**WUTC Tag Meeting 2 &3**

**Date & Time**: 7/12/2018, 09:00 AM – 04:00 PM

**Location**: SeaTac Conference Center – Seoul Room

**In attendance**: Mark Sellers-Vaughn, Bruce Folsom, Brian Robertson, Devin McGreal, Ashton Davis, Eric Wood, Chris Bolton, Jay Story (GTN), Mike Rasmussen (NWP), Marty Saldivar (NWP), Laura Flanders (NWP), Karl Frankiewich, Andrew Rector, Cory Dahl (Washington State Attorney General’s Office), & Carolyn Stone.

**Called in**: Scott Madison, Bob Morman, Chris Robbins, Jeremy Ogden, Mike Parvinen, Tom Pardee, Debra Reynolds, Amanda Sargent, Abigail Krebsbach, & Art Gelber (Gelber & Associates).

**Minutes by**: Carolyn P Stone

Mark began the meeting by welcoming everyone to the 2nd & 3rd WUTC Tag Meetings of 2018! Mark stated that there was a full agenda and questions, feedback, comments and concerns were very much appreciated! He asked attendees on the phone to please state their name before they speak. Mark asked Scott if he had any opening comments.

Scott thanked everyone for their participation. He stated that this is important for customers and stakeholders. He also thanked everyone for taking the time to be a part of the process and thanked the Resource Planning Team as well. Scott said he would not be on the call for the whole meeting.

Mark mentioned one item not on the Agenda. Art Gelber, of Gelber and Associates would introduce his firm and talk about the work his group is doing with CNGC towards a revised Hedging Policy, based on Docket 132019.

Bruce gave opening remarks as follows:

* The best way to influence the CNGC IRP will be in Tag’s 2,3,4 & maybe 5.
* He asked stakeholders to know there is an open door to himself and the team.
* Interaction prior to making comments on the draft, before the demand forecast is done is very influential.

Brian then went over today’s Agenda.

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***1st Presentation – Northwest (NWP) System Capacity*** (Mike Rasmussen)

Mike went on to present the “Shelton Lateral”:

* Mike explained, there is 8,960 Dth of capacity available on the Shelton Lateral to the Bremerton delivery point - 6,814 available capacity and 2,146 incremental capacity!
* To get additional capacity NWP would have to expand the pipeline, costing $57K.
* We could install a press regulator for about $14K Mike said, but to expand the entire lateral would be up to $20m!
* Taking the short path to Plymouth – flow Plymouth to Shelton Lateral (new capacity).

**Question**: Kyle asked if there is growth at the Shelton Lateral?

**Answer**: Mark answered “yes”, there is growth compared to the existing capacity. SENDOUT® Modeling will show what the best solution is. Devin said that the Shelton Lateral in the 2018 OPUC IRP came up as an option – but they are still modeling this. Mark said that the engineering group at CNGC distribution system work is minor combined with other solutions. It takes an entire corporation to address shortfalls!

* Capacity is remarketed to CNGC or another 3rd party and they are willing to discount Jackson Prairie (JP) to Plymouth!
* Amended contract #139090 so CNGC acquired vacated capacity from JP to Plymouth through a discounted storage redelivery agreement.
* CNGC has the option to lock in discounted capacity through 10/2052.

Mike then went on to present the Spokane Lateral:

* Extension of JP storage redelivery of capacity from Plymouth LNG up the Spokane Lateral to Southridge thru a “hydraulic exchange”.
* Mike said, if you cut a straw shorter it increases pressure, but if the straw is 3 feet long you have lower pressure, so short haul gives more pressure! In this way we grow capacity without adding facilities!

**Question**: Andrew asked what the “short haul” refers to?

**Answer**: Mike said that Chehalis discharges pressure and the gas goes out, and as it goes down, it loses capacity and pressure and can’t deliver as much. It is a pressure differential!

**Question**: Andrew asked if you are converting long-haul to short-haul?

**Answer**: Mike said that at the Moses Lake Lateral, there is excess capacity. Rights can be reserved there for free, but we don’t need all those rights. It is a shortened path without putting any new facilities in. Plymouth to Southridge is where there is growth. We just changed where we deliver using transport contract #100002. This avoids both cost and environmental considerations!

Andrew said this brings 2,400 Dth’s of gas. Mike added that the hydraulic equivalent (CD) is the same… shorter path.

Mike then went on to present the Wenatchee Lateral:

* NWP is working with CNGC because there is a need for capacity at Yakima. It is really shortened capacity that does not go to the end of the lateral. NWP must put in some facilities in Wenatchee, but it cuts the cost in half!

**Question**: Kyle asked if this flexibility is a function of their service area?

**Answer**: Mike answered “Yes!” Also, because of meter design, rights are “grandfathered” in. Today CNGC would have to pay for that flexibility!

* Mark stated that over the last several years, because of the creative solutions from NWP and GTN cascade has saved millions of dollars!

**Question**: Kyle asked, is the hardest part presenting this in your model?

**Answer**: Devin answered “Yes!”

***2nd Presentation – TransCanada (TC) Update*** (Jay Story)

Jay Story is presenting today for GTN (Gas Transmission Northwest) and announced he is retiring after 36 years!

**Potential Demand Projections**: (slide #37)

1. Northwest Innovation Works: (NWIW)
	* Methanol plant in Kalama, WA, in final phase of permitting
2. Jordan Cove & PAC Connector:
	* PAC connects to RUBY & GTN to Coos Bay and build a power plant!
	* Jordan = Agreements with JERA and ITOCHU
	* Jordan is a large,1 Bcf facility but the pipeline has problems
3. Trail West Pipeline:
	* Cross cascades link to serve growth
	* Along I-5 corridor!
	* Up to 750K Dth
	* Service date of 2023
	* Used to be called “PALO”
	* Benefits both GTN and NWP (Mike said displacement use)

***3rd Presentation - Demand Forecast*** (Ashton Davis), Slide #49

* 20-year outlook
* CORE demand and peak demand
* At the citygate (CG) level
* Use 211 different regressions

**Key Definitions**: (Slide #50)

* AIC is statistical measure to compare models
* ARIMA – Auto-Regression Integrated Moving Average – applies time to data
* HDDS – Weather defined
* Citygate loops – Group of DB’s that service similar areas, forecasted together

**Question:** Andrew asked, “Do you use 1 rate schedule to forecast?”

**Answer**: Ashton said, “Aggregated Rate Schedules” are used.

**Key Assumptions**: (Slide #51)

* 7 weather locations
* 30 years weather history at “normal” temps
* 60º HDD used
	+ Produces better results
	+ R2 is much higher

**Question**: Kyle asked if Schneider interpolates data?

**Answer**: Brian said they gather information from customers and other sources and “scrub” it. Brian said he can send Kyle the methodology. Andrew commented that these are good questions! Mark said his group will be responding to this tomorrow.

* Bruce commented, “Cascade is being modest!” The data is the best that fits the geographical area. He hopes this issue has been vetted by the TAG meetings fully. Mark said that he welcomes feedback even after the draft. If there is an additional TAG meeting or workshop needed they will have one. Mark said this has been an ongoing discussion with Staff for the past 2 years. It is important to the IRP and PGA and he is very glad to get concerns addressed. Bruce said he hopes that Staff can get behind this!

***3rd Presentation – 2nd ½ -*** (Brian Robertson), Slide #72

* Forecast slightly lower from last year due to change in methodology
* Growth rate similar
* Washington demand slightly lower

**Question:** If all things were equal between OR and WA and they were on the same IRP cycle**,** would there be a different method for forecasting?

**Answer**: Brian said, “Not really”.

**Non-Core Outlook**: (Slide #75)

* Core = 300m Therms
* Non-core will include an outlook based on a 20-year plan. CG study will be in it.
* SENDOUT® includes non-core!
* More information will be included in TAG 5 on this.

***4th Presentation – Distribution Planning*** (Chris Bolton), Slide #76

* Distribution System Planning works on what needs to be “in the ground” to serve customers!
* Bruce briefly discussed planning versus operations = they are related but different…it comes down to this – planning for peak and super peak days. Operations is different, it is making sure system is there to handle those peak days!
* Mark stated that the non-core forecast is for revenue, but engineering needs this forecast and that is why we work so closely with engineering. We have meetings together.
* Bruce says planners have always been right in the past.

**Question**: Kyle asked if this is using information on customer accounts and demographics per degree day?

**Answer**: Chris answered, “On an hourly level, yes!”

**Synergi – Low Pressure Scenario**: (Slide #99)

* Infeasible
* Other solutions?
* MAOP = can we raise the pressure?
* Put solutions into the Low-Pressure Scenario. Adequate pressure considered > 20 but depends on system.

***5th Presentation – CNGC Gas Supply Overview****:*(Eric Wood)

**Highlights for the 2017 Portfolio Design (PF): (Slide #112)**

* Buying based on Year 1, 80% of Portfolio, Year 2, 40% and Year 3 20%
* Rolling physical hedge
* WUTC Hedging Policy – status quo until consultants help us form a “Hedge Plan”
* GSOC approves the PF design
* Forward curve relatively flat, even 5 years out!
* Annual load 30m Dth’s, doesn’t change that much
* Uses a 5-year rolling average
* Total RFP’s planned Nov 18 forward

**Question**: Andrew said, looking at the graph, if I added it up I would get 80%?

**Answer**: Eric said you get 80% of total supply after you add in the 2 additional years.

**Question**: Andrew asked, the Nov 18 – Oct 19, 3-year cycle starts?

**Answer**: That’s right. Starts in year 2016.

**Question**: Kyle asked if 2016 gas is purchased by 2017 and then in 2017 do you purchase more?

**Answer**: Mark said it is a “blended process”. Eric layers on…Nov 20 – Oct 20 = 20% and Nov 19 – Oct 20 = 40%

**Question**: Is RFP a common method used to purchase?

**Answer**: Eric said his specific method is using TruMarx or “Comet” to purchase gas. He chooses terms, volume and price and puts that information in as an offer. Comet sends out an email to marketers and gives them the specifics and time to respond. Eric said he typically decides by price, sometimes by supplier (to promote diversity in suppliers).

***6th Presentation – Planned Scenarios & Sensitivities*** (Brian Robertson)

**SENDOUT® Model:** (Slide #120)

* This model, Brian, said is used for resource optimization.
* It is powerful!
* This model permits development and analysis

**Question**: Andrew asked if this model has “perfect knowledge”?

**Answer**: Brian answered “Yes”.

* Brian continued stating the model uses a “Linear” programming approach
* It is helpful but not perfect!

***7th Presentation – Alternative Resources*** (Brian Robertson)

**Location of Current & Alternative Resources**: (Slide #138 thru #145)

* Incremental transport North to South
* Incremental transport - NWP
* Incremental transport South to North – GTN
* Incremental transport – Bilateral
* Incremental storage North & East
* Incremental storage South & West
* Incremental Supplies

***8th Presentation – Market Outlook & Long-Range Price Forecast*** (Ashton Davis)

**Long Range Market Outlook**: (Slide #147)

* EIA Annual Energy Outlook (AEO), NG to lead power sector over next 20 + years
* CNGC Assigns a weight to each source to get Henry Hub (HH) price for 20-year planning
	+ Wood Mackenzie
	+ EIA
	+ NPPC
	+ Nymex HH

**Price Forecast Weights**: (Slide #151)

* SMAPE – Symmetric Mean Absolute Percentage to weights
	+ Most aggressive
	+ Most conservative
* SMAPE to Weights
	+ Uses “Holt-Winters” smoothing

**Question**: Andrew said the most conservative approach is a “back cast” …is it a conservative approach because it is lowest difference in error between two weights?

**Answer**: Ashton said because source 1 is more accurate, let’s give source 1, 6%. Literature says weight them all the same – if you think you know about them, then go with the conservative approach. Devin added it is important how well you calculate error. We pick to best balance between each source. We use the best *bridging* of those two in calculating error!

***9th Presentation – Avoided Cost Methodology & Calculation*** (Devin McGreal)

**Methodology**: (Slide #161)

* Distribution system cost – first time adding this!
* Weighted annual margin from our customers
* Distribution cost is weighted annual margin
* What we’re allowed to make based on distribution system projects – Rate based = avoided distribution costs.
* Accounts for 10% of avoided cost calculation!
* We will get more in depth in on this at the next TAG meeting.
* Mark said for the Avoided Cost Docket in Oregon – we should have comments back by the next TAG.
* Kyle says Staff prefers consistency in methodology where possible while recognizing each system is different!

**Methodology – Carbon**: (Slide #162)

* Kyle said, compared with the other utilities, it would be helpful to know what is the rationale behind Avoided Costs. If we didn’t have to serve 1/3 to CG for example, how much would that affect us?
* Devin said he does not want to talk about what other utilities do regarding avoided cost.
* Kyle said have all costs in the traditional model and breakdown what CNG pays for, that would help. There are so many moving pieces to this calculation…. other thoughts (to Andrew & Cory)?
* The more information the better!
* Devin said we will do a variety of scenarios with regards to methodology & carbon.

**Brian Robertson then went over the 2018 IRP Remaining Schedule**:

August 16 - Next month’s TAG meeting (TAG #4)

September 11 - TAG #5 Slides distributed

September 18 - TAG #5

October 5 - Draft of 2018 IRP out

November 2 - Comments due

November 14 - TAG #6, if needed

December 14 - IRP filing in Washington

Mark commented that Cascade is open to a workshop if needed. The meeting was adjourned.