**3rd External TAG Meeting**

**Date & time:** 08/23/2016 – 08:00-11:30 AM

**Location:** Kennewick GO

**Presenters:** Mark Sellers-Vaughn, Monica Cowlishaw, Bruce Folsom

**In attendance**: Mark Sellers-Vaughn, Bruce Folsom, Monica Cowlishaw, Brian Robertson, Devin McGreal, Mike Parvinen, Eric Wood, Brian Cunnington, Amanda Sargent, Carolyn Stone, Brian Hoyle, Jennifer Gross, David Nightingale - WUTC, Kathi Scanlon- WUTC, Cooper Wright - WUTC

**Called in**: Bob Morman, Laura Flanders - NWP, Chad Luginbill, Josh Romine, Mark Chiles, Deborah Reynolds, Ed Finklea – NWIGU, Jeremy Twitchell - WUTC

**Minutes by**: Carolyn P Stone

Mark began the meeting by welcoming everyone. Mark also reminded everyone that today’s meeting is a “workshop” and feedback is welcomed! He then went over the Agenda. Bob also welcomed Staff to the meeting and said he looked forward to the presentation.

*Presentation #1* – Monica Cowlishaw

**Demand Side Management**

Monica began her presentation with Slide #4 discussing the purpose of rerunning their model called “TEA-Pot”.

* Monica stated that conservation is changing the Demand Side Management within the IRP to an “Executive Summary”.
* The TEA-Pot model re-runs the forecast in 3 geographic areas at the climate zone level for Washington and 1 climate zone for Oregon.
* Amanda then went through TEA-Pot stating inputs have changed and will change again. One of the conservation forecast changes is that administrative costs have increased due to increased outreach.

**Scenarios**

* Amanda explains that the scenarios include 30% and 50 % of incremental costs for the residential incentives. It is a robust portfolio! It includes both custom and prescriptive programs.
* Amanda states that the Service Territory map helps smooth the scenarios into the IRP and better reflects the Conservation forecast.

**Slide #9 – Full Portfolio by Climate Zone**

* Amanda states that these are preliminary numbers. Zone 2 is the smallest because there are fewer customers. This forecast is in line with the average of the last 2 years.

**Slide #10 – Full Portfolio by Customer Class**

* Amanda noted this scenario will change. There are very few large industrial customers included here. If there is even 1, it makes a large impact!
* Monica mentioned that there are other items included in the IRP such as Billing Studies (both residential & commercial).
* She went on to say that Cascade & other LDC’s will make an $18.3m investment as a collective effort to make high efficiency gas appliances more efficient. Examples include the Energy Star Dryer product improvement, a water heater, rooftop units and piloting LNG in Union Gap.

Question: Was the water heater gas?

Answer: Yes

CNG is involved in community projects, i.e. Georgetown Prize competition. There is one in Walla Walla & Corvallis.

**Slide #14 – Noteworthy Changes**

Monica explained that CNG will work with Shawn Collins on low income efficiency programs.

Question: What is the “incremental cost”?

Answer: This is the difference between the costs involved to install standard appliances as compared to high efficiency appliances. The difference is the incremental cost.

* Monica explained that conservation will be pushing the 30% and 50% incentive levels in 2017 to get new customers. The Commercial & Industrial will be a mix of 30% & 50 % incentive levels too.

Question: How do you determine which goes in 30% or 50% incentive level buckets?

Answer: The TEA-Pot model calculates this, breaking down the customer benefit by climate zone.

* Monica mentioned these programs are cost effective on a portfolio level.

Question: What level is the Executive Summary going to?

Answer: Climate Zone level

Question: Are there any custom projects included?

Answer: No, custom projects take about 2 years to complete, so not included here.

There was a brief discussion of the Conservation Advisory Group. Monica says they attend 4 times per year and talk about changes in programs, evaluation of financing options and any “issues” associated with programs.

*Presentation #2* – Bruce Folsom

**IRP Carbon Assumptions**

**Slide #33 – The National Focus**

* Bruce explains that the Clean Air Act, section 111(d) has changed the reduction of greenhouse gas emissions from power plants to 32% from 30% by 2030. States can comply by rate or mass based reductions.
* Regionally, the NWPPC released a CO2 discussion, analysis and scenarios in May of 2016 having to do with the electric industry. Regionally, there is a proposed cap and trade program as well.
* Washington State is very active as the governor has proposed carbon regulation. All emitters are on a rolling baseline from which reductions need to come. Department of Ecology rules will probably be pulled into states’ implementation plans.
* Initiative 732 changes carbon taxes, but the labor and utilities groups are not supporting it.
* Environmental communities have an “initiative” in process.
* In Oregon there are a host of proposals for Legislature. The electric industry is behind “Coal to Clean” law. Northwest NG carbon program has an impact to CNG because of the fugitive methane pilot program. It would be cost effective for CNG to follow this program because methane may have a high impact on CO2 emissions.

**Slide #38 – Types of CO2 Adder Analyses**

* The NWPPC summarizes 8 approaches. There are 39 more additional methodologies and 4 additional scenarios, along with 4 sensitivity analyses. The focus here is again on electricity.
* There was a brief discussion of the Snake River Dams proposed removal.

**Slide #40 – Fugitive Methane Emissions**

* Initially, studies show this could be as much as 10% but concluded with only 1% impact. The council discussed this and there is a great deal of uncertainty as to whether it, compared to CO2 is under or over stated. The Natural Gas (NG) industry is focused on R&D. Bruce stated the NG industry is ahead of the Electric industry on this matter!
* Mike Parvinen stated that CNG is around 1%, but that the East Coast runs higher.
* CNG is currently engaged in conservation & energy efficiency programs that save customers $ and reduce emissions. The more an LDC pushes gas, the better!

**Slide #43 – Proposed Direction**

There was some discussion regarding NG being considered a monopoly.

* Mike Parvinen pointed out that when you advertise and compare electricity to gas you get the option to choose gas over electricity…and since electricity is already there we do compete and NG is the “alternative choice”.
* Ed Finklea from the phone said that if you incentivize users to get NG then are penalized for emissions is an “unintended consequence” of encouraging NG use! This is counterintuitive… to penalize fossil fuels no matter how efficiently they are used!

Question: What is the metering accuracy requirement?

Answer: Accuracy requirement is +-2%

*Presentation #3* – Mark Sellers-Vaughn

**Market Outlook and Long Range Price Forecast**

**Slide #47 - Market Outlook**

* Mark stated that the US Economy is “sluggish” right now!
* 54% capacity in Washington and 44% in Oregon
* CO2 emissions are an issue – the impact is higher gas costs.
* Storage is high, above the 5 year average!

**Slide #48 – Long Range Forecast**

* This forecast blends current market prices with long-term fundamental prices.
* This forecast uses resources from Wood Mac, NWPPC, EIA, Bentek, FF Center, and various market reports from suppliers (TD, BP, Powerex).

**Slide #53 – Long Range Price Forecast**

* The long range price forecast includes a 20-year planning horizon, prices look reasonable!
* Mike Parvinen added to the conversation saying 2037 is a realistic price, inflation puts it higher and any event could change the price.
* Mark said that they anticipate demographic increases but we are already over-supplied. We use a conservative approach!

*Presentation #4* – Bruce Folsom

**Price Elasticity Overview**

**Slide #56 – Piece Elasticity – Context and Import**

Bruce explains that there are 3 take aways from today’s presentation as follows:

1. Price Elasticity is important!
2. Precision in our industry is difficult to come by!

**Slide #58 – Factors Affecting Price Elasticity**

* Customer usage varies! If conservative usage then less input = useful output.
* Customers may not know the pricing outlook…i.e. confusing signals!
* Levelized billing
* Economic changes
* Building codes
* Technology
* Customer spending habits
* Fracking
* Spark/spread – now moves in tandem

Questions: Is there any evidence in the last 5 years of consumer responsibility for the dramatic decrease in prices? Is it the same on the industrial side? Are you distinguishing between CORE or Large Volume users?

Answers: Ironically, there is lower usage throughout the industry. Fuel switching could have impact. Not distinguishing between CORE and large volume users.

**Slide #61 – Other Factors**

* Bruce states that there hasn’t been a lot of academic work on this. A utility can run many studies, but at what cost??
* David Nightingale adds that the customer may not act rationally!

**Slide #63 – Price Elasticity – Conclusion**

* Many complicating factors!
* Customers can use alternative fuels such as propane, firewood, electricity

*Presentation #5* – Mark Sellers-Vaughn

**SENDOUT Model**

* Mark started the presentation by defining the SENDOUT model as a “resource Optimization model.
* It is a regional standard for the LDC’s.
* It is powerful & complex but “archaic”. The software is 15 years old! We are planning to move to a new platform in 2 to 3 years.
* SENDOUT uses a Linear approach
* It is a “tool” to help inform and shape it is **NOT** a final decision maker!

**Slide #70 – Major Resource Issues on the Horizon**

* Alternative resource issues
* AECO – issue because NOVA has a CAP and could become a receipt issue.
* Ryckman Creek (OPAL/Wyoming area) resource is reasonably priced but there are reliability concerns!

Question: Mark Sellers Vaughn asks Bob Morman on the phone, are we within 2 to 3 years in getting biofuels?

Answer: Bob said they are working on getting one in place, could happen any time.

**Slide #71 – Considerations**

* “Pancake” – Rate stacking for example…AECO moves to Foothills, then to GTN pipeline, then to NWP, each has their own rate, called rate “Pancaking” or resource stacking.
* Some considerations are factors & numbers that are “stress tested” with the Monte Carlo.

**Slide #73 – Supply Side Alternatives Modeled**

* Incremental Storage – Ryckman or Mist

Question: What is the medium contract length?

Answer: Medium is 3 to 5 years. Right now CNG cannot do anything farther out than 3 years but

there are discussions about that with Senior Management.

Question: Mark asks WUTC if this should be displayed in narrative or appendix?

Answer: David said he will consult with the others first.

**Slide #83 – 2016 IRP Timeline**

* TAG #4 will be Distribution System Planning. There will be a few days to look over this presentation. This meeting will be at SeaTac Conference Center (SeaTac)
* TAG #5 is Oct 7th.
* The Draft IRP will be done on 10/17 and you will have 3 weeks for comments.
* Reminder… this is a very aggressive schedule.
* Nov 23rd the IRP goes to press.
* Dec 14 it is filed in Washington.

Mark said his group is trying to make the IRP concise, but the details will be in the Appendix.