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NORTHWEST POWER AND CONSERVATION COUNCIL

SEVENTH DRAFT POWER PLAN

PUBLIC HEARING

TRANSCRIPT OF PROCEEDINGS

**TAKEN ON
WEDNESDAY, DECEMBER 16, 2015
6:30 P.M.**

**EWEB BUILDING
500 EAST FOURTH AVENUE
EUGENE, OREGON**

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APPEARANCES

NORTHWEST POWER & CONSERVATION COUNCIL:

BILL BRADBURY, OREGON

HENRY LORENZEN, OREGON

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COUNCILMAN LORENZEN: Welcome everyone.

I'll first read a formal opening statement. I should also say that this meeting is not -- this meeting is not being held out at the service center which I just visited. But welcome, you found the right place but I did not, but eventually I made it here.

I have to read --

AUDIENCE MEMBER: A little louder.

COUNCILMAN LORENZEN: Okay. I have to read an opening statement. This will be very exciting.

Welcome to the public hearing held by the Northwest Power Conservation Council on the Council's proposed Seventh Northwest Power Plan. The Northwest Power Act directs the Council to develop a regional conservation electric power plan,

1 to review that plan every five years. The Council
2 is now engaged in its latest five year power plan
3 review. As part of this effort, the Council
4 releases the draft revised plan on October 20 for
5 public review and comment.

6 Council will be accepting written comment
7 on the Draft Power Plan until December 18th.
8 Council will also hold public hearings, like this
9 one, to receive oral comments on the Draft Plan at
10 all four northwest states over the next six weeks.
11 Well, this is not quite accurate because this is the
12 last of the meetings.

13 If you would like to comment on the Draft
14 Power Plan at this hearing, please sign in on a
15 sheet provided for that purpose. You may also leave
16 written comments with us this evening if you desire.
17 Comments tonight will be recorded, placed on the
18 Council's administrative record for the Power Plan
19 review, most importantly considered carefully by the
20 Council who makes its decision on the final Power
21 Plan early in 2016. The same is true for all
22 written comments submitted to the Council.

23 Those of you who testify this evening,
24 your name will be called in the order you signed up.
25 Please begin your testimony by stating your name and

1 organization clearly for the benefit of our court
2 reporter. Feel free to summarize your testimony.
3 Your full written statement will be included in the
4 official record. In the likely event that we have
5 more willing witnesses than available time, we might
6 have to establish a time limit for each witness, but
7 we hope that won't be necessary.

8 We will leave the official record open for
9 a period of ten days following the hearing to enable
10 witnesses to submit additional written information
11 including any material that might be requested by
12 Council members. All public comments submitted to
13 the Council including the oral testimony at tonight's
14 hearing will be posted on the Council's website as
15 soon as possible.

16 For more information on the proposed
17 Seventh Power Plan including the text of the Draft
18 Plan itself, please visit the Council's website at
19 www.nwcouncil.org.

20 You may submit comments by using the
21 "Provide Comment" link on the web page devoted to
22 the Draft Seventh Power Plan. Thank you.

23 Okay. Well, thank you very much. And
24 we've -- I'll call -- actually four people signed
25 up.

1 **MR. BRADBURY:** Don't forget Tom.

2 **COUNCILMAN LORENZEN:** What am I supposed
3 to do with Tom?

4 **MR. ECKMAN:** Kick him out.

5 **COUNCILMAN LORENZEN:** I'll make
6 introductions here. Tom Eckman is Director of our
7 power division. What's that?

8 **MR. BRADBURY:** He's going to show a --

9 **COUNCILMAN LORENZEN:** Oh. Got it. All
10 right. Thank you. I'm a little harried tonight.
11 Thank you very much. And then to my right is Bill
12 Bradbury, the other Oregon Council member to the
13 Power Planning Council. And so I believe --
14 probably my hunch is most of you have seen these
15 presentations but it never hurts to have another
16 review. And so with that, Tom, I'm sorry for
17 slighting you, but go ahead and make your
18 presentation, please.

19 **MR. ECKMAN:** All right. This is going to
20 be relatively short so that we can get to your
21 comments. This is to remind you and what the Power
22 Plan's requirements are and a little bit about why
23 we go through what we go through to present to you a
24 regional power plan.

25 We have a charge under the Northwest Power

1 and Conversation Act of 1980 to ensure a reliable
2 and economical regional power system over the next
3 20 years. That is a statutory requirement. That is
4 our focus. It is not lots of other things that
5 people might like us to look at, but that's our
6 focus.

7 The plan basically guides the Bonneville
8 Power Administration in its resource decision-
9 making. When it needs the resources, it needs to
10 follow a plan consistently. The Plan has three
11 major elements. It has a forecast of future
12 electricity demand. It has an identity -- it
13 identifies a resource strategy that is both least
14 risk and least cost to meet the region's future
15 needs. And we update that Plan every five years.
16 So this is the seventh update since we first did the
17 Plan in 1983.

18 The key finding here, we have a stereo
19 view of the world. On the left-hand side of this
20 first chart is a resource stack that supplies --
21 that looks at the amount of energy on an annual
22 basis that we would supply by varying resource
23 types. That big green wedge in the bottom is energy
24 efficiency. It supplies in most all futures all of
25 the load grid that we need to meet in this region

1 for the next 20 years. On the right-hand side is
2 the winter peak, hourly peak requirement.

3 That is also being met largely by energy
4 efficiency and the next wedge up is demand response.
5 This is the first time that that resource shows up
6 in the Council's plan. It's again for peak energy,
7 not for annual average use. So that's the dominant
8 resource going forward between the two; energy
9 efficiency and demand response. We meet most of the
10 energy and peak capacity needs for this region for
11 the next two decades.

12 This chart represents the result of that.
13 So on the vertical axis is the amount of power
14 consumed in this region on an annual average basis.
15 It's about a little over 20,000 average annual
16 megawatts. Going forward along the bottom axis is
17 the years of the plan, starting in 2016 through
18 2035.

19 In the bottom, blue dark portion, is the
20 amount of residual demand that we would have for
21 electricity after we implement those two top wedges.
22 The green wedge is the amount of conservation that
23 we have in the plan. It total 4500 megawatts by the
24 time we get to 20-year end period. And that red
25 wedge is the amount of energy efficiency that's

1 going to be brought to us by federal standards that
2 were adopted since 2010, between 2010 and the end of
3 2014.

4 Those are -- they -- basically those
5 standards alone reduced regional oil growth about
6 1.1 percent to 0.8 percent. Independent of any
7 action we have to take going forward, those things
8 will occur. The green wedge is what the action plan
9 is all about developing.

10 We tested a full range, 20 different
11 scenarios. These just represent four of the
12 scenarios we tested and they pretty much cover the
13 range of experience that we see for energy
14 efficiency. The first three lines up there are on
15 top of one another. They are existing policy case
16 where we develop energy efficiency going forward and
17 retire the coal plants that are scheduled already
18 for retirement in this region: Boardman, Centralia
19 and the Valmy plant in Nevada.

20 The carbon cost risk case is where we
21 apply a carbon cost to the resources that we might
22 build going forward or operate in as existing of
23 somewhere between zero dollars and \$110 a metric
24 ton. The answer turns out in terms of net load
25 after efficiency to be the same answer. Right on

1 top of the first one.

2 In the third one we have low gas prices.

3 So we restricted the analysis to futures that the
4 average natural gas price would be below \$3.00 a
5 million metric tons, about \$2.85 for the next 20
6 years. And in that case, we also built the same
7 amount of energy efficiency and the net load was the
8 same. The high line, the highest line in that chart
9 is the lower conservation case where we said we'll
10 only build conservation up to the price of market
11 power. In that case we have no load growth through
12 2025 or 2030.

13 So for the first 15 years we have no load
14 growth. There's a little uptick at the end as we
15 don't develop enough conservation to continue to
16 meet load growth in its entirety through the 20-year
17 period, but we do for the first 15. That last
18 scenario, by the way, cost \$14 billion more than the
19 other ones, so it's not necessarily good outcome.

20 This is the carbon picture. We start at
21 the very top of this chart. With the amount of
22 carbon we will produce in 2035, if we averaged what
23 we did between 2000 and 2012. About 55 million
24 metric tons per year. The next line down, that's
25 bar chart, that goes up to 45 million metric tons a

1 year, is if we don't retire the coal plants that are
2 now scheduled for retirement.

3 If we don't retire Boardman, Centralia and
4 the Valmy plant, we would go forward with a resource
5 stacked. It would include the energy efficiency,
6 some renewables, and we'd get down to 45 million
7 metric tons from where we started at 55.

8 The next stack down takes those plants out
9 of the portfolio that are now scheduled to leave.
10 The resources at Boardman, Centralia and Valmy
11 disappears and we go from 45 down to 34 million
12 metric tons with their removals and the conservation
13 we have in the portfolio. Still around 4500
14 megawatts.

15 If we take that portfolio and subject it
16 just to a 35 percent RPS, that is no carbon taxes,
17 no coal retirements beyond those announced. We just
18 build 35 percent of the new fleet in the form of
19 renewable, we reduce the carbon emissions by about
20 five million metrics tons to 34. After that policy
21 was tested, we looked at carbon pricing policies.
22 And the next three bars are varying carbon pricing.
23 The carbon cost risk, the mid-range carbon and the
24 high-cost carbon, all three of those applied carbon
25 prices.

1 In the carbon risk case, they average
2 about \$50 a metric ton. In the carbon -- social
3 cost of carbon mid-range case, that gets up to about
4 \$60 a metric ton. And then the low case -- the
5 social cost of carbon high case, that reaches an end
6 point of about \$180 a metric ton. And that's what
7 we see in terms of carbon reduction when we price at
8 those price points throughout the forecast period.
9 We go down from -- go to 24 down to 18.

10 If we remove the remaining coal plants in
11 the region, we get down to that bottom line of 12
12 million metric tons. So that takes care of Colstrip
13 and Bridger and any other coal facility in the
14 region and inefficient natural gas. That's the best
15 we could do with current technology. It's an 80
16 percent reduction over the starting point.

17 The resource portfolio standards of 35
18 percent for RPS costs about \$34 million increment,
19 if we simply retire -- next one Chad -- retire all
20 the coal plants and replacing them without building
21 new resources other than replacing those coal
22 plants, it's about a \$20 billion recommital cost.
23 So there are different policies to reduce carbon.
24 Some are clearly more economically attractive than
25 others.

1 Resource strategy -- two slides and we're
2 done and it'll be your turn to talk. The energy
3 efficiency development called for in the Plan is
4 1400 average megawatts by 2021. 4500 by 2035. We
5 expect -- we wanted to increase the use of demand
6 response in this region to meet peak winter needs
7 when we have low water and cold temperatures.

8 We want to develop renewable resources,
9 particularly those renewable resources that bring
10 with them base load capacity that can be dispatched
11 to meet winter peak needs. The current resources we
12 have available, the solar, PV and utility scale, and
13 the wind, both in the Gorge and Montana don't
14 provide adequate winter peaking needs. And so
15 they're not very attractive and not very good fits
16 with what the problem is in the region which is
17 winter capacity.

18 On the resource strategy site front, site
19 natural gas. We use more of natural gas from
20 existing plants. That's the basic reason -- or the
21 basic resource we use to offset the known coal
22 retirements. Going forward, there's a very little
23 probability of needing new gas plants in this region
24 as a whole if we -- we use the existing natural gas
25 more.

1 If we have individual utilities with the
2 circumstances that can't reach the marketplace very
3 well because of transmission limitations or epic,
4 extraordinary conditions where they need to
5 integrate lots of additional renewables, there may
6 be a need for natural gas development in those
7 backyards.

8 Finally, with respect to regional resource
9 use, there's -- the region is treated as a whole in
10 our market model. If we divide it into public power
11 invest in utility power, the picture isn't the same
12 as the region. And if we don't share across those
13 boundaries, we end up developing additional
14 resources beyond our -- that we wouldn't need be --
15 to be developed if we were to share those resources
16 across public and private power.

17 Finally, Chad, we need to expand these
18 resource alternatives, as I said earlier,
19 particularly renewables and energy efficiency.
20 Renewable with less infrequent production. So
21 looking at geothermal wave energy and other non-
22 fossil fuel, non-carbon emitting generation. So
23 Henry.

24 **COUNCILMAN LORENZEN:** Thank you, Tom.

25 One of the findings of the modeling which

1 was -- I found quite interesting is that under the
2 existing conditions, the existing generating mix
3 that -- which also includes the closure of Boardman,
4 Centralia, and Valmy, in almost all circumstances,
5 the present system meets the emission requirements
6 established by the Clean Power Act.

7 Now -- which I found quite interesting.
8 And that is on the region-wide basis. Each state
9 comes in a little differently. Montana has a
10 particular problem because of the coal plant that's
11 located in Montana. But from a regional standpoint,
12 a four-state standpoint collectively, the generating
13 mix that now exists with the -- as I said, with the
14 exception of the closure of Boardman, Centralia and
15 Valmy, which is -- which is scheduled, it does, in
16 fact, meet the requirements of the Act.

17 First person to give testimony will be
18 Sandra Bishop. Seems to be a very formal setting
19 here with the dais and --

20 **MS. BISHOP:** So I get to be the tester of
21 the mic for a little bit.

22 **COUNCILMAN LORENZEN:** Absolutely.

23 **MS. BISHOP:** Thank you for allowing me to
24 address the Council tonight in this last public
25 hearing on the Seventh Power Plan. I have to

1 deviate a little bit from my remarks and say that I
2 was at the hearings in 1980, I just realized.

3 My name is Sandra Bishop. Address is 392
4 East Third Avenue, Suite 201, Eugene, Oregon. I was
5 born and grew up in the borthwest. I've traveled a
6 little bit but I've always returned. For ten years
7 between 1997 and 2006, I served as an elected
8 utility commissioner here EWEB, Eugene Water and
9 Electric Board.

10 Currently, I'm an individual member of the
11 Coalition made up of -- the Northwest Energy
12 Coalition, which is made up mostly of larger groups.
13 But in 1980, I was making my way as a free-lance
14 journalist or trying to. No one would buy the
15 articles about the Power Plan. So it's interesting.
16 I'm glad to be here tonight.

17 I'd like to go on record tonight with what
18 I agree with and what I think is missing in the
19 Seventh Plan. I appreciate and support the
20 increased use of energy efficiency to meet all new
21 power demand through 2025 at least. Increased use
22 of energy efficiency is money saving as well as
23 energy saving. The 4,500 average megawatts of new
24 energy savings over 20 years should be considered a
25 minimum goal of the Plan.

1 There should be no need for construction
2 of new natural gas plants, at least over the next
3 ten years or more in the region. And I think you've
4 already addressed that. Upgraded and more
5 sophisticated, or maybe just more transmission, and
6 more efficient power markets can bring this into
7 reality for specific utilities. I know the
8 conundrum is that regionally not needing new gas
9 plants has to be translated into how individual
10 utilities can be in that same position of not
11 needing those peaking gas plants.

12 Council seems to be saying in the Seventh
13 Plan that cutting carbon emissions by up to 80
14 percent can be accomplished at moderate costs.
15 That's very good. But the benefits aren't really
16 called out much in the Plan. More carbon reduction
17 can be realized by reducing the need for natural gas
18 plants in any feasible way. More carbon reductions
19 can be realized by shutting down coal plants.

20 And I just want to put in a little -- a
21 little asterisk here. I find it very interesting
22 that Montana is going to be saddled with the full
23 force of the shut down of the coal plants there.
24 Given that that's power going out regionally, it
25 would be nice to find an equitable way to share that

1 -- that kind of burden with Montana.

2 Making sure that low income and other
3 disadvantaged consumers get a share of any energy
4 efficiency or other savings seems to be a value that
5 the Council really holds fast to and I much
6 appreciate that. One thing that is conspicuously
7 absent is that there is not enough recognition of
8 the efficacy of using demand response to help meet
9 peak demand. Shifting wind consumer-used power can
10 make a significant difference and can assure more
11 reliability of the system and can avoid using more
12 or any natural gas-fired power to meet peak demand.

13 Specifically, the Seventh Plan needs a
14 target for demand response. A 700 to 1,000 megawatt
15 target should be called out in the Seventh Plan.
16 More emphasis and information and support for
17 renewable power sources would also be great to be
18 included in the Plan. Easily said.

19 The Plan needs more specificity in how
20 renewable can contribute to meeting the power
21 demand, especially the peaks. The Seventh Plan is
22 too timid in respect to encouraging and assuring us
23 that renewable power can be as cost effective as any
24 new natural gas plants in many cases. The Plan is
25 too timid in regard to renewables and other

1 technologies such as battery storage and solar.

2 The Council should encourage and lead the
3 region toward more reliance on renewable sources of
4 power by including more support in the Seventh Plan
5 for new, clean, renewable sources that can help
6 address peak power needs.

7 I really appreciate and thank you for all
8 of your work. It's been a long -- a long road --
9 long road tour for you guys so thank you very much.

10 **COUNCILMAN LORENZEN:** Sandra, thank you
11 for your comments.

12 Lon Otterby.

13 **MR. OTTERBY:** I rudely forgot the staff
14 when I gave hard copies.

15 Thank you for being here on this last
16 night. My name is Lon Otterby. I'm a small farmer
17 from up on the Mohawk River near the county line
18 with Lane County. But tonight I'm representing
19 3,000-plus members of the local Sierra Club in Coos,
20 Douglas and Lane County. Something that's not in my
21 written testimony but thanks to EWEB's little museum
22 out here, tonight walking around looking before the
23 meeting, I see out there a apartment cooker, which
24 is about this size. Smaller than a miniature waffle
25 maker that a family used to have to cook off.

1 And I thought what our expectations are
2 today compared to what they were 70 years ago. And
3 education's really not a part of this whole Plan and
4 it might be a valuable asset to add in to educate
5 people on lifestyle and use of power. I know we
6 have -- with our chickens, for instance, we've
7 stopped using candescent lights. We use the AFD
8 lights now at a substantial savings and it achieved
9 the same results.

10 Here in Lane County, most of my testimony
11 here is -- you guys heard last night from our parent
12 organization in Portland. But here we're very
13 concerned about what we consider a loose goal of 35-
14 35. Saving of 35 percent of CO2 gases by 2035. We
15 think we might be more aggressive and set shorter
16 term goals of ten percent in five years if I dare
17 say so. And then review those every five years as
18 we go along to see how we're doing, in order to
19 adjust if those seem unrealistic. I know ten
20 percent is high, but it's a -- particularly with the
21 new Paris accords, it might be a reasonable
22 expectation with people's mind on this now.

23 The other thing we want to commend you on
24 is we're really, really happy to see the retirement
25 of those coal plants. We do, however, hate to see

1 them replaced with natural gas plants. Another
2 fossil fuel, CO2 generator, and we think we can do
3 better on that. If we're going to over the long
4 term, leave what we have and what we've enjoyed for
5 our children and our grandchildren. Anyway, thank
6 you. That's all I got to say.

7 **COUNCILMAN LORENZEN:** Thank you. Lon. I
8 appreciate the comment.

9 Ray Neff.

10 **MR. NEFF:** Hi, my name is Ray Neff and I
11 live at 1741 West 10th in Eugene. And I work with
12 Oregonians for Renewable Energy Progress. On behalf
13 of our 950 members, I'd like to thank the Commission
14 for this opportunity to provide comment on the
15 Seventh Power Plan, and staff for their efforts to
16 work through complex issues of energy delivery in an
17 evolving electric generation landscape.

18 OREP appreciates the fact that the Council
19 has identified energy efficiency as a high priority
20 to meet future energy demands. The energy we don't
21 need to generate is the cheapest and cleanest of any
22 resource. Likewise, demand response is another tool
23 that will allow consumers and utilities to better
24 manage the energy that we do generate, alleviating
25 some of the winter peak load called out in the plan.

1 It should be pursued to capture the potential 700
2 megawatts of capacity and customer-focused solutions
3 should be at the core of future policy.

4 Beyond that, the models used in the Plan
5 are only as good as the data and assumptions going
6 in. Most importantly, the models rely too heavily
7 on historical data and weather patterns to determine
8 future needs. The science is clear that long-term
9 trends show a steadily warming planet. Here in the
10 Pacific Northwest specifically, current data shows a
11 strong trend where the coldest days of the year are
12 warmer than historical patterns. As this trend
13 continues, it will reduce our winter peak needs in
14 the electricity system.

15 Indicators show that in a warming world
16 we'll have more precipitation in the form of rain
17 than snow in the northwest, which increases winter
18 stream flow and hydroelectricity and reduces storage
19 capacity for energy generation during the dry summer
20 months. As summer temperatures and droughts
21 increase, last summer was a good example of
22 projected summers to come, having less water
23 available from snow pack will require more summer
24 energy from other sources than hydropower.

25 Indeed many regional utilities, including

1 Portland General Electric, are seeing a shift
2 towards summertime peak system demand. Unlike
3 winter peaking solar -- unlike winter peaking
4 months, summer months are well matched to increased
5 use of renewable energy, especially solar, to meet
6 capacity needs throughout the northwest.

7 Wildfires and storms also have an impact
8 on transmission capacity and highlight a need for
9 distributed generation resource located near
10 customer load to increase grid resiliency. Planning
11 for future climate, not past climate, may negate one
12 of the plan's main assumptions, i.e., that there is
13 a predominant need to meet winter peak, with the
14 least-cost option for that appearing to be natural
15 gas.

16 Another inadequacy of the plan is that it
17 is very heavily focused on providing least-cost
18 resources over all others. Despite the charge to
19 the Council to account for externalities, such as
20 methane leakage and water usage in power generation,
21 the Plan ignores these factors. In doing so, the
22 least-cost resources identified in the near future
23 are, in fact, not necessarily the most cost-
24 effective over the long term, and does not
25 necessarily provide the greatest resiliency.

1 In evaluating renewables and RPS targets,
2 the Plan approach overstates the cost and
3 integration impacts of renewable energy without
4 considering any additional coal and natural gas
5 plant retirements, beyond those already committed in
6 Boardman and Centralia. This business-as-usual
7 approach that ignores externalities isn't good
8 enough in a warming world.

9 Finally, the plan relies on the existing
10 policy landscape to guide energy investment
11 decisions. Oregon's utilities are on target to meet
12 efficiency and renewable energy standards as
13 currently set out in Oregon statute. Yet, a
14 November 2015 report from the Green Energy Institute
15 at Lewis & Clark Law School, clearly states that
16 these strategies are inadequate to meet Oregon's
17 2050 climate targets.

18 According to the Oregon Global Warming
19 Commission, even if Pacific Power and PGE replaced
20 all their coal-fired generation with natural gas-
21 fired generation, complied with their renewable
22 portfolio standards, and continued their energy
23 efficiency programs, the utilities are not expected
24 to meet the emission reduction goals defined in the
25 2015 report to the legislature.

1 Based on past, not future, climate
2 expectations and searching for the lowest cost
3 resources that don't include externalities,
4 essentially business as usual is not stepping up to
5 meet the challenge of our time and the right of
6 future generations to inhabit a livable planet. We
7 can and must do better than this.

8 We can build on the success of our 19th
9 century hydropowered energy system to create a
10 clean, resilient, affordable 21st century renewable
11 energy-powered grid, that incorporates a broad mix
12 of renewable resources while eliminating the
13 greenhouse gas pollution from fossil-fueled energy
14 generation.

15 The time is now to take definitive action
16 to address climate change in all sectors of our
17 society. You and I have the power to determine the
18 kind of world our children and grandchildren will
19 live in with the decisions we make here today.

20 Yes, the transition away from fossil fuels
21 may be costly in the short term and require changes
22 in how we all participate in energy choices. It is
23 also fair that we shoulder the expense to transition
24 to a low-carbon economy, just as our 19th century
25 counterparts embarked to tap the bounty of our

1 region's many, mighty rivers.

2 Complimenting that existing clean resource
3 with significant new wind, solar, and energy storage
4 and other renewable energies will get us there.

5 From the long view, we will all benefit both in the
6 form of lower energy rates down the road and a
7 healthier planet for all of us. Experience bears
8 that out.

9 Thank you, again, for this opportunity to
10 provide comment on the Seventh Power Plan for the
11 Northwest.

12 **COUNCILMAN LORENZEN:** Ray, thank you for
13 your comments.

14 Matt Michel.

15 **MR. MICHEL:** Good evening. My name is
16 Matt Michel. I'm the General Manager at Lane
17 Electric Co-op here in Eugene, Oregon. Just
18 briefly, the comments I want to provide you first,
19 thank the Council for having these public hearings
20 to gather information a testimony.

21 My main comment is to address the natural
22 gas forecasts that are contained in the Plan. They
23 appear stale as far as when they were first created.
24 And I think when it comes to addressing a plan for
25 the region by a public agency, it taps into a larger

1 issue of the civic discourse to we have in our
2 nation about public agencies and its best
3 information not being monolithic or rigid in
4 gathering best information available.

5 So specifically stating that analysis that
6 was put together a few years past should be able to
7 be updated to provide best forecast going forward.
8 And again, I think that even beyond this Plan, it
9 speaks to having a public agency add to the level of
10 civic discourse being able to create that sense of
11 trust in the general public. Otherwise, I basically
12 underscore the comments that will be provided by the
13 two associations that Lane Electric is a member of,
14 the Public Power Council as well as PNGC Power, an
15 association of co-ops. Those more detailed comments
16 have the support of Lane Electric.

17 Thank you for your time.

18 **COUNCILMAN LORENZEN:** Thank you.

19 Normally we don't comment on testimony,
20 but I want to let you know that our -- at the recent
21 power planning Council meeting which was held this
22 week actually, we approved the re-running of the
23 models using updated projections for natural gas.

24 **MR. MICHEL:** Thank you.

25 **COUNCILMAN LORENZEN:** Kathy Ging.

1 **MS. GING:** My name is Kathy Ging, and I
2 live at my Post Office Box 11245, Eugene, 97445. I
3 am a licensed Oregon Realtor for 29 years, and I
4 have a background in promoting renewable energy in
5 Oregon. I've organized about 25 renewable energy
6 projects since 1976, including the Oregon Energy
7 Round-up at the State Fair, 2400 square feet, 1982,
8 '83 and '84. And first ever Oregon Fair Visions for
9 Humanity, a few weeks after President Carter's MEOW
10 Speech in 1977.

11 Anyway, I'm an old hand at being a
12 networker and promoter of renewable energy. And
13 today I'm going to talk about some -- a few things
14 and provide a written statement by Friday. I want
15 to talk about consumer decisions I have made in
16 which I made mistakes.

17 Here -- here's this box of LED lightbulbs
18 which we've all been taught to try to use maybe to
19 replace the CFLs. I very self-righteously went to
20 the store and bought a whole box of these and
21 started giving them out to my friends for Christmas
22 presents. Well, I'm also involved in a national
23 group called OccupyEMFHarm.org. And with this group,
24 I've been on a conference call every week for about
25 three years, so I've learned quite a bit about

1 people who we may called EMF or electromagnetic
2 radiation refugees.

3 And this is an increasing number of people
4 in our society who are subject to the vagaries of
5 the electrical grid, as not only the power switch
6 modes in our electronic instrumentations in our
7 houses, but also in the solar inverters, in compact
8 fluorescent lightbulbs and in LED lightbulbs.

9 So I called a friend of mine in California
10 who is often on these conference calls and I bragged
11 about buying all these LEDs and he said that he had
12 been out buying them for the last three years. And
13 he bought ten different bulbs and nine of them
14 tested out pretty bad for dirty electricity. And he
15 did find one, I think it was made by C-r-e-e, Cree.
16 And then went back a year later and he tested some
17 of those bulbs and they were also too much dirty
18 electricity.

19 So what I want to say is that I think the
20 BPA needs to rethink its whole strategy, not only in
21 terms of saving energy, but also in affecting the
22 health of people in our society. Three to six
23 people have what's called advanced electromagnetic
24 hypersensitivity. Another 30 percent have moderate
25 sensitivity. I was also the principal founder of a

1 local group, Families for Safe Meters in which we
2 kind of side tracked EWEB from doing what's called
3 the wireless smart meter, radio mesh net with
4 microwaves. And if you do some research on this,
5 which I've done about 3,000 hours in the last four
6 years, you'll find that the kind they use in
7 California puts out between 7,000 and 190,000 beacon
8 signals per day per meter.

9 That when you think this is going through
10 people, which nine percent of our population now has
11 medical implants, including Alzheimer's implants,
12 ear implants, heart implants, and you'll know that
13 this does sometimes affect -- wireless does affect
14 these functioning of people and you realize that
15 about 50 percent of the cars on the road should soon
16 have WiFi, and with electric cars too, you'll find
17 some people may stop having their hearts function
18 because they're right next to a bunch of cars with
19 WiFi. And this is not urban legend.

20 And so I'm coming here to tell you another
21 consumer decision I made that was a mistake. My
22 first CFL lightbulb, well, I bought it from an
23 environmentally responsible, local green operation
24 and who's owner I totally trusted and I had this
25 lightbulb with a ballast, one of those really big

1 thick ones, right next to my head for a year and a
2 half before I bought from Real Goods when they were
3 located in Eugene.

4 For \$150 I bought one of these little
5 meters you can test EMF and microwaves with, et
6 cetera. And it almost went off the charts. And
7 here this one was -- thing was zapping my head for a
8 year and a half. And so I removed that compact
9 fluorescent and put in another one. And then I
10 found out, you know, years and years later after
11 using compact fluorescents that they do put out the
12 dirty electricity also.

13 So another consumer decision that I made
14 that I'd like to share with you is I bought a solar
15 water heater. And, in fact, I was the one who
16 initiated the renewable energy tax credit in the
17 Oregon legislature in the late '80s when I was
18 working toward a second master's degree at the U of
19 O and -- in the public planning department. And
20 this tax credit got passed the second time around.

21 This was after 85 percent of the solar
22 business had gone bankrupt state and nationwide
23 because of the short-sightedness of letting go of
24 the solar tax credits, the 40 percent federal and 25
25 percent state tax credit. And so I was involved in

1 working to promote renewable energy in this way.

2 Finally, I bought a solar water heater. I
3 qualified for the tax credit with my income. And
4 then I found out for an extra 150 bucks, I could
5 have got the kind of solar water heater installed
6 and I would be independent of the electrical grid in
7 case the electricity went down. And so that's one
8 little mistake I made. But another mistake, I'm not
9 saying that I made it, but we all are making it, if
10 we don't recognize that solar water heating is still
11 a major part of our energy future. And one thing I
12 found is that fixing my solar water heater would
13 cost 1800 bucks.

14 Well, I paid about \$6,000 for it, and I
15 used a program that EWEB doesn't have anymore, the
16 zero interest loan program, and paid for that about
17 \$60 a month for five years. And then I found out
18 that after the red tag, which had been guaranteed
19 for five years, it ran out -- broke down in six
20 years. And it would cost me 1800 bucks to get my
21 solar water heater fixed.

22 Well, I found out through the years that I
23 changed my ideas about a lot of things. So I think
24 now the utilities should be promoting solar water
25 heating, solar thermal as it's called, but we should

1 be allowing people to make the decision if they want
2 to pay a little fee every month and have the utility
3 maintain this for them.

4 I was able to get the fees down a little
5 bit because of my background promoting solar energy
6 strictly as a non-business person, by the way, but
7 most people wouldn't have that kind of energy to try
8 to get the bill reduced like that and they would
9 just drop the solar water heater. So I'm just
10 telling you based on consumer decisions that I felt
11 were mistakes but that could be rectified by the
12 utilities if they had better planning mechanism.

13 The next thing is I want to say is I want
14 you to look at the next generation in energy
15 efficiency by educating utilities in this technology
16 that allows us to mitigate. And there is a system
17 that I've provided, you know, to you in a handout,
18 StetzerElectric.com. S-t-e-t-z-e-r, electric.com.

19 And there's a lot of history behind this
20 guy, but basically, one of the studies that, you
21 know, he's quoting on his website, the medical
22 director for Switzerland's Paracelsus Clinic takes a
23 stand on hazards of electromagnetic pollution.
24 Electromagnetic load is a hidden factor in many
25 illnesses. And this is something Magda Havas up in

1 Canada, who is probably the number one woman in
2 North and South America who knows about this stuff.
3 You can go to her website, MagdaHavas.org and also
4 .com.

5 So I want to say to you, you need to go to
6 the next generation of thinking about this. And how
7 do I know some of this stuff, although I'm not a
8 technical person? Well, I had a woman call me up
9 from California who had spent \$150,000 of her
10 retirement money with her husband, and they have
11 moved into a house with smart meter located 45 feet
12 away from their bedroom. Within about a few months
13 or so she was unable to even turn her electricity on
14 in her living room.

15 And finally she decided she'd move to
16 replace the photovoltaics. Well, they had to
17 dismantel the photovoltaics because of the problems
18 with the inverter. And you'll see from a guy named
19 Dr. Sam Milham, Sam Milham, M-i-l-h-a-m, .com. He's
20 a medical doctor. He's in his 80s now and he's
21 written a little book called Dirty Electricity. He
22 said that every one of the houses that he tested who
23 had solar electricity on them in this country, have
24 had the dirty electricity, and he recommends the
25 Stetzer filter too.

1 So another thing I want to talk about is
2 like other people have already said, I want you to
3 leave the fossil fuels in the ground for future
4 generations to take the leading edge on developing
5 and promoting renewable energies like wind, solar,
6 et cetera. According to the University of Oregon
7 Solar Radiation Monitoring Lab, in 2008, solar
8 radiation has increased in this part of the state
9 ten to 15 percent, within ten to 15 years before
10 2008.

11 I just talked to Frank Vignola, Director
12 of the center today, and he says he doesn't have any
13 new data from that. But he suspects, like a lot of
14 people do, that the solar energy will be increasing
15 in our area. So at a time that the snow pack is in
16 the decline, solar resources is increasing. We need
17 to take advantage of that.

18 And so I want to say that the fact that
19 the PNW still gets six to seven percent of its
20 electric power from nuclear, like the Columbia
21 Generating Station, this should be shut down. And
22 we need to look closely at what pioneer utilities
23 are doing in other parts of the U.S., experimenting
24 with micro-grids.

25 And what Germany is doing with the feed-in

1 tariff, that has allowed what's called the
2 democratization of the energy grid. And we should
3 have required reading the now free PDF from Rocky
4 Mountain Institute, SmallIsProfitable.org. 200-plus
5 reasons why it benefits utilities to have
6 distributed generation.

7 We need to educate ourselves about -- the
8 public about this because, you know, when you have
9 earthquakes possible and tsunamis, and now these
10 huge fires and even these storms -- in Southern
11 Oregon, 5,000 people were without power in just the
12 last week. You know, I want to talk about something
13 that most people don't talk about and that's the
14 fact that the marijuana growers are increasingly
15 causing disruptions of our electric grid.

16 Now, according to statistics, Jackson
17 County, Southern Oregon, is the number one holder in
18 Oregon, for instance, of medical marijuana cards,
19 and Lane County is number two. And I can almost bet
20 that most of those people are growing pot inside.
21 And as a Realtor, I have seen many of the
22 deleterious effects on people's house from people
23 growing pot inside.

24 So I think that part of your strategy
25 should be educating utilities, if these people are

1 going to be growing pot inside, to use the more --
2 there's like a \$700 lightbulb, apparently, that came
3 out. It combines light spectra and is more
4 efficacious for these people that need to grow pot
5 either for medical or for adult use.

6 And I'm almost done. I don't want
7 neighborhood nukes. I don't want the suitcase
8 nukes. I don't want the nukes that are the coolers
9 buried in the ground. I don't want the nukes from
10 Corvallis with the nuclear energy. No more nukes,
11 please. That's -- we really need to make sure that
12 we go forward towards the solar energy and
13 distributed energy grid in order to deter that
14 future.

15 And one thing you got to remember, in
16 October, Tesla Power started to deliver the power
17 walls. Now, the nice thing about these power walls
18 is they cost about 7500 bucks and you might need
19 four or five, you know, for a typical house. But
20 they can match the pastel colors of your wall. So
21 women are going to start falling in love with these.
22 And there again, we'll have the early adopters who
23 can afford this stuff.

24 And so I would like to recommend that you
25 work with Tesla to put a gigawatt factory, and

1 they're going to open source that technology and
2 give it to anybody in the world who wants it. I was
3 hoping we could put one over at the Hynix Plant and
4 maybe you could go ahead and still try to buy that
5 Hynix Plant from whoever bought it and convince them
6 that we should be doing this instead.

7 So that's the main things I wanted to say.
8 Thanks for listening and I'll provide some written
9 testimony in a couple of days. Thank you.

10 **COUNCILMAN LORENZEN:** Kathy, thank you
11 very much. That concludes the list if people people
12 who have signed up. Is there anyone else who would
13 like to testify? And if there is, you're most
14 welcome to do so.

15 This is a little different than last night
16 when we ran over about 40 minutes. And so don't be
17 shy, if you have something you want to say. I'm
18 sure there's -- but -- so if not, we will be
19 adjourned this evening. And thank you so much for
20 coming and participating and listening to the
21 testimony and providing testimony. Appreciate it
22 very much.

23 **(Whereupon, hearing concluded at 7:20**
24 **p.m.)**

25

1 CERTIFICATE

2
3 I, Kimberly R. McLain, do hereby certify
4 that I reported all proceedings adduced in the foregoing
5 matter and that the foregoing transcript pages constitutes
6 a full, true and accurate record of said proceedings to
7 the best of my ability.

8
9 I further certify that I am neither related
10 to counsel or any party to the proceedings nor have any
11 interest in the outcome of the proceedings.

12
13 IN WITNESS HEREOF, I have hereunto set my
14 hand this 24th day of December, 2015.

15
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17 

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19 _____
20 Kimberly R. McLain
21
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23
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