

1 BEFORE THE PUBLIC UTILITIES COMMISSION OF OHIO

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3 In the Matter of the :
4 Mercantile Customer Pilot :
5 Program for Integration :
6 of Customer Energy : Case No. 10-834-EL-POR
7 Efficiency or Peak-Demand :
8 Reduction Programs. :

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10 EE RIDER OPT-OUT COMMISSIONERS' WORKSHOP

11 before Chairman Todd A. Snitchler and Commissioners
12 Steven D. Lesser, André T. Porter, Cheryl Roberto,
13 and Lynn Slaby, at the Public Utilities Commission of
14 Ohio, 180 East Broad Street, Room 11-B, Columbus,
15 Ohio, called at 10:00 a.m. on Thursday, November 15,
16 2012.

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1 Thursday Morning Session,
2 November 15, 2012.

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4 CHAIRMAN SNITCHLER: Good morning. I'd
5 like to call our program today. I don't even know if
6 "meeting" is the right word, but our program today,
7 workshop, in order, and with that I'm going to turn
8 it over to Dick Bulgrin who's our attorney examiner
9 who is going to administer and run our program today.

10 So with that, Dick, it's all yours.

11 EXAMINER BULGRIN: Thank you,
12 Mr. Chairman.

13 A preliminary note for those wireless
14 users out there, there's a PUCO hookup that if you
15 put in the password, I'm told it's "Happy New Year"
16 with capital H, capital N, and a capital Y, and an
17 exclamation point, you should have internet access.

18 And I think Deb said there are more
19 handouts coming down, so we should have some more for
20 those of you who haven't gotten any.

21 Just real briefly, this workshop will be
22 presented in three parts. I'll give a brief overview
23 of the statute, the rules, and some of the case
24 history, and then Bob Wolfe from our staff will
25 present an overview of the staff process and some

1 statistics on the cases that have been processed, and
2 then Merrian Borgeson of the Lawrence Berkeley
3 National Laboratory will offer us a review of some of
4 the self-direct demand-side management programs
5 across the country, and then, hopefully, by that time
6 we'll have a little bit of time left at the end for
7 questions and answers.

8 CHAIRMAN SNITCHLER: Actually, Dick,
9 we're going to execute a little Commission
10 prerogative and we're probably just going to go ahead
11 and ask our questions during the middle of everyone's
12 presentation.

13 EXAMINER BULGRIN: That will certainly
14 work as well.

15 And then the final note, just for those
16 of you thinking ahead, I'll be issuing an entry
17 either today or tomorrow seeking comments on what all
18 we've discussed here. As you probably know, staff
19 has to issue a report by January 15th, so we're
20 asking that the comments be filed by November 30th
21 and that we get any replies by December 7th.

22 So let me see if the clicker works here.

23 This was all initiated by a relatively
24 new statute which, beginning in 2009, the electric
25 utilities were required to implement energy

1 efficiency programs that achieved energy savings and
2 there's certain target ranges up to 22 percent by the
3 year 2025.

4 And the other, I'm just going to kind of
5 pick out, you can read the slides yourselves or
6 you're probably more familiar with the code than I
7 might be, but there's a three-year calendar period
8 that is crucial in the development of these.

9 I'd note that this all came about as the
10 result of Senate Bill 221 back in 2008 and it was
11 amended by Senate Bill 315 effective this year.

12 This looks to be the same slide but it's
13 actually, there's not only a requirement for energy
14 efficiency, but there's also a requirement for peak
15 demand reduction, and that is set to run through the
16 year 2018 and then, if you look at the last sentence
17 there, it gets referred to the General Assembly to
18 kind of figure out where we're going from there.

19 The next slide is setting the baselines
20 and it's the average total kilowatt-hours that the
21 utility sold in the preceding three calendar years,
22 and the baseline for the peak demand reduction is the
23 average peak demand for the utility in the preceding
24 three calendar years, again.

25 I'm going to zig away from Ohio Revised

Code section 4928.66 and we jump to the definitions.

A "mercantile customer" means a commercial or industrial customer that either consumes more than 700,000 kilowatt-hours per year or is part of a national account involving multiple facilities.

Back to 4928.66, it says that compliance shall be measured by including the effects of all demand-response programs for mercantile customers, and all such mercantile customer-sited energy efficiency and peak demand reduction programs, adjusted by the appropriate loss factor.

And any mechanism designed to recover the cost of these programs may exempt mercantile customers that commit their demand-response or other customer-sited capabilities, whether existing or new, for integration into the electric distribution utility's programs, if the Commission determines that the exemption reasonably encourages such customers to commit those capabilities to those programs.

Looking at 4928.66(A)(2)(d), the programs implemented by a utility may include demand-response programs, provided that such programs are demonstrated to be cost-beneficial, customer-sited programs, and transmission and distribution infrastructure improvements that reduce line losses.

1 This section will be applied to include facilitating
2 efforts by mercantile customers or group of customers
3 to offer customer-sited capabilities to the utility
4 as part of a reasonable arrangement submitted under
5 section 4905.31.

6 Next in the chronological thing, scope of
7 things, was the Green Rules which the Commission
8 adopted in case No. 08-888, and I've got a quote here
9 from the April 15th, 2009, Opinion and Order,
10 basically because this will come up later on in
11 Commissioner Roberto's dissent, and the quote in
12 there I think is the second or third line: "We see
13 no reason to credit electric utilities for benefits
14 of measures that would have happened regardless of
15 their efforts."

16 So now let's take a little look at the
17 actual rules themselves. And the one for these EEC
18 programs is 4901:1-39-05(E) which -- and all these
19 rules became effective December 10th of 2009, and
20 this says that the utility may satisfy its
21 peak-demand reduction benchmarks through a
22 combination of energy efficiency and peak-demand
23 response programs implemented by the utilities and/or
24 programs implemented on mercantile customer sites
25 where the mercantile program is committed to the

electric utility.

And to drill down, we look at 39-05(F) and a mercantile -- the highlight there is the second sentence: "A mercantile customer's energy savings and peak-demand reductions shall be presumed to be the effect of a demand response, energy efficiency, or peak-demand reduction program to the extent that they involve the early retirement of fully functioning equipment, or the installation of new equipment that achieves reductions in energy use and peak demand that exceed the reductions that would have occurred had the customer used standard new equipment or practices where practicable."

And moving on to 3905(G): A mercantile customer may file, either individually or jointly with an electric utility -- and I believe most of the ones we've had to date have been filed jointly, Bob may be addressing that, but the statute requires that it be filed -- if the mercantile customer wishes to file individually, they are permitted to do so -- programs for integration with the utility's programs.

And then it goes through what the application will provide, and I think No. (2) there should be highlighted, that the application has to grant permission to the electric utility and to staff

1 to measure and verify energy savings and/or
2 peak-demand reductions resulting from the
3 customer-sited projects and resources.

4 And as well as No. (5) which says that
5 the application needs to include a description of the
6 methodologies, protocols, and practices used or
7 proposed in measuring and verifying program results,
8 and identify and explain all deviations from program
9 measurement and verification guidelines that may be
10 published by the Commission.

11 A little spoiler alert, we're going to
12 get to another slide that covers a little bit of case
13 09-512, which is the technical reference, it's the
14 measurement docket. So forgive me for jumping around
15 here, but all this stuff is related.

16 Next is 3905(H) which says that the
17 electric utility shall not count measures that are
18 required to comply with energy performance standards
19 set by law or regulation, including but not limited
20 to, those embodied in the Energy Independent and
21 Security Act of 2007 or any applicable building code.

22 Moving to 39-07, this has a little piece
23 that applies for the EEC cases as well. 3907(A)(2)
24 says that mercantile customers, who commit their
25 projects for integration with the utility's programs

1 under Rule 39-08, may individually or jointly apply
2 for exemption from such recovery. And that any
3 person may file objections within 30 days of the
4 filing for the application for recovery.

5 39-08 says that an application to commit
6 a mercantile customer program for integration may
7 include requests for exemption from cost recovery
8 mechanism under 39-07, but to be eligible the
9 customer may consent -- must consent to provide an
10 annual report on the savings or demand reductions
11 achieved in the customer's facilities in the year.

12 And then the subcategories here delineate
13 what shall be provided in that report, and of course
14 the first thing there under (A) is: A demonstration
15 that the energy savings or peak-demand reductions are
16 the result of investments that meet the total
17 resource cost test, or the electric utility's avoided
18 cost exceeds the cost to the electric utility for the
19 mercantile customer's program.

20 And the other thing I have highlighted is
21 3908(H) which says that any request for an exemption
22 may be combined with any other reasonable
23 arrangement, approved under chapter 38 of the OAC, if
24 such reasonable arrangement contains appropriate
25 measures and verification of program results.

1 Okay. The next thing chronological was
2 actually in case No. 09-512-GE-UNC which is the
3 protocols for measurement and verification of energy
4 efficiency and peak-demand reduction measures which
5 we also know as the TRM docket with "TRM" standing
6 for "technical reference manual."

7 And there's a quote from the June 16th,
8 2010, Entry on Rehearing that was also picked up in
9 the dissent in the 10-834 case and it's set out here
10 basically saying that "The Commission believes that
11 the 'as found' standard is only appropriate in the
12 event of the early retirement of functioning
13 equipment."

14 And that using the 'as found' method runs
15 a high risk of overstating the energy savings effects
16 of efficiency programs.

17 And, "Additionally, when equipment is
18 replaced based upon the failure of existing equipment
19 or normal replacement schedules, or is installed due
20 to new construction, using the 'as found' method may
21 allow electric utilities to claim savings for changes
22 in energy use that are in no way related to
23 efficiency programs."

24 In that same order there's also a quote
25 that, about halfway down on page No. 17 of the slides

1 here, that the energy savings which may be counted
2 toward an electric utility's compliance must be the
3 result of an energy efficiency program, and that, in
4 certain cases, energy savings may be derived from
5 activities that can only be categorized as "business
6 as usual" practices; these activities do not
7 constitute energy efficiency programs.

8 And that Section 4928.66(A)(1)(a) and (c)
9 of the Revised Code underscore the efficacy of
10 programs that encourage the adoption of
11 cost-effective efficiency measures beyond simple
12 replacement of worn-out equipment.

13 Finally, last slide on this opinion, and
14 we're noting here that the Commission has directed
15 staff to develop a standard application template, and
16 that the Commission intended to streamline the
17 approval process via an auto-approval process in case
18 No. 10-834-EL-EEC.

19 And before we get to that case there's
20 one more of note. In case No. 10-833 there is a June
21 23rd, 2010, Finding and Order which approved 241 of
22 the EEC applications subject to staff review and
23 objections by any parties.

24 And there's a footnote in that opinion,
25 footnote No. 1 at page 3 that's also cited in some of

1 the dissents that says prior to the effective date of
2 the rule, which was December 10th, 2009, the
3 Commission believes that it is both equitable and
4 reasonable to recognize the existing mercantile
5 customer-sited capabilities and investments that
6 relied upon previously adopted rule's methodology.

7 Okay. Next slide. And now we finally
8 get to case No. 10-834 EEC, which was later on
9 changed to the case type of "POR" for our tracking
10 capabilities, but this is the EEC pilot program and
11 the next few slides tend to -- or, are intended to
12 put together all the highlights and the decisions
13 that have been made in this docket.

14 And the first Entry was issued September
15 15th, 2010, that established an 18-month energy
16 efficiency credit, EEC, pilot program. There was a
17 60-day automatic approval process for newly filed
18 applications that used the template posted on the
19 Commission's website, these provided only cash-only
20 rebates, there was no provision for the exemption
21 from the utility's rider, and there was a waiver of
22 rules and prior Commission orders, which we've kind
23 of alluded to in the earlier slides, for purposes of
24 the pilot program.

25 The next slide covers Commissioner

Roberto's dissent to that entry where, basically, she was objecting to the waiver of rule 39-05(H), which is one of the prior slides covering the applicable law thing. She was also objecting to the majority overrule of the entry on rehearing on June 16th, 2010, in case 09-512 in the TRM docket regarding the use of the "as found" method, and objecting to the use of the benchmark comparison method for any application filed after December 10th, 2009.

Okay. The next entry of import in case 10-834 was on May 25th, 2011, a second Entry on Rehearing was issued and this determined that the EEC pilot program should track the statutory three-year period under ORC 4928.66 but allow a reasonable time for processing applications.

So the bottom line was that customers have one calendar year to sign a commitment agreement with the utility for energy efficiency or demand reduction projects that have been implemented within the past three calendar years, and then the utility has until March 31st of the following year to file the completed application.

But, notwithstanding that perspective rule, we also allowed a one-time 30-day window for the filing of completed applications for programs

implemented in 2006 and 2007.

And then there was also an extension of the 60-day automatic approval process which extended that to applications seeking exemption from the utility's rider for a period of 24 months or less.

Okay. The next slide brings us to the September 20th, 2011, Fourth Entry on Rehearing where the 60-day automatic approval process extended applications seeking an exemption from the rider for periods beyond 24 months but subject to a trueup adjustment every two years to ensure that the exemption accurately reflects the savings.

And the entry also clarified that participation in a PJM program did not fall within the EEC pilot, and that the establishment of a maximum customer commitment payment should be addressed in the electric utility's portfolio review cases and, finally, it extended the pilot for an additional six months through September 15th, 2012.

Last we have the September 5th, 2012, Finding and Order that clarified the postapproval reporting requirements for rider exemptions beyond 24 months, extended the EEC pilot for an additional six months through March 15th, 2013, directed the staff to file a report by January 15th, 2013, and

1 scheduled the workshop that we're here for today.

2 So that concludes my brief overview and
3 I'd like to now turn it over to Bob Wolfe to --

4 MS. GEBOLYS: Anybody who needs an agenda
5 or the handouts for the next two presentations.

6 COMMISSIONER LESSER: Dick, if I could
7 ask a question.

8 EXAMINER BULGRIN: Sure.

9 COMMISSIONER LESSER: You went through a
10 number of the statutes and then, more importantly,
11 the rules and cases. Are there any pending appeals
12 to those rules or cases?

13 EXAMINER BULGRIN: Yes. Actually, there
14 is still a pending rehearing in the Green Rules case,
15 08-888, and actually the other two cases are still
16 open as well. Obviously, the 10-834 case is open. I
17 believe technically the 10-833 case is still open.
18 And then, obviously, the TRM case is also open. So,
19 yeah, they're still pending.

20 Mr. Wolfe.

21 MR. WOLFE: Good morning. The purpose of
22 my presentation this morning -- you can probably go
23 ahead and advance it one there, Dick.

24 The purpose of my presentation this
25 morning is just to explain exactly how Staff

1 currently processes these mercantile exemption
2 requests.

3 Currently, as you can see, these three
4 pages here are examples of the current template
5 that's required to be filed with these exemptions
6 requests, they also use this for the rebate forms.
7 So the customer fills out the first, it's probably a
8 ten-page template, and the customer fills out all the
9 pertinent information that we need to review the
10 application to explain exactly what the project is
11 and the length of exemption they're requesting or the
12 amount of rebate.

13 We're going to kind of stick to just the
14 exemptions today.

15 So once this is filed -- probably we can
16 go on to the next slide there.

17 This slide here gives the overview of
18 what we do to process one of these applications. For
19 this example, given the pilot program, the 834, we
20 started using the benchmark methodology that's
21 authorized in that entry.

22 So what we do is we take the three-year
23 baseline of the applicant, we take the previous three
24 years' usage, add it together, divide it by three,
25 that comes up with the customer's baseline. Similar

1 to the utility's required baseline of Senate Bill
2 221.

3 After that we look at the project savings
4 that are claimed by the project. We do an analysis
5 to determine if those savings are accurate, and then
6 we divide the savings of the applicant, the savings
7 of the project actually, by the baseline, and that
8 gives us a percentage which is down there in the
9 "Benchmark comparison" box.

10 What we do under the benchmark
11 methodology comparison, we go over to the EE
12 Benchmarks column here on the right side and we
13 mirror exactly what the utilities would be required
14 to do under Senate Bill 221.

15 So the thought process here is the
16 customer has provided savings related or have already
17 initiated savings on their own for a project that
18 they've already installed in relation to the
19 benchmarks. So if you would look at it in this
20 scenario, there's around 13 percent, 13.6 percent, so
21 they would be exempt through August of 2021 for this
22 project that we have drawn up the example here.

23 Same as if the utilities had done savings
24 of 13.6, they would meet the statutory requirements
25 through 2021, but it's kind of a little bit

different. It's just a way of grading the facility itself and their project in relation to the benchmark, what they need to contribute.

After -- or, this review is all done within the 60-day process, we recommend denial or suspension if there's any other information that we need or if the project doesn't meet the guidelines found within the remaining portion of 834.

Anything further than a 24-month also requires an additional application, basically an annual report, and what that demonstrates is that the savings haven't changed, a shift hasn't been added or productions expanded or declined, that way we're not looking at a project that's saying the customer's exempt for, you know, ten years and the total makeup of their baseline has changed. It just kind of keeps it a little truer.

Is there any questions on how we calculate that?

It's a good spot here. All right.

And the last slide I have for you today is basically showing the applications filed to date under -- or, since 2009 when Senate Bill 221 took effect. We've had 1438 applications. Requests for exemptions to date have been 108, so it's really a

1 small portion.

2 Most of the applicants seek the rebate
3 payment. When they seek the rebate payment, they
4 continue to pay the rider. So they take a one-time
5 cash incentive, continue paying the rider.

6 Pending apps, we've got 104 of them still
7 pending to date. Since 834 took place, when we
8 started using the benchmark methodology, we've --
9 virtually all applications have been approved or
10 recommended denial or suspension within the 60-day
11 time frame.

12 Speed has really taken hold after that.
13 We had cases sitting around, as everyone knows, over
14 a year old prior to the pilot. So this is just
15 showing kind of where we're at and the actual problem
16 at hand with the exemptions. It's relatively small
17 exemptions, really only deal with about 7 percent of
18 the total applications filed for the mercantile.

19 I think that's really about it unless
20 there's further questions.

21 CHAIRMAN SNITCHLER: Well, I have one.
22 I'm going to ask what I'm sure is an overly broad
23 question and you're going to say "I don't have the
24 answer and you should have told me you were going to
25 ask me this before I came up here," but of all the

1 applications that we've processed through, what's the
2 energy savings been?

3 MR. WOLFE: I don't have that number with
4 me, but it's been massive.

5 CHAIRMAN SNITCHLER: Is that calculable?
6 Is that something you can just supply to us
7 afterward?

8 MR. WOLFE: Yeah. We can take it -- are
9 you talking historic mercantile applications only?

10 CHAIRMAN SNITCHLER: Please.

11 MR. WOLFE: Yeah, we can have you that
12 number.

13 COMMISSIONER LESSER: Mr. Chairman.

14 CHAIRMAN SNITCHLER: Sure.

15 COMMISSIONER LESSER: Bob, if you know,
16 our mercantile definition brings in two groups, the
17 700,000 kilowatts per year and the national account
18 customers. Do you know what the mix of applicants
19 looks like between those two groups?

20 MR. WOLFE: The mix, definitely the
21 majority is over 700,000. There are a few chains
22 that will do an applicant and those mostly deal with
23 like just smaller customers, but they're names of
24 companies that we see driving to and from work every
25 day, so they're part of a giant broad picture.

1 But the majority of the applications that
2 are filed in this are definitely in excess of 700,000
3 kilowatt-hours.

4 COMMISSIONER LESSER: Thank you.

5 EXAMINER BULGRIN: Mr. Chairman.

6 CHAIRMAN SNITCHLER: Thank you, Dick.

7 Thank you, Bob, I appreciate it.

8 MR. WOLFE: Thank you.

9 CHAIRMAN SNITCHLER: I wouldn't say
10 you're relieved from questions, I suspect you may get
11 more later, but I'll say for now you're off the hot
12 seat.

13 MR. WOLFE: All right.

14 CHAIRMAN SNITCHLER: At this time I want
15 to explain a little bit, and thank Commissioner
16 Roberto for her work in trying to organize and put
17 this workshop together and really reaching out to
18 some national experts as well who are going to be
19 able to assist us. The Lawrence Berkeley National
20 Lab is going to provide some information for us
21 together, and I'll talk a little bit about what they
22 do.

23 For those who don't know, in the world of
24 science the Lawrence Berkeley National Labs are
25 synonymous with excellence. Thirteen scientists

1 associated with Berkeley have won the Nobel Prize; 57
2 lab scientists are members of the National Academy of
3 Science, which is one of the highest honors for a
4 scientist in United States; 13 of those scientists
5 have also won the National Medal of Science, the
6 Nation's highest award for lifetime achievements in
7 the field of scientific research; and 18 of our
8 engineers have been elected to the National Academy
9 of Engineering; and 3 of our scientists have been
10 elected into the Institute of Medicine.

11 So I think we call that It's not bragging
12 if you can do it. So I think that talks about the
13 scholarship and the brain power that's actively
14 working on solving issues at the Lawrence Berkeley
15 National Labs.

16 It's also important for you to know that
17 the labs have given -- their scientists and
18 researchers have been made available to state public
19 utility commissions via the U.S. Department of Energy
20 funding, and Commissioner Roberto was also helpful in
21 getting the Commission engaged with DOE on CHP issues
22 as well. So, clearly, we have developed a working
23 partnership with them on a number of issues and we're
24 certainly grateful for that opportunity.

25 Today we have with us Merrian Borgeson

1 who is a researcher in electricity markets and policy
2 development. She comes barely qualified. Her résumé
3 is very impressive. She's got her BA in
4 international relations from Stanford, her master's
5 in energy and resources from Cal Berkeley, and her
6 MBA from Cal Berkeley as well.

7 So it's I think important for us to know
8 who are some of the folks who are presenting to us
9 this morning, and so with that the floor is yours and
10 we look forward to your presentation.

11 MS. BORGESON: Great. Thank you. Thanks
12 for having me here today.

13 I spend most of my time at the lab
14 examining energy efficiency policies and program
15 design around the country, and we are available in
16 the future as well for future questions. We spend a
17 lot of time with commissions around the country
18 looking at issues of program design, EM&V, et cetera,
19 and so we're really glad to be able to support you
20 guys in this question of what's going on around the
21 country in terms of self-direct programs, how they're
22 designed, different program features you might want
23 to consider as you look at your programs here in
24 Ohio.

25 So my outline, I'll go through some

1 background fairly briefly, why these programs are
2 run, and to provide how self-direct programs are run,
3 we'll look at three case studies in some depth, and
4 then I'll do a sort of comparison across programs for
5 specific program design elements.

6 And just a note on language, I do use the
7 term "DSM charge," which is the same thing as your
8 efficiency -- "energy efficiency and peak-demand
9 reduction rider." People call these fees different
10 things in different places, but the bottom line is
11 that they're supporting efficiency and demand
12 response in utilities and in programs across the
13 country.

14 So let's dive into why we have these
15 programs in the first place as a foundation for what
16 makes an effective self-direct program.

17 So there's over 40 states that have
18 demand-side management programs and the benefits
19 include things like lower energy prices, reduced grid
20 congestion, the opportunities to delay or avoid
21 building new generation, reduced emissions, increased
22 system reliability, protection from fuel price risks,
23 among other things.

24 There are also many nonenergy benefits
25 that we're seeing across the country, things like

1 economic development, new job creation, more
2 comfortable homes, more cost-efficient businesses.

3 In terms of the costs of some of these
4 programs, one review of the cost of saved energy in
5 14 different programs showed an average acquisition
6 cost about 2-1/2 cents per kilowatt-hour.

7 At the lab -- at my lab we're currently
8 doing some more in-depth research on the cost of
9 saved energy looking at specific programs and also
10 specific customer classes.

11 Our sort of initial findings support the
12 sort of very low cost of energy savings, and the
13 other thing we find is that the programs working with
14 commercial and industrial customers are often the
15 lowest-cost programs. It's a really important
16 resource in the whole system. They often make up
17 more than half of the savings found in the states
18 that we looked at.

19 It's also important to note that to be
20 able to get many of the benefits that these -- that
21 many states are seeing, the benefits are really
22 only -- or, many of the benefits are only fully
23 realized if the savings are reliable and verifiable
24 and additional so that the system can plan around
25 these resources and you can fully maximize the

benefits.

This is a chart, there's a number of studies looking at the levelized cost of energy consumption. Energy Efficiency is the bottom left-hand corner. They're estimating cost efficiencies between zero and 5 cents a kilowatt-hour, or 50 cents a megawatt-hour. And, as you can see, the cost of new generation for almost any other resource is much higher, and we see this again and again in a number of studies that have been done like this one.

I wanted to give you one quick example of a region that has done sustained programs over time. In the Pacific Northwest they've run efficiency programs for over 30 years. It's a particularly good example to look at because their cost of energy is so low. It's one of the lowest cost energy in the country because of their significant hydro resources.

And they have been able to -- this chart is from 1978 to 2011. They've been able to get average annual savings that have increased over time and really created some momentum with their programs in that region.

And then in terms of where they're finding savings in the Pacific Northwest, you can see

1 the two middle sets of bars, Commercial and
2 Industrial, these are the savings that they've
3 achieved between 2008 and 2011. They've increased
4 every year over that period and have been obtained at
5 very low cost.

6 One of the things that they're finding in
7 the Pacific Northwest and elsewhere is that their
8 business customers, while they're extremely efficient
9 at their core business activities, they don't always
10 have the in-house capacity and expertise to know what
11 is the latest in new technologies, energy efficiency
12 processes, and things like that. So they're seeing
13 customers increasingly come to the programs asking
14 for that sort of support so that they can become much
15 more efficient.

16 You can also see that the commercial and
17 industrial programs are a big chunk of their total
18 efficiency savings.

19 And this is the average cost of
20 conservation, they're under 2 cents a kilowatt-hour
21 in that region throughout this period which is 2005
22 to 2011.

23 And then in terms of the types of
24 programs we're seeing for commercial and industrial
25 customers, there's four main types of programs. Some

1 utilities have like 30 different programs that are
2 superspecialized, but they fall into four main
3 categories, the first being technical assistance and
4 energy auditing services, basically giving customers
5 some sense of what their opportunities are.

6 And then there's prescriptive incentive
7 programs where those often give a set rebate for a
8 specific measure, so you might get paid a certain
9 amount for implementing a new lighting system for
10 example.

11 And then there are custom incentive
12 programs that are usually for larger customers. It's
13 usually a program administrator or representative
14 that works very closely with a larger customer to
15 create a set of incentives for a group of measures
16 that are tailored to that customer's needs.

17 And then there's self-direct programs.
18 So self-direct programs are usually targeted at the
19 very largest customers where specialized needs are
20 really strong, in-house capacity to do efficiency
21 work, and the best self-direct programs are really
22 creative ways to tailor the needs -- the programs to
23 the needs of large customers.

24 There's self-direct programs in at least
25 24 states and there's many variance on these

1 programs, I'll be talking about some of those today,
2 but you should know there's a huge diversity out
3 there in terms of how they give incentives and who
4 qualifies and things like that.

5 They're also often the least-used
6 programs in many jurisdictions because of the
7 eligibility limits and because of the attractiveness
8 of other program offerings. So when you talk to
9 program administrators in other states, they'll often
10 tell you that many customers, as long as they're
11 offering really effective commercial -- custom or
12 prescriptive programs, customers often prefer those
13 programs because of the expertise they're able to tap
14 into that they don't have in house.

15 CHAIRMAN SNITCHLER: Can I interrupt here
16 for one question. Is that least used based on a raw
17 number or on energy savings?

18 MS. BORGESON: That's a good question.
19 It's both, but it's largely the number of customers.
20 There's very few customers that use it because the
21 pool that's --

22 CHAIRMAN SNITCHLER: Sure, that even
23 qualify is smaller to begin with.

24 MS. BORGESON: Exactly.

25 COMMISSIONER LESSER: Mr. Chairman.

1 Merrian, I don't know if you're going to
2 go over this, but are these programs electric only or
3 are many of these programs electric and gas?

4 MS. BORGESON: You know, in the Pacific
5 Northwest they're both, but almost all of the savings
6 are from the electricity side. And, actually, at the
7 end of the presentation I do have a backup slide.
8 We've done a study looking across the country at kind
9 of the trajectory of ratepayer programs in the
10 country and the majority is really on the electric
11 side as opposed to the gas side.

12 And we project that spending on
13 efficiency for electricity is going to about double
14 between now and 2025, whereas gas programs will
15 remain about -- pretty stable to what we have right
16 now.

17 CHAIRMAN SNITCHLER: Is the basis
18 commodity price, generally?

19 MS. BORGESON: You mean the --

20 CHAIRMAN SNITCHLER: Because the gas
21 price being --

22 MS. BORGESON: Yes, that's been a big
23 issue, especially in the last couple years, because
24 the prices have fallen.

25 COMMISSIONER PORTER: Mr. Chairman.

1 CHAIRMAN SNITCHLER: Mr. Porter.

2 COMMISSIONER PORTER: Yeah, just a couple
3 quick questions. What are the incentives out in the
4 Pacific Northwest? Are there other incentives like
5 we see here with exemptions or rebates?

6 MS. BORGESON: I will talk about that.

7 COMMISSIONER PORTER: I will wait until
8 you get there.

9 MS. BORGESON: I have a case study
10 from --

11 COMMISSIONER PORTER: Are you also going
12 to cover the measurement process as well?

13 MS. BORGESON: Yes.

14 COMMISSIONER PORTER: Yes.

15 MS. BORGESON: Yeah. I'll give you a
16 bunch of different examples, as I mentioned, there's
17 not one, but we'll kind of go through some of the
18 options.

19 COMMISSIONER PORTER: Thank you.

20 MS. BORGESON: Excellent segue into the
21 case studies. So it's three case studies today
22 chosen based on actually the most effective programs
23 out there and kind of trying to show a variety of the
24 ways that these programs are designed.

25 So for the Rocky Mountain Power programs

1 in Utah and Wyoming, they have self-direct programs
2 for their largest customer and they have a
3 benefit-cost ratio in the most recent program year of
4 2.7, so highly cost-effective.

5 Their programs have two paths. The first
6 path, the customer receives credits against their DSM
7 charge up to 80 percent of their approved project
8 costs, and the DSM charge credits can be taken over
9 multiple years until that 80 percent of the project
10 costs are reimbursed.

11 Like in Ohio, we're replacing equipment
12 that is -- replacing equipment that is in use. The
13 baseline for savings and costs is as found. For new
14 construction or replacement of equipment at the end
15 of its useful life, the code or industry common
16 practice is using the baseline, again, like in Ohio.

17 The program does not give credit to
18 historic projects, only new projects that exceed code
19 or industry common practice, and the projects must
20 have a pre-rebate payback period of between one and
21 five years and must pass the cost-effectiveness test
22 for the utility. Customers pay a \$500 admin. fee for
23 that first path.

24 So the second path, which actually has
25 not been used to date, is for customers that have no

1 remaining DSM opportunities in their facilities, and
 2 the way they demonstrate this is that the customer
 3 hires an auditor that goes and does an audit of all
 4 of their facilities and if they are unable to find
 5 any projects that have a payback of, sorry, if they
 6 are unable to find projects that have a payback of
 7 eight years or less, then they can be -- they can,
 8 sorry, receive a credit for 50 percent of the DSM
 9 charge. So far, as I mentioned, no one has actually
 10 done that.

11 Rocky Mountain -- I'm sorry, was there --
 12 okay. Rocky Mountain Power allows industrial
 13 customers to choose between their programs for each
 14 project, so they can choose the self-direct program
 15 for one project and a custom incentive for another
 16 project.

17 In general, the incentives for
 18 self-direct programs are higher, they're 80 percent
 19 of the project costs, versus 50 percent for their
 20 custom program for example, and that's because Rocky
 21 Mountain Power's engineers spend far less time
 22 examining the projects, helping them through the
 23 process, and doing the monitoring and verification.

24 COMMISSIONER LESSER: Merrian.

25 MS. BORGESON: Yes.

1 COMMISSIONER LESSER: I see your note "No
2 incentives for historic projects."

3 MS. BORGESON: That's right.

4 COMMISSIONER LESSER: Was the issue of
5 early adopters, did that come up in the legislative
6 process; the rule process?

7 MS. BORGESON: I don't believe it did.
8 There are four states that have had some exemptions,
9 either short-term exemptions or, like Ohio,
10 longer-term exemption for historic projects, but it's
11 really not very common in terms of the self-direct
12 programs that exist.

13 COMMISSIONER LESSER: Do they also go
14 back over a three-year period for using their
15 baseline, or did they start from year one?

16 MS. BORGESON: They start from year one,
17 yeah.

18 CHAIRMAN SNITCHLER: Could I ask a
19 follow-up?

20 MS. BORGESON: Of course.

21 CHAIRMAN SNITCHLER: Your program
22 benefit-cost ratio of 2.7 is using the total resource
23 cost --

24 MS. BORGESON: That's right.

25 CHAIRMAN SNITCHLER: -- the TRC? Is

1 there a way for us to calculate, or perhaps you have
2 already done so, to calculate it using the benchmark
3 method, what we use here, or -- there's the four
4 schools of thought, one of which is commonly
5 disregarded, and of course I'll never remember all
6 the acronyms, but is there a way to run those numbers
7 so that we can see what that looks like in each of
8 the three sort of commonly-accepted versions?

9 MS. BORGESON: Of the cost-effectiveness
10 test?

11 CHAIRMAN SNITCHLER: Yeah.

12 MS. BORGESON: I would guess that you can
13 do it for -- because you have all the applications
14 and the savings estimates here. Some of those tests
15 require more information than others, so it just
16 depends on what you're collecting.

17 CHAIRMAN SNITCHLER: Okay.

18 MS. BORGESON: In this program they're
19 only doing the TRC, and I couldn't run the numbers
20 without getting all their files to do the other
21 tests.

22 CHAIRMAN SNITCHLER: Okay. I didn't know
23 if you had access or --

24 MS. BORGESON: I don't.

25 CHAIRMAN SNITCHLER: Okay.

1 MS. BORGESON: I will show one example
2 where they do both the utility cost test and the TRC
3 so you can kind of see the difference because in one
4 of the programs they require both.

5 CHAIRMAN SNITCHLER: Okay. And you said
6 these were typically the heavy industrial
7 customers --

8 MS. BORGESON: Yes.

9 CHAIRMAN SNITCHLER: -- that are using
10 these programs in Utah and Wyoming.

11 MS. BORGESON: That's right.

12 CHAIRMAN SNITCHLER: Just as one of the
13 peculiarities, from a regional perspective, Ohio is
14 the third largest manufacturing state in the country,
15 so our customers tend to have a little different view
16 about efficiency and I think that may be why it was
17 maybe raised from the historical perspective, and so
18 I'm just trying to put those pieces together as you
19 explain kind of why they didn't consider that
20 information and why it may have been considered here
21 to just get, I guess, a better linear grasp on some
22 of the steps.

23 MS. BORGESON: I don't know the history
24 of that in the state. In terms of their customers,
25 it's mostly industrial customers, but they just use

1 the threshold of 5,000 megawatt-hours a year
2 consumption.

3 CHAIRMAN SNITCHLER: Okay. Thank you.
4 Commissioner Porter.

5 COMMISSIONER PORTER: Yeah, do you have
6 data that would allow us to understand the
7 participation rates of customers who may have been
8 early adopters or who had historical projects but who
9 now have been participants going forward?

10 MS. BORGESON: You know, many of these
11 programs, and certainly the next case I'll show you
12 from Washington state, about 75 percent of all of the
13 customers, which is about 50 customers total that are
14 eligible for the program, participate, and they'll,
15 you know, they'll keep participating.

16 And they certainly have done work in the
17 past. You know, in the Pacific Northwest I mentioned
18 they've had programs for 30 years, so they have been
19 doing this over time.

20 Just, in general, what programs are
21 finding is that even though it seems like you should
22 run out of efficiency to do, there's almost always
23 more to be done, that you can really find
24 cost-effective savings and public money can be used
25 to support those for sort of systemwide benefits. So

1 we're not seeing folks run out.

2 COMMISSIONER PORTER: You're not seeing
3 the utilities run out, but not even the customers?

4 MS. BORGESON: In general. I mean, just
5 in the example of, you know, in the three states
6 where they do have the ability to opt out if they
7 have no remaining cost-effectiveness projects --
8 cost-effective projects left, no one has applied or
9 no one's qualified for that.

10 You know, that might be a good idea, to
11 have some sort of bar like that, that if you really
12 have no additional work to be done, great, then you
13 don't need to pay this charge. But, again, it's just
14 that there hasn't been precedent for showing that
15 lots of -- lots of customers have been able to show
16 that.

17 CHAIRMAN SNITCHLER: Is part of that a
18 function of the 30-year history of the program, that
19 some of the efficiencies that may have been
20 implemented in the late-'70s or early-'80s have kind
21 of been consumed by their useful life, have been
22 replaced by updated technology since then, and those
23 recent --

24 MS. BORGESON: That's true.

25 CHAIRMAN SNITCHLER: -- well, more

1 recent, whenever they may have been after, would
2 count towards the efficiency going forward because it
3 had completed its useful life and, therefore, would
4 be able to qualify for yet another improvement on
5 efficiency?

6 MS. BORGESON: Yeah, that's definitely
7 true over the long run, that you'll have things that
8 just, you know, they phase out --

9 CHAIRMAN SNITCHLER: Sure.

10 MS. BORGESON: -- you get new equipment
11 or use more efficient technology. For the Rocky
12 Mountain Power program, I think they started in 2009
13 so they have a shorter history, as does Xcel, which
14 is another case I'll talk about.

15 CHAIRMAN SNITCHLER: All right.

16 COMMISSIONER LESSER: If you know for
17 those states, and if you do as we move into these
18 other case studies, are these vertically integrated
19 regulated companies?

20 MS. BORGESON: Yes.

21 COMMISSIONER LESSER: And if, as we move
22 into the other case studies, if you could note how
23 they regulate their --

24 MS. BORGESON: Sure. Almost all of the
25 ones that I'm covering today and that I looked at

1 were vertically integrated utilities with a
2 commission very similar to here that's regulating
3 them.

4 CHAIRMAN SNITCHLER: Because we're a
5 restructured state, we're hybrid, we're not exactly
6 like anyone else.

7 MS. BORGESON: Oh, you're talking
8 about -- in terms of, yeah, in terms of the --

9 CHAIRMAN SNITCHLER: That's not a
10 reflection of the current panel of Commissioners,
11 it's the state of the world as we find it.

12 MS. BORGESON: Yes. There are certainly
13 unique things about Ohio, yes.

14 CHAIRMAN SNITCHLER: That's a very nice
15 way to say it.

16 MS. BORGESON: Okay. So let's talk about
17 Puget Sound Energy in Washington. Their program is
18 really set up to push customers to kind of act
19 quickly to get access to the incentives that they
20 offer. Their program runs on a four-year cycle and
21 in the first two years customers are able to use up
22 to 82-1/2 percent of their DSM funds for projects
23 that meet both the TRC and the utility cost test.

24 The fund can cover up to a hundred
25 percent of the approved projects versus only 70

1 percent for the non-self-direct programs.

2 And the program staff review the project
3 proposal M&V plan and inspect the project after
4 installation but they don't do sort of the hands-on
5 work that you might with a custom C&I program.

6 After that first two years they move into
7 a competitive phase where they put any unused
8 self-direct funds into a common pool that are
9 competitively bid out to the entire pool of
10 self-direct eligible customers.

11 They received a huge volume of
12 applications for this competitive phase so in the end
13 of the last phase, in 2009, they received
14 applications for four times the amount of funds that
15 they had available, which really reveals a
16 significant amount of savings that's still to be had
17 even in a region like the Pacific Northwest.

18 COMMISSIONER LESSER: What does that RFP
19 look like? When they're bidding, what exactly are
20 they bidding on?

21 MS. BORGESON: They propose projects in
22 their own facilities and they provide a set of
23 engineering analysis and cost-effectiveness estimates
24 for those proposals. And the staff essentially goes
25 through and says, you know what, these -- we have,

1 let's say, a hundred million dollars or a million
2 dollars and we'll do the most cost-effective
3 applications that were submitted.

4 COMMISSIONER LESSER: How does the
5 utility participate as to how that program would
6 perhaps even be integrated?

7 MS. BORGESON: The utility's actually
8 running the program. So Puget Sound Energy staff is
9 actually managing that process.

10 COMMISSIONER LESSER: Oh, when you said
11 "staff," you meant utility staff --

12 MS. BORGESON: Utility staff.

13 COMMISSIONER LESSER: -- not commission.

14 MS. BORGESON: Yes. Their program
15 administration staff for those efficiency programs,
16 yeah.

17 And this program has a much higher
18 participation rate as a percent of eligible customers
19 and higher savings than their other C&I programs, and
20 they have a cost-benefit ratio, or a benefit-cost
21 ratio between 1.15 and almost 5 depending on the
22 program year. So the more, the higher benefit-cost
23 ratios are in the competitive years as opposed to the
24 first two years where they can just use whatever
25 funds they are able to for their own projects.

1 COMMISSIONER PORTER: Mr. Chairman.

2 CHAIRMAN SNITCHLER: Sure.

3 COMMISSIONER PORTER: A question at just
4 a very high level. Could you help me to understand,
5 you know, what may be the average useful life of a
6 particular project.

7 MS. BORGESON: Oh, gosh. It varies a
8 lot.

9 COMMISSIONER PORTER: Give me an example.
10 Maybe if it's a lighting retrofit.

11 MS. BORGESON: Well, it also depends on
12 who you talk to. Like in the Pacific Northwest
13 they'll have estimated useful lives for all measures.
14 I'll bet that your staff could probably tell you the
15 exact measure of useful life.

16 But we're talking, you know, it could be,
17 you know, ten years for lighting. Lighting
18 technology changes really quickly. It could be quite
19 a bit longer for like a boiler, let's say, for a
20 school district, those last for quite a long time,
21 often beyond their useful life.

22 COMMISSIONER PORTER: Mr. Chairman, one
23 follow-up.

24 So looking back at the chart that you had
25 on page 5, and this is a chart that measures, it

1 looks like it measures the performance over a period
2 of 30 years, it looks like in the early phases of the
3 early stages of this -- I'll wait till you get there.

4 MS. BORGESON: Are you talking about the
5 Pacific Northwest, that chart?

6 COMMISSIONER PORTER: Yeah, that's the
7 Pacific Northwest. So in the early stages there it
8 seemed as if, you know, certainly there was a ramping
9 up of performance.

10 MS. BORGESON: Yeah. So that chart --
11 let me actually explain that chart a little more
12 because it's maybe, it's a little confusing.

13 So each of those years from 1978 to 2010
14 they're estimating what savings the programs in that
15 year were able to achieve. And so, for example, if a
16 new efficient boiler was installed in 1980, they
17 would actually be looking at the lifetime savings of
18 that boiler as opposed to the savings that they're
19 achieving from that boiler over time.

20 COMMISSIONER PORTER: Okay.

21 MS. BORGESON: Does that make sense?

22 COMMISSIONER PORTER: I think it does.

23 CHAIRMAN SNITCHLER: So in year one
24 you're accounting for a hundred percent of the
25 savings over the life of the boiler. So if it's a

1 20-year boiler and it's X, then it's all counted in
2 1980, not that small percent over the useful life.

3 MS. BORGESON: Exactly. Yeah, so you can
4 see the programs in the later years have just become
5 more aggressive, they've figured out how to work with
6 customers really well, they're able to get higher
7 average savings.

8 COMMISSIONER PORTER: Mr. Chairman, just
9 a final question.

10 So what I was trying to get to is so the
11 elimination or the noninclusion of the historical
12 projects, that seems to be accounted for here, you
13 know, in this chart. You know, let's say if there's
14 an average useful life of 10, 20, 30 years, you've
15 now had a bunch of folks who have now been able to
16 install new, you know, projects and you see a
17 significant ramp-up in performance, you know, if you
18 look at 2000 going all the way out to 2010. Am I
19 reading that correctly?

20 MS. BORGESON: I guess I'm not sure
21 exactly what you're saying. Say it again.

22 COMMISSIONER PORTER: If the historical
23 projects are not included, let's say if you're
24 looking at 1978 which is where that chart starts --

25 MS. BORGESON: Yes. Yes. Okay.

1 COMMISSIONER PORTER: -- so if we're
2 looking at, you know, look all the way out for 2012,
3 if the average useful life of a project let's just
4 say is ten years, let's say there were projects that
5 were installed in 1972 --

6 MS. BORGESON: Yeah. Right.

7 COMMISSIONER PORTER: -- or 1976 --

8 MS. BORGESON: Then those folks can
9 participate again once they're --

10 COMMISSIONER PORTER: Right, is that what
11 we're seeing here is that the useful life has now run
12 so the people are now participating and that's why
13 you're seeing the success?

14 MS. BORGESON: Well, I mean yes, in a
15 way, in that equipments are always, you know, either
16 failing or needs to be replaced for some reason, and
17 so every time that happens they're taking that
18 opportunity to push folks towards the most efficient
19 equipment possible, as opposed to just what the basic
20 code might be at that time.

21 And so, yes, you can see over time, you
22 know, maybe if a, let's say a boiler has a 20-year
23 lifetime and there's, you know, 10,000 boilers in the
24 state, you know, that would be one-twentieth of those
25 may be replaced every year. So there's definitely

1 this ongoing ability to get the savings as that
2 equipment becomes sort of ready to be replaced.

3 COMMISSIONER ROBERTO: Mr. Chairman, if I
4 may.

5 Just to be clear, when we're seeing the
6 ramp-up, this isn't a matter of a boiler that is just
7 what you go in and buy being more efficient, because
8 it's always going to be more efficient as time goes
9 on, these programs require an incremental savings
10 above the standard boiler that you walk in and see.

11 MS. BORGESON: That's right.

12 COMMISSIONER ROBERTO: They have to
13 demonstrate that it's better --

14 MS. BORGESON: Yes.

15 COMMISSIONER ROBERTO: -- than the boiler
16 that they would just normally go in and replace it.

17 MS. BORGESON: Exactly.

18 COMMISSIONER ROBERTO: So this isn't just
19 a matter of obsolescence. This is a matter of
20 incremental savings on top of what obsolescence would
21 accomplish with energy savings.

22 MS. BORGESON: Yeah, and that's really
23 the goal of additionality of these programs, that
24 you're getting something that you wouldn't have
25 otherwise because you're investing these public funds

1 to increase the efficiency of what they're choosing.

2 CHAIRMAN SNITCHLER: Would that work the
3 same on a self-directed program where you were
4 self- -- it was your own money you're spending, is
5 the bar set lower, or is it the same requirement that
6 it not be a historical replacement but it's an
7 efficiency above and beyond what standard --

8 MS. BORGESON: That's the ideal. And,
9 actually, the --

10 CHAIRMAN SNITCHLER: What's the
11 practical, I mean, is that, from a self-directed is
12 that, understanding that's where you'd like to go,
13 but is that counted that way in some states or not?

14 MS. BORGESON: It varies.

15 CHAIRMAN SNITCHLER: Okay.

16 MS. BORGESON: Actually, and Xcel
17 Energy's case is actually a really good example of
18 that.

19 CHAIRMAN SNITCHLER: Could I tee up your
20 next slide for you?

21 MS. BORGESON: Yes.

22 Okay. So Xcel has one of the more
23 rigorous self-direct programs in the country and it's
24 achieved really savings they're competent in while
25 achieving a benefit-cost ratio of 3.5, which is

1 extremely high.

2 Their self-direct program has similar
3 requirements to the prescriptive and custom programs,
4 including the need to pass a cost-effectiveness test,
5 providing incentives for only the cost of the
6 incremental improvements, and rigorous M&V done on
7 each project. The incentives are 10 cents a
8 kilowatt-hour for incremental savings.

9 So let me explain what that incremental
10 piece is. For some improvements like a new energy
11 management system that they may not have installed
12 otherwise, they don't need it to function but it's
13 actually going to improve their efficiency quite a
14 lot, the entire cost of that system and all those
15 savings will be considered as incremental, something
16 they wouldn't have needed to do otherwise.

17 But if they're replacing equipment that
18 is just in their building, lighting, heating, cooling
19 equipment that everyone knows that they will have to
20 replace eventually, they use as their baseline the
21 current code or the current industry common practice,
22 basically, what we know they would have installed if
23 they change out the equipment today, and they take
24 the difference both in the cost between the code or
25 current industry practice and the efficiency, the

1 more efficient equipment, and they say this is the
2 cost we're going to reimburse you for, and the
3 savings, the difference in savings between those is
4 the savings we're going to count towards our goals
5 and towards the incentives the way they're set up in
6 the state.

7 Does that make sense?

8 CHAIRMAN SNITCHLER: That helps, thank
9 you.

10 MS. BORGESON: This is also a program
11 that doesn't give credit for historic projects, only
12 new projects that are shown to be incremental
13 improvements. And for every project an Xcel customer
14 can choose between their self-direct programs,
15 custom, and prescriptive programs.

16 The self-direct programs are about
17 30 percent higher than their other programs, again,
18 like their other programs because the program staff,
19 the utility staff, is not having to do as much
20 hand-holding.

21 There's no upper limit on the total
22 incentives that a customer can get, so it's not
23 limited to their DSM charge. And Xcel is really
24 looking to purchase efficiency as a resource wherever
25 they can and they know that the customer's interest

1 in and a capacity for savings will vary. So Xcel's
2 staff is really seeking the lowest-cost resource
3 whenever they can find it.

4 Xcel has extremely rigorous M&V
5 requirements. They require pre-project energy use
6 monitoring to create a baseline for where the
7 customer currently is, and they also preapprove
8 projects and estimate the incentives that are going
9 to be available. Their most senior engineers review
10 all of the project proposals and the monitoring and
11 verification plans.

12 COMMISSIONER LESSER: You talked about
13 the vigorous M&V. Do you have any idea what those
14 costs are like?

15 MS. BORGESON: You know, it varies a lot.
16 I couldn't tell you, you know, what the costs are. I
17 will give you an example later on.

18 COMMISSIONER LESSER: Or a percentage of
19 programmatic costs.

20 MS. BORGESON: Yeah, it varies a lot
21 between states. I can tell you that there's a few
22 states where they explicitly carve that out, so in
23 the Pacific -- in Puget Sound Energy, they say that
24 it's about 7-1/2 percent of the DSM charge that they
25 put aside for administrative costs. Again, it really

1 varies on how rigorous the M&V is and all the
2 different parties that are involved that have to
3 review the applications.

4 Okay. And so now I'm going to step back.
5 And just so you know, all the notes for these slides
6 I've also included so you can review them later. I
7 know it's a lot of information and I get the programs
8 confused, so I'm sure you will as well if you are
9 just looking at it once, or for the first time
10 rather.

11 So in terms of the elements of program
12 design that I think are important for self-direct
13 programs, I'm now going to look -- I looked at about
14 19 different programs across the country, and so now
15 I'm going to talk through the differences in who's
16 eligible, which customers are eligible, which
17 projects are eligible, the level of incentives, the
18 level of exemption or credit from the DSM charge, the
19 length of exemption, and measuring the savings.

20 So in terms of eligible customers,
21 there's many ways for setting the bar for who can
22 participate. A few states use the dollars of DSM
23 charges they pay each year, a few states use power
24 demand, but almost all of them or well more than half
25 use annual energy consumption.

1 So, just as an example, in Arizona the
2 minimum is 40,000 megawatt-hours a year of
3 consumption. In New Mexico it's 7,000 megawatt-hours
4 a year of electricity consumption. And when I was
5 looking through all these programs, the thing that
6 really pops out is just how low the bar is relative
7 to other programs in Ohio.

8 So 70,000 megawatt-hours a year, or
9 700,000 kilowatt-hours a year in Ohio, which means,
10 you know, you're going to get a lot more customers
11 that qualify and, potentially, the administrative
12 burden and complexity is going to be a lot higher.

13 Just, you know, so you get a sense of the
14 19 programs that I reviewed, almost all of them had
15 50 or fewer customers every year that participate.
16 So they're the very largest customers and there's
17 really quite a bit fewer than we're seeing here in
18 Ohio.

19 In terms of eligible projects, like Ohio,
20 most programs allow projects with a benefit-cost
21 ratio of greater than 1.

22 You can see on your screen here, this is
23 Xcel's program on the bottom left-hand side, the
24 self-direct programs, as compared to some of their
25 other programs. This is very cost-effective.

1 And then on the right, Puget Sound Energy
2 program, you can see that they have the utility cost
3 test and the TRC for different program years and, as
4 I mentioned, you know, it varies between, you know,
5 around 1 or around 5 for the TRC based on whether
6 it's a competitive year or sort of the normal program
7 year.

8 Some programs also have simple pay-back
9 thresholds of between one to seven years. A lot of
10 programs in our country don't want folks to be
11 rewarded or reimbursed for projects that have
12 paybacks of less than one year because they think
13 they should have done them anyway because it's so
14 cost-effective.

15 Again, it's just a, you know, a long list
16 of the different projects and how they do it. But
17 again, you know, it's some sort of benefit-cost test
18 they're using as a threshold in most cases.

19 In terms of incentives, most programs
20 reimburse based on the amount of money that the
21 customer spends on the project and it's somewhere
22 between 50 and a hundred percent of the project
23 costs. A few, like Ohio, provide incentives based on
24 savings.

25 And in terms of level of exemption, most

1 customers, sorry, more than half the customers
 2 require -- more than half of programs require
 3 customers to pay some share of the shared costs such
 4 as admin. and M&V, and the sort of rationale behind
 5 that is that self-direct customers aren't paying the
 6 full cost of their own programs, other customer
 7 classes are paying those costs

8 COMMISSIONER LESSER: Merrian, what about
 9 incentives to the utility in regard to let's say
 10 they're going to over and above their RPS benchmark.

11 MS. BORGESON: Yeah, there is a huge
 12 diversity of incentive mechanisms for utilities. In
 13 fact, we do a lot of research on this. There's not
 14 really a short answer to that. There's like five or
 15 six different ways that utilities are reimbursed.

16 Cheryl, did you want to say something?

17 COMMISSIONER ROBERTO: Yeah, I did.

18 If I can, Mr. Chair.

19 That is an entirely different topic and
 20 there is a wealth of information on it, and if anyone
 21 is interested, there's actually going to be a
 22 workshop in Detroit on November -- 28th?

23 MS. GEBOLYS: Ninth.

24 COMMISSIONER ROBERTO: Ninth. Thanks,
 25 Deb.

1 -- November 29th, the week after
2 Thanksgiving, on Thursday, for a full-day workshop in
3 which commissioners and commission staff will walk
4 through the types of incentives that are available to
5 utilities for engaging in energy efficiency programs.
6 And when you participate in that program, you will
7 walk out with a thumb drive that will lead you to
8 even more research that's available on it.

9 COMMISSIONER LESSER: Mr. Chairman, do we
10 have anyone participating?

11 CHAIRMAN SNITCHLER: Not that I'm aware
12 of, but I do know, as the cyber security watchdog
13 around here, thumb drives are suspect, so we'll have
14 to make sure we're careful about what we're importing
15 into our system.

16 MS. BORGESON: We have a few, I mean, so
17 some of the staff from LBNL are working on that
18 workshop, and we have a few short papers as well that
19 I can send you that kind of -- for a number of states
20 and commissions we've actually gone through sort of a
21 business model looking at who benefits from which
22 cost recovery mechanism, you know, utilities versus
23 ratepayers, et cetera, and it can get very complex.

24 But there's essentially, you know, three
25 models that you might look at and kind of compare

1 when you're thinking about that issue. These are
2 just two examples. In Michigan they provide for
3 administrative costs and also for shared funding for
4 their low-income program.

5 In the Pacific Northwest they provide
6 carve-outs, as I mentioned, 7-1/2 percent for program
7 administration and 10 percent for market
8 transformation programs. They have an entity there
9 called NEEA, Northwest Energy Efficiency Alliance,
10 that provides market transformation work across the
11 various market segments including C&I, so everyone
12 pays a portion of those costs.

13 CHAIRMAN SNITCHLER: Can I take one slide
14 back?

15 MS. BORGESON: Please.

16 CHAIRMAN SNITCHLER: I'm going to jump in
17 front of you.

18 MS. BORGESON: Yes.

19 CHAIRMAN SNITCHLER: The Michigan one,
20 obviously we're dealing with, when you're talking
21 about administrative and low-income programs, now
22 we're moving more into the residential camp and less
23 from the C&I camp.

24 MS. BORGESON: Yeah.

25 CHAIRMAN SNITCHLER: Okay.

1 MS. BORGESON: Oh, so this is for their
2 self-direct industrial program. What they're saying
3 is that costs such as adminis- -- yes, it's outside
4 of just their program in this case. They're saying
5 we want to run very subsidized low-income programs
6 and everyone's going to share a piece of that.

7 CHAIRMAN SNITCHLER: Okay.

8 MS. BORGESON: Not just the residential
9 customers.

10 CHAIRMAN SNITCHLER: Okay. Thank you.

11 MS. BORGESON: Yeah.

12 COMMISSIONER LESSER: My question was
13 could you tell me a little bit more what a market
14 transformation program is.

15 MS. BORGESON: Sure. So in this case, so
16 in the Pacific Northwest they divide their activities
17 essentially into three areas: One, they look at
18 codes and standards so that's, you know, they're
19 adjusting their codes and standards all the time,
20 there's folks in the region that do that;

21 And then there's programs, it's usually
22 the utilities or some sort of third-party
23 administrator that is working directly with customers
24 to figure out where the savings are;

25 And then there's market transformation

1 which is looking often to manufacturers and what they
2 might be able to reduce. They look -- they do market
3 surveys to figure out what products and services are
4 actually needed by their customers but might not be
5 available currently. They look at what training
6 might be needed to allow the contractors, for
7 example, in that region to be offering new services
8 that are cost-effective.

9 So they're looking across the sort of
10 supply chain and trying to figure out, you know, how
11 do they push the market towards being able to offer
12 innovative new technologies and services that serve
13 both the residential sector and the commercial and
14 industrial sector.

15 COMMISSIONER LESSER: Okay. So I'm
16 trying -- I'm just trying to understand this. So a
17 commercial customer would be doing their own, are you
18 describing an R&D program?

19 MS. BORGESON: Okay. So in this case for
20 market transformation, this organization, NEEA, gets
21 some public funding and they are doing the research,
22 they're working with distributors, manufacturers,
23 and --

24 COMMISSIONER LESSER: So you're not
25 describing about an individual commercial customer.

1 MS. BORGESON: No. Not an individual
2 commercial customer, but the idea is that those
3 commercial customers are ultimately benefitting from
4 the work that NEEA is doing to bring new products
5 into market, helping manufacturers design customers
6 [verbatim] that better meet both the needs of their
7 customers and are more efficient.

8 So it's actually worth looking at the
9 work they do because they've been extremely effective
10 in sort of getting the ball rolling and helping --
11 and they work directly with, you know, manufacturers
12 of light bulbs, large firms that go in and actually
13 do like the engineering analysis in, you know,
14 industrial customers' buildings and things like that.

15 COMMISSIONER LESSER: I'm not sure how
16 you can answer this, but has the industrial sector in
17 that state been supportive of this?

18 MS. BORGESON: In general, yes. Yeah.
19 And I think over time, you know, this organization
20 has now been around for many years, they've seen some
21 of the benefits and, you know, kind of experienced
22 that personally, and so the support at least under,
23 at least I know for several, like for large
24 commercial real estate property owners for example,
25 or for certain segments of the industrial sector or

1 the agricultural sector, for example, they've gotten
2 a lot out of the efforts that this organization puts
3 out to kind of move the market forward.

4 Let's see. In terms of the length of
5 exemption, like Ohio we're seeing most states
6 offering multiyear exemptions or credits. I think
7 this is actually really important because if you're
8 only looking at the amount that they're paying in DSM
9 charge in one year, you often can't do some of the
10 more comprehensive changes to facilities.

11 Oftentimes you'll want to do an upgrade
12 that maybe saves 20 percent of energy in one facility
13 and it's a fairly large investment. So where
14 possible you don't want to limit the savings to
15 just -- or, limit it to the DSM charges for just one
16 year. So like we have in Ohio.

17 And I mentioned earlier sort of this
18 opt-out due to lack of efficiency potential, there's
19 three states that have the option and none of them
20 have seen it used to date. And usually when they
21 give that exemption, they only offer about half the
22 DSM charge for a period of time, and in this case --
23 in both of these cases it's for two years and then
24 they need to reapply with sort of the idea that
25 technology changes and in two years they may have

1 more options available to them.

2 In terms of how savings are measured,
3 most programs, like Ohio, use M&V similar to their
4 other C&I programs, but the rigor really varies
5 based -- depending on the program.

6 And then the baseline, as I mentioned,
7 also matters, sort of "as found" or versus the code
8 or industry standard practice.

9 And just a summary of how Ohio compares
10 in the key points, as I mentioned, significantly more
11 customers qualify in Ohio than in other states.

12 Unlike most programs, Ohio credits
13 historic projects, but on the cost-effectiveness
14 criteria Ohio is very similar to other programs.

15 In terms of incentives and level of
16 exemption, the benchmark comparison method is not
17 used in other states, and more than half of the
18 programs reviewed have some carve-outs for
19 administrative costs or other common costs.

20 In terms of length of exemption, unlike
21 most programs Ohio uses -- the length of the
22 exemption is based on the savings rather than the
23 project costs, but like other programs it's also
24 multiyear exemption or credit.

25 In terms of savings, several practices do

1 have -- or, several states have practices similar to
 2 Ohio, but you might want to consider moving towards
 3 more of the use of the code or industry standard
 4 practice as opposed to "as found" just to increase
 5 the likelihood that the savings are additional and
 6 wouldn't have happened without the program.

7 And this is my last slide. So Cheryl
 8 asked me to just pose some questions for
 9 consideration, and these may be things that folks in
 10 the room want to respond to in their comments. I'm
 11 sure there are other things to comment on and other
 12 questions that are out there, but No. 1 is: Should
 13 Ohio's self-direct customers pay for some of the
 14 costs such as admin., and if so, to what extent.

15 The second question is around the fact
 16 that few self-direct programs award credit for
 17 historic projects: Should Ohio redirect resources to
 18 new and additional projects, and if so, how.

19 No. 3: Should Ohio consider alternatives
 20 to the Benchmark Comparison Method, you know, some of
 21 the examples I presented today.

22 And then No. 4: Should Ohio adopt a
 23 baseline of current code or industry standard
 24 practice instead of "as found" in the cases where
 25 that's used.

1 So it's just some of the questions you
2 might consider. I will be providing a large Excel
3 spreadsheet that compares the 19 programs that I
4 looked at as well as my notes on this talk and,
5 again, I'm also available in the coming months if you
6 have additional questions.

7 So thanks for your time, and thanks for
8 inviting me here.

9 CHAIRMAN SNITCHLER: Thank you.
10 Appreciate it very much.

11 Any questions from the Commissioners or
12 staff for that matter? Don't feel like you have to.

13 (No response.)

14 CHAIRMAN SNITCHLER: Well, thank you very
15 much. I appreciate your input and making those
16 resources available, I know that will come in very
17 handy for us.

18 MS. BORGESON: Glad to help. Thanks.

19 EXAMINER BULGRIN: Okay. Just as a
20 reminder, I will be issuing an entry, an attorney
21 examiner entry, either today or tomorrow seeking
22 comments from the parties on what they've heard today
23 and also generally the EEC program, and those
24 comments will be due by November 30th with replies
25 due by December 7th.

1 And if there's nothing further --

2 CHAIRMAN SNITCHLER: There is one other
3 thing, if I may exercise executive privilege again.
4 Just because we are, in effect, having a meeting
5 today I'd like to announce that there will be a
6 Commission meeting tomorrow morning at 9 o'clock here
7 at our usual meeting room, 11-B, for a short agenda.
8 But just so that everyone's aware, and it's already
9 been noticed I think electronically, but to make sure
10 people are aware.

11 Thanks, Dick.

12 EXAMINER BULGRIN: Thank you.

13 CHAIRMAN SNITCHLER: So we're adjourned?

14 EXAMINER BULGRIN: We're adjourned.

15 CHAIRMAN SNITCHLER: Thank you.

16 (The workshop adjourned at 11:20 a.m.)

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CERTIFICATE

I do hereby certify that the foregoing is a true and correct transcript of the proceedings taken by me in this matter on Thursday, November 15, 2012, and carefully compared with my original stenographic notes.

Maria DiPaolo Jones, Registered
Diplomate Reporter and CRR and
Notary Public in and for the
State of Ohio.

My commission expires June 19, 2016.

(MDJ-4083)

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This foregoing document was electronically filed with the Public Utilities

Commission of Ohio Docketing Information System on

12/3/2012 9:22:58 AM

in

Case No(s). 10-0834-EL-POR

Summary: Transcript Transcript from hearing held on 11/15/12 electronically filed by Mrs. Jennifer Duffer on behalf of Armstrong & Okey, Inc. and Jones, Maria DiPaolo Mrs.