161:18 ties (1) 18:3 tile (1) 105:1 time-of-day (6) 45:12;49:1;138:22; 139:11;172:18,23 Time-of-Use (5) 48:20,22,25;172:5,5 timer (11) 43:4,9,11,18,21;44:1, 5,8,12;48:5,9 times (11) 9:5;34:1;62:17; 90:22;119:10,11; 120:25;159:20;160:10; 169:10;171:21 time's (1) 33:10</p>	<p>timing (3) 43:19;168:3,6 tiny (1) 159:24 tips (2) 42:10;76:7 TOD (3) 153:13,17,18 Today (16) 8:19;9:5,12;17:21; 75:15,17;76:7;84:9; 90:3;99:25;119:10; 120:14;128:25;143:18; 145:17;173:21 today's (1) 4:20 Together (8) 8:12;10:13;58:5; 75:22;81:21;130:10; 162:22;180:9 told (3) 46:22;119:10;178:2 Tom (1) 160:15 Tomorrow (3) 84:19,19;85:1 ton (1) 32:8 TONI (1) 121:11 tonight (33) 5:20,22;6:2,7,23;7:3; 11:24;13:14;22:11; 23:12;42:12;44:20; 45:6,23;46:3;49:3,6; 57:4;59:16;61:1;65:6; 66:5;74:9;88:1;99:25; 101:7;114:19;122:6; 141:6,9;143:1;144:19; 166:13 tonight's (2) 7:21;11:18 tons (1) 102:17 took (4) 20:20;26:8;32:4; 109:12 tool (2) 108:8;146:11 toolkit (1) 54:2 tools (1) 38:13 top (6) 27:22;37:24;106:14; 149:23;153:12;170:9 topic (1) 90:11 topics (1) 41:5 total (5) 44:19,21;91:3; 123:20;170:7</p>
T				
<p>table (1) 15:19 tag (2) 26:25;27:1 tailwinds (1) 29:19 talent (1) 87:1 talk (24) 7:3;8:17;17:16; 21:21;23:8;24:23;34:3; 35:1,7;46:25;70:25; 78:13;82:18;99:8,9; 100:1,1,7,13,20,22; 104:22;168:6;178:22 talked (5) 31:5;36:6;83:7; 107:7;169:15 talking (5) 49:5;58:15;83:3; 116:22;175:13 talks (2) 20:9;22:15 Tamayo (7) 44:21;174:10,11; 175:11,18;176:12; 177:4</p>	<p>TANNER (3) 133:17,20,23 Tanner's (1) 133:14 tap (1) 142:19 tapping (1) 22:16 taps (1) 23:4 target (2) 164:5,14 targeted (1) 23:9 targeting (3) 30:21;110:17,18 targets (1) 18:19 Tariff (10) 4:12;14:14;35:2; 58:16;115:5;152:13, 17;179:18;182:13,19 tariffs (2) 14:17;60:7 tasked (1) 151:16 tasks (1) 21:25 taught (1) 90:14 tax (7) 47:11,25;48:3;55:18; 155:20;158:3,11 taxes (2) 45:7;47:11 teach (1) 90:11 teacher (2) 82:7;141:3 teaching (1) 90:7 team (4) 17:8;35:12;54:15; 133:24 teams (1) 40:6 Technical (5) 12:22;20:12,22; 61:14;154:24 technically (1) 54:4 techniques (1) 76:8 technological (2) 85:8,14 technologies (7) 32:6;37:10,15;61:11; 63:2;93:12;128:11 technology (7) 57:15;60:5;81:11; 85:5;88:10;95:17; 101:16 technology's (1)</p>	<p>10:25 Telecommunications (1) 17:6 telling (1) 109:9 tells (1) 12:11 Temecula (1) 123:11 tempered (1) 105:5 temporary (1) 9:10 ten (10) 4:19;6:8;22:2,6; 44:19,22;82:21;90:3; 115:9;164:18 tenants (2) 68:22;103:24 tens (2) 80:12;129:21 tenure (1) 58:25 term (3) 22:24;83:7;160:18 terms (2) 149:11;153:23 territories (1) 21:1 territory (9) 10:1;89:22;96:17; 106:13,15,18;123:21; 124:10;140:6 Tesla (9) 30:17;31:1;66:23,24; 67:11;102:19;104:18; 105:4;171:19 Tesla's (2) 30:20;66:25 tested (1) 157:8 testifying (1) 138:21 testimony (2) 4:21;119:7 testing (1) 122:25 thankful (1) 29:5 thanking (2) 67:4;70:1 Thanks (4) 52:2;58:8;72:3; 81:20 themes (2) 25:17,18 theoretically (1) 141:23 therefore (3) 102:5;124:7;133:4 thermal (3) 25:1;174:1,2 thermostat (2)</p>	<p>34:7,16 thinking (6) 36:22;37:4;67:7; 171:1;172:20;177:22 Third (3) 14:8;45:20;60:16 thorough (1) 156:10 though (1) 141:22 thought (9) 21:18;26:9;31:6; 33:15;65:5;98:11; 170:25;180:8;181:6 thoughtful (3) 65:2;77:21;97:14 thoughts (1) 173:20 thousands (6) 28:8,8,8;80:12; 126:14;129:21 threatening (1) 150:19 threatens (2) 114:22,24 three (17) 4:21;9:5;19:21; 52:20;59:21;78:2;82:8; 90:22;119:22;121:6; 123:4;127:12;149:8; 168:7,9;171:20;177:11 thriving (1) 17:20 throughout (12) 12:1;57:22;64:18; 68:15;69:7;74:8;76:23; 81:19;87:21;89:21; 94:9;141:10 TID (1) 168:14 tied (3) 28:14;41:8;126:22 tier (1) 161:18 ties (1) 18:3 tile (1) 105:1 time-of-day (6) 45:12;49:1;138:22; 139:11;172:18,23 Time-of-Use (5) 48:20,22,25;172:5,5 timer (11) 43:4,9,11,18,21;44:1, 5,8,12;48:5,9 times (11) 9:5;34:1;62:17; 90:22;119:10,11; 120:25;159:20;160:10; 169:10;171:21 time's (1) 33:10</p>	<p>timing (3) 43:19;168:3,6 tiny (1) 159:24 tips (2) 42:10;76:7 TOD (3) 153:13,17,18 Today (16) 8:19;9:5,12;17:21; 75:15,17;76:7;84:9; 90:3;99:25;119:10; 120:14;128:25;143:18; 145:17;173:21 today's (1) 4:20 Together (8) 8:12;10:13;58:5; 75:22;81:21;130:10; 162:22;180:9 told (3) 46:22;119:10;178:2 Tom (1) 160:15 Tomorrow (3) 84:19,19;85:1 ton (1) 32:8 TONI (1) 121:11 tonight (33) 5:20,22;6:2,7,23;7:3; 11:24;13:14;22:11; 23:12;42:12;44:20; 45:6,23;46:3;49:3,6; 57:4;59:16;61:1;65:6; 66:5;74:9;88:1;99:25; 101:7;114:19;122:6; 141:6,9;143:1;144:19; 166:13 tonight's (2) 7:21;11:18 tons (1) 102:17 took (4) 20:20;26:8;32:4; 109:12 tool (2) 108:8;146:11 toolkit (1) 54:2 tools (1) 38:13 top (6) 27:22;37:24;106:14; 149:23;153:12;170:9 topic (1) 90:11 topics (1) 41:5 total (5) 44:19,21;91:3; 123:20;170:7</p>

totally (2) 34:6;99:9	28:12;29:13	Typically (2) 7:14;104:7	33:1;93:7;22	66:19;68:9;69:19;72:7; 74:13;77:9;79:16; 81:25;84:12;86:21; 89:12;92:2;94:19;96:4; 11:97:7;99:3;101:20; 103:7;106:2;109:1; 111:6;113:25;121:10; 122:14;125:21;127:21; 130:21;133:10;136:6; 137:21
tout (1) 71:19	tricky (1) 172:4	U	uneconomical (2) 102:25;129:12	81:25;84:12;86:21; 89:12;92:2;94:19;96:4; 11:97:7;99:3;101:20; 103:7;106:2;109:1; 111:6;113:25;121:10; 122:14;125:21;127:21; 130:21;133:10;136:6; 137:21
toward (2) 16:19;65:11	tried (2) 28:7;134:11		UC (1) 78:20	unfair (1) 126:22
towards (2) 28:14;125:15	triggers (1) 6:7	Uhlen (1) 171:1	unfortunately (2) 78:21;121:6	103:7;106:2;109:1; 111:6;113:25;121:10; 122:14;125:21;127:21; 130:21;133:10;136:6; 137:21
track (3) 7:19;59:8;124:18	trim (1) 66:15	Uhler (30) 53:9,11,13;111:9; 113:23;114:2;116:6; 10,10,11,14,16,20; 117:4,6,12,16,18,23; 118:16;119:9,12,17,24; 120:5,9,16,19,22;182:5	unhappy (1) 172:7	103:7;106:2;109:1; 111:6;113:25;121:10; 122:14;125:21;127:21; 130:21;133:10;136:6; 137:21
Tracy (4) 81:24;82:1,2,6	troubling (1) 62:6	Uhler's (2) 180:22;182:3	unique (3) 10:4;25:9,9	103:7;106:2;109:1; 111:6;113:25;121:10; 122:14;125:21;127:21; 130:21;133:10;136:6; 137:21
trade (1) 53:22	true (9) 22:8;43:7,14;76:9; 97:24;107:16;115:7; 154:15;176:23	ultimate (1) 100:18	unit (7) 18:6;23:8;24:3;28:4; 31:14;34:19,20	update (2) 35:2;138:1
traded (1) 137:9	truly (6) 20:2;33:14;127:13; 136:21,25;137:17	ultimately (2) 11:20;74:4	United (4) 95:12;103:18; 104:22;105:2	updates (3) 14:15;179:19,20
traditional (2) 18:8;25:2	truthful (1) 46:13	UMEMOTO (3) 138:5,8,12	units (4) 30:15,23,25;73:24	upfront (1) 139:12
traditionally (1) 88:18	try (4) 35:16;137:25;143:7, 11	unable (1) 41:9	unjustified (1) 132:22	upgrades (1) 81:14
trained (1) 39:8	trying (9) 25:23;43:3,9;64:3; 137:23;165:1;170:6; 173:19;180:15	unattractive (2) 9:25;104:3	unless (2) 148:18;181:24	upgrading (1) 154:16
training (4) 74:24;80:3;87:19; 90:10	tuition-free (1) 74:21	unavailable (1) 115:13	unlike (2) 7:17;32:22	upon (5) 130:8;139:6,11,23; 149:18
transcribed (3) 4:3,16;184:9	Turlock (1) 19:20	unblocking (1) 24:3	unlock (2) 18:5;28:3	upside-down (1) 115:9
transform (4) 11:3,4;18:25;164:14	turn (7) 12:18;13:8;37:21; 38:2;77:23;156:25; 157:20	uncertainty (2) 145:11;150:12	unmute (5) 92:4;96:14;121:13; 126:7;133:16	urge (6) 60:23;108:22; 129:25;141:13;143:18; 163:11
transformational (1) 7:6	turned (1) 41:1	unconstitutional (2) 45:14;132:16	unprompted (1) 36:23	usable (1) 62:21
transformative (1) 162:23	twice (1) 181:21	under (15) 4:17;31:13;32:1; 51:25;66:6,10;95:15; 112:20;124:15,17; 126:24;134:20;146:13; 148:6;160:19	unstable (1) 131:24	usage (5) 22:18;32:9;55:1; 150:2;170:7
transformed (1) 11:4	two (22) 7:16;11:14,18,25; 12:9;13:17;17:9;18:1; 20:9;31:5;45:18;84:15; 85:3;117:10;127:5; 146:16;150:20;155:12; 156:21;167:5;178:14; 181:25	underlying (1) 122:4	unusual (2) 5:21;40:13	use (24) 34:17;36:1;46:14,15, 18;48:19;51:13;55:11; 62:6;76:8;83:7;87:9; 102:3;121:1,5;139:11; 144:13;146:5;147:12; 158:16;159:12;160:6; 161:21;168:25
transition (8) 9:14;13:3;18:10,12; 66:7;67:1;93:11; 106:24	two-step (1) 6:12	underpinnings (1) 90:16	up (68) 4:20;14:11;20:12; 21:20;22:4,5;24:22; 25:21;31:4;36:7,44;2; 46:8;52:4,19,22;56:12; 58:10;61:3,25;63:15; 64:22;65:16;66:18; 68:8;69:18;72:6;74:12; 77:8;79:15;81:24; 84:11;86:20;89:11; 92:1;93:14;94:18;96:3; 97:6;99:2;101:19; 102:21;103:6;106:1; 107:13;108:25;111:5; 112:25;114:22;116:4; 118:25;122:13;125:20; 127:20;130:20;131:23; 133:9;136:5;137:20; 140:20;143:4;144:25; 147:11;160:2;170:13, 14;175:13;178:22; 179:10	used (9) 16:10;38:9;129:9; 137:6,8;146:23; 147:13;150:9;175:17
transitioned (2) 19:21;113:13	two-thirds (2) 47:25;65:14	underrepresented (1) 83:15	unusually (1) 137:4	useful (1) 55:4
translate (3) 12:3;16:21;39:7	two-X (1) 19:12	under-resourced (10) 19:17;23:10;27:8; 37:11,13;41:20;74:23; 77:5;93:19;163:9	unusually (1) 137:4	users (4) 102:7;140:11; 161:16,18
Transmission (6) 4:12;14:14;35:2; 108:21;137:3;179:18	two-year (1) 67:6	underserved (8) 57:1,9;64:14;72:19; 75:25;76:15;80:10; 93:17	unusually (1) 137:4	uses (1) 38:13
transmit (1) 50:12	type (3) 15:9;60:14;77:22	understands (1) 27:3	unusually (1) 137:4	using (10) 87:6;102:4,8;136:24; 137:24;161:8;174:19; 175:12,19,23
transparency (1) 148:16	typed (1) 171:25	undertaking (1) 59:18	unusually (1) 137:4	usual (1) 148:17
transparent (2) 32:18;83:23	types (1) 37:10	undo (1) 134:12	unusually (1) 137:4	usually (6) 169:3,5,22;170:3,3; 180:6
transparently (1) 163:6	typical (2) 16:10;91:10	undue (3)	unusually (1) 137:4	Utah (4)
transportation (1) 80:1				
travels (1) 156:18				
trees (2) 178:9,10				
tremendous (1) 20:5				
trend (2)				

<p>124:11,13,19;134:10 utilities (22) 11:7;16:14;46:14,17, 18;51:14;58:22,24; 69:13;82:17;96:22; 136:19;137:7;140:1,3; 141:21;144:12;146:24; 149:3,7;155:6;176:16 utility (28) 7:10;16:10;37:3; 54:8;61:17;72:15;73:6, 7;82:12;90:5;95:15,16; 98:24;100:16,25; 130:11,12;132:18; 135:9,10,11,18;140:3; 149:18;150:23;151:16; 155:7;165:1 utility-scale (6) 8:25;61:10;62:8; 65:20;95:18;148:7 utility-scaled (1) 108:20 utility-sized (1) 25:11 utilize (2) 87:15;159:2</p>	<p>136:15;166:21,25 vast (1) 26:17 Vedante (1) 177:21 vegetative (1) 80:17 vehicle (8) 21:14;68:18;91:9; 112:20;141:20;170:20, 24;171:1 vehicles (2) 65:12;67:2 vendors (1) 69:14 venues (1) 78:12 version (2) 137:24;143:10 versus (3) 95:18;157:12;174:7 veteran (1) 61:8 via (1) 42:9 viable (2) 113:5;151:5 Vibrant (1) 102:12 victims (1) 63:23 video (1) 117:7 view (5) 60:15;112:9;114:22; 145:18;157:24 vigorous (1) 156:5 Vincent (2) 111:5,8 violates (2) 47:12;129:23 violation (1) 49:21 violence (1) 63:23 virtual (24) 22:19,23;28:2;29:18; 30:7;31:18;32:7;35:22; 36:13;37:8,16;56:6; 67:18;69:2;73:20; 88:20;108:7;143:21; 148:13;152:4;159:12; 163:7,15;167:20 Vision (10) 92:10,13,19,23,24; 94:11;99:14;107:3; 125:16;145:20 Vision's (1) 92:24 vital (1) 108:3 VNEM (12)</p>	<p>22:22;23:8;37:17; 41:18,19;74:1;115:13; 163:7,12;167:19; 168:21,21 vogue (1) 79:5 voice (12) 53:23;114:25;145:2; 146:15;149:8;151:23; 154:21;157:16;160:14, 24;162:18;164:18 voided (1) 25:3 Volume (5) 4:12;124:9,12; 179:14,18 Volumes (1) 4:9 voluntarily (1) 153:10 vote (5) 11:20;42:4;47:9; 163:2;164:4 voter (4) 47:4,7,8;164:24 voters (1) 48:1 votes (1) 49:7 vouchers (2) 64:2,2 VPP (2) 31:17;164:7 vulnerable (4) 64:14;73:15;87:5,25</p>	<p>137:3 watch (1) 114:16 watching (1) 151:22 water (3) 76:3;95:5;146:23 way (19) 7:15;8:7;10:18; 21:14;28:6;50:1;51:14; 52:19;58:20;70:5; 71:10;100:24;106:23; 112:21;119:2;149:18; 160:2;164:15;175:2 ways (5) 55:1;56:5;71:11; 76:4;93:17 wealthier (1) 60:3 wealthy (3) 101:13;107:15; 129:18 weatherization (1) 72:12 WEAVE (3) 63:18;64:8,19 web (1) 161:13 website (2) 39:6;147:2 week (1) 124:23 weekend (1) 153:1 weeks (1) 85:6 weigh (1) 145:5 welcomed (1) 107:24 well-established (2) 65:18;114:19 wellness (1) 80:2 weren't (2) 40:14;118:24 Western (3) 103:17;104:8,25 West-Heiss (2) 133:9,13 what's (8) 10:10;32:22,24; 35:10;43:12;62:18; 143:1;182:18 Wheels (1) 80:5 wheeze (1) 75:15 whole (2) 77:2;135:16 whole-house (1) 113:3 wholesale (3)</p>	<p>62:11;65:20;104:9 whose (1) 72:24 who've (1) 56:3 wide (2) 39:3;41:4 widened (1) 85:21 widest (1) 38:23 Wiechert (1) 160:15 wildfire (7) 14:25;50:18,21;51:7; 80:16;93:10;165:9 wildfires (2) 108:22;142:22 willing (5) 32:5;36:9;55:13; 104:14;119:5 willingness (1) 67:6 Wind (3) 65:1,20;76:6 windfall (1) 155:23 window (1) 128:9 windows (2) 95:21;105:6 wings (1) 166:15 Winograd (4) 140:21,22,25;141:2 winter (1) 73:11 win-win (7) 21:20;22:5,10;36:3, 4;54:17;101:11 wires (2) 135:12,16 wish (2) 64:8;72:16 wishes (1) 164:22 within (7) 13:21;20:25;64:12; 81:5;106:13;123:20; 124:10 without (9) 18:7;45:18;47:25; 66:3;68:2;93:7;118:9, 23;159:14 witnessing (1) 87:24 Wonderful (3) 121:18;133:21;145:1 wondering (1) 174:14 word (1) 25:17 words (3)</p>
V		W		
<p>vaccination (1) 78:22 Valley (6) 92:9,13,19,24;94:11; 99:14 valuable (1) 27:10 value (36) 18:6;19:12,14;20:17, 17,21,25;21:3,3;24:3, 24;28:4;55:2,12,24; 56:5;61:13;97:25; 101:9;111:22;125:1; 132:23;133:1;134:22; 145:9,12,17;154:24; 156:8;173:16,17,23; 174:3,6;175:6,7 value-based (1) 10:9 valued (2) 8:22;54:1 values (3) 56:7;75:9;109:24 valuing (1) 145:19 van (4) 103:10,12,15,16 varied (1) 41:4 varies (1) 16:4 variety (1) 38:13 various (3)</p>	<p>wages (1) 81:3 wait (3) 23:23;118:11;131:22 waiting (5) 43:9;125:10;147:5; 166:15;168:3 walk (2) 15:11;104:24 walks (1) 126:14 wants (5) 35:25;101:6;158:25; 162:16;178:22 warming (2) 102:16;146:9 warning (2) 44:2,13 warrant (1) 40:11 warranted (1) 94:4 warranty (1) 131:15 wasteful (1)</p>			

<p>62:13;71:2;95:14 work (25) 8:3;22:4;41:22; 52:22;56:10;58:5; 59:15;67:5,19;70:10; 71:1,22;82:8,9,14;88:7; 17;106:13,16;108:17; 131:22;134:6;138:14; 162:22;169:8 workable (1) 72:1 worked (5) 8:5;9:11;62:24;86:8; 98:7 workers (1) 130:15 workforce (1) 85:23 Working (15) 12:22;17:8,10;20:12, 22;43:11;75:21;85:20; 87:21;98:20;100:9; 150:12;154:24;156:11; 161:20 working- (1) 102:25 works (2) 37:18;55:16 workshops (3) 11:18;40:23;41:3 world (6) 30:24;33:14;63:1,4; 86:13;136:21 world-changing (1) 88:25 world's (2) 30:19;67:1 worry (1) 31:8 worst (1) 110:11 worth (2) 111:3;163:18 wow (1) 105:15 wrap (1) 44:2 writing (1) 149:9 written (2) 144:21;165:21 wrong (1) 116:2 wrote (1) 44:24</p>	<p>Year (41) 15:10,18;16:1,2,22; 27:1,1;29:14,14;30:3, 22;59:7;70:7,17;82:8, 10;83:2;86:24,25;87:4, 21,23;97:13,13; 113:20;123:19;124:18; 126:25;131:3,4;133:6, 6,7;139:10;147:21; 148:5;149:13;152:19; 153:15;154:3;160:9 year-round (1) 74:21 years (68) 11:15;17:9,18,21; 19:5,21;20:9;23:23; 24:9;26:5,5,6;27:22, 24;28:5,17,18;31:22; 45:18;50:20;57:4;59:2; 63:19;65:14;68:14,20; 72:15;75:22;77:16; 78:2,5;79:21;80:13; 82:21;85:3;86:8;90:3, 15;91:2,4,5;92:12,18; 95:11;102:15;105:1,2, 7;109:12,15;113:19; 114:15,18;115:5,9; 125:1;126:13;127:2; 129:5,8;131:14;132:5, 11;134:25;136:14,17; 137:7;138:13 year's (1) 91:11 year-to-date (2) 29:12;30:1 yesterday (1) 45:1 You're (1) 165:2 young (9) 84:20;85:1,4,14,25; 86:3,11,12;151:21 younger (1) 75:16 youth (5) 74:23;75:3,17,20; 77:5</p>	<p>1 1 (14) 4:9,12;13:18;98:12, 13,16,19;124:18; 129:22;179:15,15,18; 182:13,18 1,157 (1) 30:2 1.0 (15) 14:3;17:17;19:6,21; 23:13,15;26:2;31:13; 32:1;115:1;124:22; 126:21;155:7,19;156:1 1.2 (1) 123:20 1.5 (3) 13:18;48:16;73:1 1.67 (1) 86:5 10 (5) 28:18;91:5;113:19; 149:1,2 100 (9) 16:15;22:18;105:7; 109:18,19,19;136:21; 137:7;169:18 11 (2) 28:17;124:25 11.5 (1) 107:22 110 (5) 23:3;91:11;169:5,14, 17 1139 (1) 140:7 11th (1) 48:12 12 (4) 28:5;91:5;129:5; 157:12 12/31/2030 (1) 26:15 120 (2) 102:15;134:25 1200 (1) 39:19 125 (1) 27:11 12th (1) 100:9 12-year (2) 28:9,16 13 (5) 8:20;19:13;61:17; 109:12;171:21 135 (1) 135:21 14 (2) 91:4;131:14 1400 (1) 106:11</p>	<p>14403.5 (1) 119:7 15 (3) 26:5;44:25;129:7 15-1 (2) 6:9;44:23 16 (1) 126:13 16th (3) 6:10;11:20;42:4 17 (1) 106:13 17th (4) 4:10,13;179:15,18 18 (3) 11:14,17;44:24 18th (1) 59:6 1960s (2) 75:11,11 1972 (1) 79:22 1998 (4) 9:3,9;19:2;107:15 19th (1) 75:4 1st (5) 13:20,25;14:10; 23:18;24:17 2 2 (10) 4:7,10;13:19;21:6; 48:16;58:15;73:1; 124:17;131:5;132:17 2,000 (2) 27:8;85:1 2.0 (20) 29:4,6;97:12;98:11, 14;107:5;116:1;124:3, 6,23;125:3,7;146:18; 147:1,19,22;148:10; 155:1;156:14,19 2.0's (1) 97:22 2.6 (1) 135:3 20 (13) 15:22;20:13;26:5; 65:14;68:20;78:5; 106:14;109:15;114:15; 115:5;127:2;132:11; 171:21 20,000 (2) 112:8;139:12 200,000 (1) 30:23 2000 (1) 82:16 2011 (2) 123:11;153:8 2013 (1)</p>	<p>84:22 2014 (1) 28:6 2015 (1) 28:6 2016 (1) 28:6 2017 (2) 19:4;29:6 2018 (3) 29:22;48:19;135:4 2019 (9) 20:11;22:16;40:20; 44:22;46:4,21;100:8,9; 164:25 2020 (4) 21:17;47:16,17; 124:16 2021 (5) 26:11;29:11;30:2,20; 124:12 2021-22 (1) 145:6 2022 (12) 13:19;14:1,10;15:10, 17;16:1;23:18,25; 24:17;30:22;98:13; 163:13 2023 (8) 13:20;15:10,18;16:2; 98:12,16,19;173:2 2029 (1) 126:23 2030 (39) 9:21;13:23;14:5; 16:16;18:4,17;21:12, 16;23:15;26:4,7,13,25; 32:3;41:16;69:1;71:17, 18;77:2;88:24;92:23; 93:7;98:6;108:1; 109:20;110:24;113:17, 20;115:2;124:23; 125:15;139:15;141:22; 147:20;151:11;164:4, 6;173:16;174:1 2031 (2) 129:22;172:12 20-plus (1) 17:21 20-something (1) 113:19 21 (1) 107:22 22 (1) 28:15 23 (2) 17:18;28:15 24 (4) 20:17;101:9;123:12; 160:7 25 (2) 92:12;106:16 250 (1)</p>
<p>X</p>	<p>Z</p>	<p>1400 (1) 106:11</p>	<p>2013 (1)</p>	<p>250 (1)</p>
<p>XIII (3) 45:8;47:3,12</p>	<p>Zaro (2) 96:13,15 Zaro's (1) 96:8 zero (16) 7:20;18:4;21:12,16; 32:3;33:8;54:6;69:2; 77:1;88:3,24;92:23; 107:3;147:24;154:12; 174:5 Zoom (3) 137:24;138:1;143:10</p>	<p>1400 (1) 106:11</p>	<p>2013 (1)</p>	<p>250 (1)</p>
<p>Y</p>	<p>Zoom (3) 137:24;138:1;143:10</p>	<p>1400 (1) 106:11</p>	<p>2013 (1)</p>	<p>250 (1)</p>

113:18 256,000 (1) 39:16 26 (9) 49:22;50:1;51:16,25; 63:19;98:9;132:16,18, 20 299 (1) 15:22 2s (1) 86:6		630 (2) 22:10,13 65 (1) 123:18 656 (1) 138:16	900 (1) 106:18 90-year-old (1) 150:9 95 (1) 26:14 990 (1) 123:16
3	4	7	
3 (8) 21:1;61:18;65:22; 105:14;157:11;173:25; 174:7;179:11 3- (1) 171:22 3.0 (1) 19:23 3.5 (1) 8:25 3:00 (1) 139:11 30 (10) 6:22;24:11;57:4; 65:14;77:16;102:15; 105:2;134:25;136:14; 171:21 30,000 (6) 14:11;18:17;32:10; 154:11;164:2,6 300 (4) 17:22;18:16;39:23; 105:1 31 (1) 47:17 31st (3) 9:21;26:11,12 327 (1) 129:23 34,000 (1) 104:19 340 (1) 40:22 35-year-old (1) 106:10 36,000 (4) 17:22;26:17;27:2,7 365 (1) 139:10 370 (1) 106:16 39,000 (1) 147:19 39th (1) 77:14 3a (2) 179:16,20 3b (2) 179:15,16	4 (4) 62:5;102:16;121:22; 157:12 4,300 (1) 147:21 4:00 (6) 172:4,4,10,20;173:1, 6 40 (6) 5:10;20:15;22:1; 26:6;30:9;171:19 400 (1) 171:22 40th (1) 131:3 40-year (1) 61:8 425-watt (1) 124:25 43 (1) 128:17 44 (1) 41:2 47 (1) 40:24 49 (3) 39:25;79:21;80:13 4th (1) 77:14	7 (5) 8:23;65:23;173:25, 25;174:7 7.4 (17) 19:15;21:1,3;24:6, 23;25:7,12;29:8;62:10; 97:22,24;98:1;111:21; 112:1;131:8;148:1; 173:24 7.6 (1) 29:7 7:00 (7) 139:11;172:4,4,11, 20;173:1,6 70 (1) 123:17 75 (1) 153:9 750 (2) 15:15;177:24 7500 (1) 32:11	
	5	8	
	6	9	
	5 (2) 65:22;163:25 5.98 (1) 29:23 5:00 (5) 172:5,11,21,24; 173:6 5:30 (1) 4:1 50 (2) 34:25;134:20 50,000 (1) 78:23 55 (2) 40:1,3 58,000 (1) 104:21	8.7 (1) 31:20 8:00 (5) 172:5,11,21,24; 173:7 80 (1) 147:4 80,000 (1) 134:1 81 (1) 133:25 85 (2) 175:5,7	
	6 (1) 124:15 60 (1) 106:12 600 (1) 95:2 600,000 (1) 12:8	9 (1) 48:17 9.2 (5) 45:10;46:1;48:23; 49:2;124:14 9.9 (2) 31:15,21 9:00 (1) 181:9 9:12 (1) 184:8 90,000 (1) 164:11	