From: Carl Linvill [mailto:clinvill@raponline.org]
Sent: Thursday, March 23, 2017 9:16 AM
To: Nightingale, David (UTC) <dnightin@utc.wa.gov>
Subject: Re: WA UTC initial workshop on T&D planning this Friday

Hi David,

Here are some overall high level thoughts on your presentation, the T&D framework and the presentations of others at the workshop. These are thoughts and shoot from the hip facts, so this is not information of a quality that you can introduce these things as fact. They are high level observations intended to identify potential gaps in your process. If you find some of these shoot from the hip facts interesting, let me know and I can seek to back them up with exhibit quality facts, or point you toward people who can. I am presuming a lot, acting like I know more about your on the ground situation than I really do, so apologies in advance if I presume too much.

- 1. Distribution planning is mostly done on a very rudimentary level, from what I have seen. PSE lays out a very detailed distribution planning process where they include all conceivable factors in their analysis. I am skeptical they actually do all of this, but if they do, good for them. Most utilities forecast distribution need based on straightline projections of locational load growth, and they build infrastructure to meet the need. They do not evaluate alternatives at all. They likely assume very poor information on usage, that it, almost a complete lack of visibility into the distribution system on the customer's side of the substation, and they project need very conservatively under the assumption that since they can't see anything that's happening, they need to consider far fetched possibilities to protect reliability. It is also likely that they use planning rules of thumb that assume this very same thing. So given this:
 - a. It seems like you will need to establish current practice and

distinguish it from current aspiration. What a utility is doing on selected feeders and circuits is interesting, but what is the baseline approach that is used most prevalently? Both are indeed interesting but it seems like the information you have gotten so far is what is happening on the leading edge of a given utility, not what is happening commonly with each utility. Transparency starts with the baseline information and it seems to me that a customer should be able to know what the baseline assumptions are for their place on the grid, and the regulator should know what the baseline approach is across locations on the grid. This baseline allows information helps you to understand what the benefits of improvements are and it will let you prioritize what those best value improvements are.

- b. Pilot projects are great, what is happening on the margin is great, and I really mean that. But grid modernization is unlikely to happen by identifying the gold standard and then building out the entire grid to that standard. So at the same time you are learning from pilots you need to be pressing for the pervasive, "everywoman" improvements that move the ball forward for all customers.
- c. While we are on that thought what do customers want? You mention listening to customers in your intro and that is good. You mention stakeholder processes, yes, you really need to understand where households, companies, local government aspire to do. I believe you have Solarize programs in your state, that is one place for hearing aspirational voices from consumers. And you have many companies with corporate sustainability goals, those are voices of what people want. So I know you know these things, but a missing piece from the conversation thus far is a deep consideration of what people want, what they are asking for, and what the distribution system needs to be capable of doing to enable those aspirations (Fast EV charger deployment, solar, community solar, local storage, microgrids/resiliency aspirations, etc.) what is the aspirational trajectory. Maybe this is just common knowledge and so there is no need to talk about it.

- d. The first question you need to start with is, "what does the distribution system "need" to maintain reliability in the evolving grid?" and what it "needs" is driven by projections of what people want. The second question is, "what sources of value do we aspire to extract from the distribution system?" and this further informs what we "need" because animating those value streams requires some combination of investment and evolution of planning and operational practices. The utility needs help discovering what people want and what sources of value to animate because it is not obvious. So a great outcome of this process would be to get a simplified way of determining what the distribution system needs to be capable of in the near term, say next five years, to enable customers in getting what they want and in moving toward animating value streams that help customers to finance projects.
- e. So now we just repeat the word transparency. Given what we have just talked through, what does transparency look like? What do you need to know as a regulator and what do customers need to know to pursue their aspirations. Whatever those things are, that's what we need to be transparent.
- f. And now we turn to the thought of "keeping it simple". I like the transactive energy approach as a mental model of what we aspire to in the long term and as a guide toward that long term. BUT, building out the transactive approach leads us down many technical rabbit holes that could defer anything meaningful from happening for a long time. Blockchain seems to be a near term operationalization of the transactive approach that might be useful as a building block. I just get concerned when utilities disappear to study some very complex process and implement numbers of pilots is this a tactic of meaningful modernization to meet customer need or a tactic of deferral and control? I don't want to judge, I just want to reveal my angst when I see really complex stuff going on in partial view.
- 2. So back to your task at large. I like your approach of identifying needs on the distribution and transmission system and then holding some kind of competition of alternatives, akin to the BPA non-wires process. You

asked good questions on that score. You are probably aware that part of the CA DRP process is Comm. Florio's order on incentive compensation for utilities when they contract for resources that defer needs. I have attached that in case you don't have it. The utilities are asked in this order to propose places on the distribution system ripe for non-wires solutions, and to set up pilots to seek non-wires alternatives. That seems pretty good to me.

So this is enough for now just to get this conversation going. Happy to talk about any of these things. Happy to dig into particular issues/questions.

I'm glad you are pursuing IRP revisions and considering DERs and Distribtion planning as you do it.

Carl

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From: "Nightingale, David (UTC)" <<u>dnightin@utc.wa.gov</u>>
Date: Wednesday, March 15, 2017 at 12:48 PM
To: Carl Linvill <<u>clinvill@raponline.org</u>>
Subject: RE: WA UTC initial workshop on T&D planning this Friday

Thanks very much! I look forward to that.

From: Carl Linvill [mailto:clinvill@raponline.org]
Sent: Wednesday, March 15, 2017 12:08 PM
To: Nightingale, David (UTC) <<u>dnightin@utc.wa.gov</u>>
Subject: Re: WA UTC initial workshop on T&D planning this Friday

Hi David

I do have some thoughts. I will be writing up some notes and reactions in the next couple of days. I'll think about Model regulations and pass along what I find. Carl On Mar 15, 2017, at 11:27 AM, Nightingale, David (UTC) <<u>dnightin@utc.wa.gov</u>> wrote:

Carl -

Thanks for calling in.

Did you have any reactions to the presentations made in the morning?

Based on the discussions we will be start drafting some preliminary rule language. Are there rules in other states that you would suggest may be good models to examine or emulate in part or whole?

Cheers, Dave N

From: Carl Linvill [mailto:clinvill@raponline.org]
Sent: Thursday, March 09, 2017 11:25 AM
To: Nightingale, David (UTC) <<u>dnightin@utc.wa.gov</u>>
Subject: Re: WA UTC initial workshop on T&D planning this Friday

Hi David. I was able to clear my calendar tomorrow morning so I can be on, at least from 9 until noon. Look forward to it. Carl

From: Carl Linvill <<u>clinvill@raponline.org</u>>
Date: Wednesday, March 8, 2017 at 4:29 PM
To: "Nightingale, David (UTC)" <<u>dnightin@utc.wa.gov</u>>
Subject: Re: WA UTC initial workshop on T&D planning this Friday

Great, glad to help

Carl Linvill RAP 775.450.0603 www.raponline.org On Mar 8, 2017, at 4:18 PM, Nightingale, David (UTC) <<u>dnightin@utc.wa.gov</u>> wrote:

Carl -

That would be great. This is very short notice, but I appreciate the perspective you can bring.

The presenters presentations will be posted to the docket today and tomorrow. I know that the PNNL presenter has already placed here presentation there.

To the extent that you can help us out as we move forward in our process, it would be appreciated.

Cheers, Dave N

From: Carl Linvill [mailto:clinvill@raponline.org]
Sent: Wednesday, March 08, 2017 3:13 PM
To: Nightingale, David (UTC) <<u>dnightin@utc.wa.gov</u>>
Subject: Re: WA UTC initial workshop on T&D planning this Friday

Hi David

Thanks for inviting me. I cannot come in person. I will try to call in, I have to move another meeting but I will try. Carl

Carl Linvill RAP 775.450.0603 www.raponline.org

On Mar 8, 2017, at 2:56 PM, Nightingale, David (UTC) <<u>dnightin@utc.wa.gov</u>> wrote:

Carl Linvill –

I wanted to make sure that you were aware of the Transmission and Distribution planning workshop that the WA UTC will be holding this Friday in Olympia. It would be great if you could attend in person or call in to provide a regional perspective. If not the presentations will be posted on-line and would be happy to talk with you before or after the workshop. This is the kickoff workshop for T&D planning and is a part of our larger IRP rulemaking process. The notice of this Friday's meeting can be found in our docket <u>U-161024</u>. Following this initial workshop, I plan to convene a workgroup to help hash out possible approaches to incorporate T&D planning into our IRP rule.

I am currently listening into the NWPCC's DRAC. I will send you the notice of this event in a following e-mail attachment.

Dave n.

David Nightingale, C.E.M. Senior Regulatory Engineering Specialist Washington Utilities and Transportation Commission

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