

## **Attendees: TAC 1, Thursday, June 18, 2020 Virtual Meeting on Skype:**

Shawn Bonfield (Avista), Terrance Browne (Avista), Logan Callan (City of Spokane), Teri Carlock (IPUC), John Chatburn (Idaho Governor's Office of Energy and Mineral Resources), Corey Dahl (Washington State Office of the Attorney General), Thomas Dempsey (Avista), Chris Drake (Avista), Annabel Drayton (NW Energy Coalition), Michael Eldred (IPUC), Nancy Esteb (Renewable Energy Coalition), Chip Estes, Rachelle Farnsworth (IPUC), Ryan Finesilver (Avista), Damon Fisher (Avista), Grant Forsyth (Avista), James Gall (Avista), Annie Gannon (Avista), Amanda Ghering (Avista), Dainee Gibson (Idaho Conservation League), Kate Griffith (Washington UTC), Vlad Gutman-Britten (Climate Solutions), Leona Haley (Avista), Jared Hansen (Idaho Power), Lori Hermanson (Avista), Kevin Holland (Avista), Kristine Holmberg (Avista), Tina Jayaweera (Northwest Power and Conservation Council), Clint Kalich (Avista), Kevin Keyt (IPUC), Kathleen Kinney (Biomethane, LLC), Scott Kinney (Avista), Dean Kinzer (Whitman Co. Commissioner's Office), Erik Lee (Avista), John Lyons (Avista), James McDougal (Avista), Matt Nykiel (Idaho Conservation League), Tom Pardee (Avista), Jørgen Rasmussen (Solar Acres Farm), John Ross, John Rothlin (Avista), Jennifer Snyder (Washington UTC), Dean Spratt (Avista), Jason Thackston (Avista), Marissa Warren (Idaho Governor's Office of Energy and Mineral Resources), Amy Wheeless (NW Energy Coalition), and 13 Guests who did not identify themselves.

Questions and comments are identified by speaker when possible and text in *italics* records the responses by the presenters.

## **TAC Expectations & Process Overview**

**John Lyons:** A new stakeholder feedback form will be added to the IRP website. Slides from this meeting will be posted on the IRP website next week. The generation resource options spreadsheet was emailed earlier this week. Avista is also considering different options for meetings and sharing of TAC materials, but we will continue to post meeting notes on the website. We will attempt to record these meetings.

**John Lyons:** Washington now requires an IRP every 4 years with an update after two years. Washington law (Clean Energy Transformation Act or CETA) does not allow for the Commission to acknowledge an IRP without all of the CETA requirements and rulemaking in place, moving the next IRP out until 4/1/21. The 2021 IRP will be modeling 2021 through 2045 (for CETA). Avista welcomes requests for additional studies by August 1, 2010, but earlier is better for accommodating any requests. The dates of future TAC meetings are in the presentation and posted on the IRP web site.

## **2020 IRP Acknowledgement – John Lyons**

IRP acknowledgement means the filing has met the rules for IRPs in both states. It includes comments about topics to include or build upon in the next IRP. Acknowledgement does not provide rate recovery, but is a component of rate recovery. If a new resource wasn't chosen in the IRP, we have more explanation required what it was not identified in the IRP. Because of the extension for the 2020 IRP, we do not have acknowledgements to review in this meeting. The Idaho Commission is accepting comments from the public through August 19, 2020 with replies due from the Company by September 2, 2020. A key area of expected concern is how Avista will develop an IRP that accommodates Washington's CETA requirements, but not adversely impact Idaho customers. Washington suspended acknowledgement letter through December 31, 2020, but provided some comments on the work plan including providing an opportunity for stakeholder input on the conservation potential assessment (CPA) before finalization, extending participation to a broader public audience, and providing a timeline of IRP data and when it will become available.

## **CETA Rulemaking Update – Shawn Bonfield**

CETA applies to all electric utilities in Washington. It requires 100% clean energy, the elimination of coal from serving Washington customers by 2025, greenhouse gas neutral by 2030 and at least 80% clean, and 100% renewable or generated from zero-carbon resources by 2045. CETA also requires equitable distribution of energy and non-energy benefits and to ensure public health and environmental benefits. Avista is well above the 15% renewable standard required under the Energy Independence Act (I-937). Avista is about 60% clean/renewable today. 2020 is a big year for CETA rulemaking: Phase 0 included the overall implementation plan. Phase 1 (August 2019 – January 1, 2021) includes the already published the Social Cost of Carbon (<https://www.utc.wa.gov/regulatedIndustries/utilities/Pages/SocialCostofCarbon.aspx>) for use in resource planning and the CPA, and the initiation of other required rulemaking dockets. Concurrent EIA draft rules are about done and hopefully will be adopted next month. Other areas include the CEIP – how utilities will look at compliance and penalty processes; IRP updated rulemaking – July timeframe; Purchase of Electric (impacts RFPs) draft rules June 1 with comments due end of June with a workshop mid-July; Department of Ecology rulemakings will identify greenhouse gas emission factors; and plenty of other rulemaking activity at the Department of Commerce, the UTC and other agencies.

**Jennifer Snyder:** Thank you. You covered it well. We (Washington UTC) appreciate any comments and participation in the CETA rulemaking process.

## Modeling Process Overview – James Gall

**James Gall:** Aurora is an electric market cost model that is used to simulate the Western Interconnect. It is the industry standard model in the Northwest. Avista implemented Aurora in 2003 and uses it for IRP and rate cases. The inputs include regional loads, fuel prices, resource availability, new resource costs, transmission, and system constraints. Outputs include market prices, energy mix, transmission usage, emissions, power plant margins, generation levels, fuel costs and variable power supply costs to serve loads by year. Market price forecast helps us develop a purchase/sales strategy. The model dispatches to meet hourly loads in each area and tries to match supply with demand or loads and resources. Market price is based on the price for the last, or marginal, plant to turn on for that hour.

**Matt Nykiel (Slide 3):** I have a better understanding of Aurora after participating in the last IRP. For slide 3 inputs and following, I'd like a general understanding of what inputs are public and private in Aurora. *We'll cover some here and there is a slide later that cover more. The database from EPIS is proprietary and they use it for all of their clients who are Aurora license holders. It is largely based on publically available information from EIA, EPA, etcetera, but we can't release it per our license. There are adjustments for Avista including data that will be changed to reflect our contracts, pricing, and operational requirements and how we operate our resource which are proprietary. We'll describe more later in the presentation.* Thank you.

**James Gall:** Deterministic studies are single point estimates with median hydro and expected loads. They are easy for scenario analyses. Stochastic studies use the expected case or preferred portfolio providing a range of results. The model runs 500 times with different inputs in order to understand risk or volatility. Avista uses the mean value of stochastic analysis for its expected case. Stochastic studies provide better representation of expected value of resources. The model assumptions start from 2020 IRP. We use the same database available from Energy Exemplar today; then update natural gas prices, new resources and retirements, include new laws, review load/resource assumptions for EVs, rooftop solar, new resource costs, add Avista proprietary system info and stochastic distribution of regional hydro, natural gas, wind and loads. We will provide what's not confidential. The Aurora run process-request input will need to be done ASAP, finalize inputs, run long term studies to estimate new resource additions and will show results at next TAC. We will test under 500 simulations and test a future year – 2035. The deterministic run tests reasonableness. The stochastic run takes 3 weeks to run the scenarios. It is a very tight timeline. The outputs will show how profitable each of the resources are to understand dispatch under CETA. This helps us value the cost to serve, estimate emissions, understand changes to the regional market such as volatility, emissions, etc., and the data used for PRISM.

**Matt Nykiel (Slide 7):** You mentioned long-term study. Is this what Avista thinks how the region will meet demand? Is this Avista's interpretation or is it based on other utilities that have their own IRPs? *That's a good question. It's multiple ways. We*

*typically have not utilized other utility's IRPs since they only cover a portion of the area and could be dated. Some utilities don't do IRPs. We look at the region of load obligations, the current resource mix, and state requirements. The model selects new resources for most cost effective for those load areas given our cost assumptions. We have also looked at other studies, consultant data for storage and small renewables. This is a fairly industry standard approach.*

**James Gall:** PRiSM is where all of the models come together from an input perspective to make resource decisions. It is internally developed. We input resource needs and options. The model will select resources that meet needs based on constraints. 'What's Best' is the solver function – min/max of a variable to optimize the value with unlimited variables/constraints. What's Best plus Gurobi speeds up optimization especially when considering so many inputs such as energy efficiency. The outputs include the power supply costs (fixed + variable) and variation; selection of new resources, etc. We design the model to add new resources to serve Washington, Idaho or combined customer requirements. We will split our resource cost using the P/T ratio [35% Idaho and 65% Washington]. States may sell RECs to help recover customer costs.

**James Gall (Slide 10):** The last IRP showed that Colstrip was not cost-effective past 2025. We will reevaluate Colstrip in this plan as no decision has been made. After 2025, since we're splitting by state in PRiSM for the resource balance, Idaho will still receive its 35% share of Colstrip unless it's determined that it will be retired. There is an option to retire in Colstrip in 2025 or in the future.

**Vlad Gutman-Britten:** Does the future year on the chart incorporate potential climate change? *Typically impacts include from climate change include load and hydro. We are open to for 2045 about how climate change impacts these forecasts*

**John Lyons:** Grant [Forsyth] picks these changes up in his load forecast.

**Grant Forsyth:** I try to look at how temperatures change. The approach is a moving average for weather. People can ask more about that during my presentation in the next TAC meeting [August TAC].

**James Gall (Slide 11):** The Social Cost of Carbon (SCC) is required for Washington under CETA. We will run the model to get the expected amount of emissions for each resource. This is for long-term not short-term resources. We will calculate emissions from short-term resources and may cover those at a future TAC. We will not include SCC for biomass or geothermal since those resources are specifically outlined in law, or for Idaho, but we could consider including for Idaho as a scenario if the TAC wants.

**James Gall (Slide 12):** SCC pricing – 2007 \$ and discounted 2.5% (on the lower range). Will use the green line in the chart which starts at \$80 per ton. We move prices from 2007 to 2019 and inflate based on our annual inflation rate of 2.11%.

**James Gall: (Slide 13):** Issues Not Finalized. We may transfer RECs between states, but must determine the price to transfer RECs at. We will need input on if we need to

consider transferring more than 20% if there is an economic benefit. How do we count RECs toward the 80%? Will this be hourly or over the four-year compliance period? If we receive no clarification, we will need to make assumptions to model the IRP. This may be the biggest rulemaking from CETA that the UTC needs to resolve, hopefully in early fall, so it can be modeled correctly for this IRP.

**James Gall (Slide 14):** Reliability planning. We estimate probability of failure to serve all load to a regional standard of 5%. To evaluate whether a portfolio is reliable – PRM (planning reserve margin) is the percentage above the expected load measured by the coldest day of each month averaged by that temperature, load requirement, plus planning margin. This helps us understand how much we can rely on certain resources. The gold standard would be a region wide program with enforced requirements for each utility. Currently, the region is looking at moving toward this model, but probably not in time for this IRP. So, we need to decide how much time we invest in this issue now. ELCC (Electric Load Carrying Capability) – improvement by focusing on additional years, sampling every 5 years, peak credits or peak types. As you add intermittent resources peak value declines. We haven't ran an ELCC for each resource to determine how much the peak contribution reduces over time.

**James Gall (Slides 15 – 17):** Reliability study models to consider. ARAM model is used currently and is customized (not for this IRP). Aurora has ability to dispatch hydro – not as good when the system is stressed leading to over acquisition. Genesis is an option for the future. We can purchase software/hire consultant – this is costly and not currently being looked at. Regional Resource Adequacy Market – could be used for a future option. Two areas of focus are ARAM and Aurora – likely our current model with a single year and possibly scenarios, but we can't commit to every year, use 2020 ELCC (peak credits) scenario on resource adequacy. We will keep the TAC updated throughout the process.

**James Gall (Slide 18):** Data availability – proposal, we are interested in feedback for. Avista-specific data and Energy Exemplar database is proprietary, prices, regional emissions, not dispatch (confidential), high level results including PRiSM, won't be able to make inputs and resolve (requires license), big change from prior IRPs, load forecast models are confidential because of customer-specific information. We will provide monthly energy/peak results by state, resource costs (you already received); demand-side data will include a list of energy efficiency programs available, may not be fully available in July/August so we may have a short, 1-hour workshop when that data becomes available. DR programs and their potential. Transmission/distribution models are confidential and will be a TAC 3 discussion. Reliability – ARAM requires a license so you can't input and resolve, but we are researching to ensure we can make it available.

**Michael Eldred:** I have a question of how you are testing for reliability. *LOLP in 2035, 500 times in that year. The percent probability load not met. The goal is 95% meeting in all times. In most cases it does. If results are grossly inadequate and outside the margin of error, we rerun the study. Does that help?* Yes, thank you.

**Matt Nykiel:** LT study, when Avista is looking over a range of resources is it taking into account things like customer owned generation over time as roof top solar reduces demand on IOUs? *Good question. Slide 6 specific adjustment made to model. We will present assumptions in the market price meeting. Definitely an area we will have to consider.*

**Matt Nykiel:** Recall that was an analysis for Avista, but how meeting regional WECC loads but in area. *Yes, we look at both inside Avista and outside the service territory. Looking to point to the right spot in the last IRP. Typically not a lot of discussion. It is a small but important input. Will definitely talk about it in the next TAC.*

**James Gall:** I appreciate the better interaction on these questions.

**Tina Jayaweera:** I'm interested in more about emissions savings in energy efficiency and demand response. *DR is challenging and depends on program – some reduce and some shift loads, and the likelihood of a DR program being called on based on program design could be a challenge. Energy efficiency typically uses an hourly profile of savings compared to hourly emissions from Aurora – possibly could run a scenario to see how emissions change by the hour. We can do this for the deterministic but not all 500 runs. Could show incremental savings.*

**Dainee Gibson:** A lot of CETA requires the model to be able to split differences geographically. Can Aurora split it by state or does it apply to the entire service territory? *Sure. We could split it by state, but it doesn't model the physics well. Now we talk about region as a whole. The OWI bubble in Aurora can't split by state really well, since the system doesn't recognize state boundaries. Avista in PRISM is where we talk about how we split resources by state from a resource planning perspective.*

**Kevin Key (Slide 10):** I understand the 65/35 split historically, but it appears incremental legislation in Washington may split differently. *Maybe the model equals 65/35 for existing resources and the split of new resources are an output of the model.* I don't want to volunteer you for a bunch of runs, but want to understand how it might change. *We may shift from a cost to a load balance.*

**Vlad Gutman-Britten:** CETA requires 100% in 2045, but Avista corporate goal is 100% by 2027. How do you account for that? *Excellent question. If cost effective, we will do it. Will run a scenario to meet the goal and it becomes a management decision on reaching 2027 and 2045 goals to set the strategy going forward based on the cost to customers. Last IRP, we were 90% clean without additional costs beyond CETA. At that time, management was not willing to put that additional cost on customers for the remaining 10 percent.*

**Matt Nykiel:** In PRISM, are there parameters that require Avista service territory to meet the goal in 2027 and 2045 for the entire service territory? Carbon neutral by 2027 and 2045 is not meaningful if not cost effective from the get go. I don't understand the goal if it doesn't have an impact

**Jason Thackston:** Good question and the point is appreciated. I appreciated the way James answered. What we said, and are still committed to, is affordability and reliability. We are still committed to those goals, but reliability will not be sacrificed and the goal is subject to affordability by the impact on customers' bills. We always look at cost-effective, but trying to be more holistic. Does that help?

**Matt Nykiel:** I'd like to learn more.

**Terri Carlock:** To clarify, you will run the full system to meet that commitment and looking at the costs separately for both states to decide whether you implement in both states and the Commissions will each review. *That is a fair and correct summary. Still need guidance by states before we can fully state how we model.*

**Vlad Gutman-Britten** – Are you selling REC between states? *About ready to talk about that. If 20% REC only or bundled. Idaho to Washington for Rulemaking is still being considered relative to this and bundling so I can't answer specific questions on how we'll be modeling until the rulemaking is more final. We will likely try to simulate REC sales similar to our last plan.*

**Vlad Gutman-Britten:** So Idaho would have a higher fossil fuel content than Washington? *Correct.*

**Matt Nykiel (Colstrip):** What does it mean to have a shareholder portfolio? One question, I don't understand why if Units 3 and 4 are uneconomic, why is the Washington share only going to shareholders? *Need to model it to decide where it goes. We are redoing same analysis so the Idaho portion only serves their load. If the model chooses 2025, or another date, to close for economics. The shareholder portfolio is because it can't be in Washington rates after 2025 under CETA, but if it is still operating, we still have to sell off or consume those megawatt-hours.*

**Jason Thackston:** Correct me if what I say is incorrect. There are two outcomes. One. Assume all same as last IRP, after 2025 Colstrip is not in the portfolio because it is not economic. Two. Very extreme. Everything doubles and Colstrip is way in the money, it should still be in the portfolio beyond 2025, but it is not viable in Washington. It would still be, absent a decision to shut down the plant. Nuance in Washington State the model has to reflect.

**Matt Nykiel:** That's helpful. Thank you.

**Terri Carlock:** What shareholder portfolio costs would be associated for any costs extending the life of the plant? *Washington depreciation done in 2025 for Colstrip. Any other O&M, capital, or fuel at that time will be on shareholders. Washington will still cover their shutdown costs for the time it was on their system.*

**Matt Nykiel (Slide 10 – PRiSM):** I don't mean to belabor the point, first bullet point, does it respect state guidelines? How will the model in practice split up new resource? *We don't have all the answers regarding specific actual operations. From a modeling*

*perspective for adding or subtracting resources we continue to operate as a whole system. Operations is as a single system. From a clean energy perspective, we can assign whether or not power is clean, etcetera on an accounting basis not a physics basis. Accounting rather than an engineering basis. Appreciate more discussion in the future.*

**Terri Carlock:** *Same for market purchases? Still rules to come. I hope regulating bodies don't rush it because of lasting impacts of the decision.*

**Jennifer Snyder:** *Are you including social cost of carbon on new construction and operation of new or existing resources? Just new, but there are there processes at the generation site that add to emissions. Trucks for hauling fuel at Kettle Falls and other equipment, trucks to maintain wind farms. NREL has some older studies estimating these types of emissions as well.*

**Matt Nykiel:** *SCC is a reflection of the understanding of GHG cost not being internalized by facilities that emit them. Is Avista incorporating this cost due to the legal requirements not because Avista is acknowledging that GHG have a cost that's not being internalized? Its Avista's understanding of a cost just as a legal operation, not as a corporate entity. Makes sense. One way to interpret it.*

**Jason Thackston:** *I'm not sure I'm the best one to answer, but generally speaking you have captured it for Washington legislation and Washington feedback.*

**Tina Jayaweera:** *Upstream value for emissions? Next TAC meeting, but Avista gas line rights are very different than the distribution side. We source our gas mostly from Canadian sources so we're focusing on the emission for the gas we're sourcing.*

**Jennifer Snyder:** *Issues not finalized, what date do you need clarification by for RECs/CETA? REC transfers by September [2020] at the latest. Earlier is better. If not clarified by then, we would run multiple scenarios or possible outcomes.*

**Matt Nykiel:** *Bundled RECs, can Avista transfer energy plus RECs associated with that? Multiple interpretations of the options. Power, REC, power plus REC or separate the two and combine with others. The way bundled or not is the difference for Washington CETA in different contexts. Depending on how WUTC rules, we could have to way overbuild because of REC needs. Treat as I-937 or actually serve instantaneously.*

**Rachelle Farnsworth:** *So can you tell more on how and why it is Washington establishing the price of REC transfers between states? Hopefully I didn't say that. Washington sets the requirement for how many RECS are required. Then it is a question of what price is needed to meet Washington law. I.e., the price is \$20 so the model says build for Idaho to sell to Washington. Price matters depending on outcome in model. Much as last time, if economic to build for state and take advantage of the market if available. Three examples at different prices: example price of a REC at \$20, Idaho should build a project to sell to Washington. If valued at \$0, Idaho wouldn't build.*

*We wouldn't want to see the model build based on resources to sell to Washington, but would build the least cost to take advantage of the market.*

Kevin (IPUC) – have you defined requirements for Reliability modeling (document would be helpful)? James - slide 14 95% of simulations serve 100% load and reserve requirements; don't want to start down the path of buying new software if the regional market is coming soon

**Kevin Keyt (Slide 14):** *Have you defined requirements for reliability models and decision making? 95% LOLP of simulations serve 100% of load requirements and we look at other metrics too. In terms of software development and modeling tool, we want to produce some confident results. There is a cost to maintain/operate a reliability model. Timeline is short for this plan, so we don't want to go too far if a resource market overseer is coming. Maybe the new Genesis model. Maybe a new overseer. Don't want to have to scrap a new model in a year or two.*

### **Modeling Process Overview Continued After Lunch Break – James Gall**

**Matt Nykiel:** *I appreciate the transparency. I notice it in the slides already. For Aurora, I'd like to understand Colstrip inputs better. If Units 3 or 4 continues to be uneconomic for Idaho from modeling, how would the Idaho share go into a shareholder portfolio? Aurora gives a price forecast valuing resources not by ownership. Dispatch the plant with a heat rate and fuel costs that influence market price if economic to run. If PRiSM is not cost effective, do we retire or close the plant? If it goes out, need to decide how – if closed or sold. PRiSM more utility based.*

**Matt Nykiel:** *Make sure the model is looking at price to meet minimum take obligations. If it becomes uneconomic for Idaho, does the IRP consider where that minimum energy goes? If it goes out of the Idaho portfolio, it jumps from planning to action. If we remove it from Idaho, Idaho no longer bears the expense. We reevaluate it at every IRP cycle. Nothing changes here from how we model in last IRP*

**Matt Nykiel:** *Mentioned earlier it accounts for shut down, forced outages and needed repairs. Unit 4 is expected to need repairs to the super heater. Does the model account for those expected repairs? This can affect ownership issues not agreed to under sections of the contract. I can't and maybe shouldn't comment on a contract. It includes expected and potential repairs.*

### **Generation Resource Options – Lori Hermanson**

**James Gall:** *We are seeking feedback from the TAC about if we should model generic or specific resources regarding pumped hydro storage.*

**Jennifer Snyder:** *Don't have rates impact now. But lean towards specific projects if data available.*

**Terri Carlock:** *Doesn't pumped hydro storage depend on scale?*

**James Gall:** A generic resource would need an assumption for duration and cost. Hybrid concept we used last time. But some projects have attributes with lower or higher costs. We got comments last time from some TAC members. We modeled one specific pumped hydro resource and some TAC members thought we should have modeled others. Then what about specific wind and solar projects? That means we are doing an RFP in an IRP.

**Kathleen Kinney:** I have some sources on renewable hydrogen gas you can email me about. *We will email you. Renewable natural gas will be discussed in the next TAC meeting.*

**Amy Wheeless:** I acknowledge the conundrum. Did you reach out to the renewable hydrogen alliance? *We did not. We used Black & Veatch last time. Also had comments from a vendor on gas turbine retrofits for hydrogen gas.*

**Matt Nykiel (Slide 3):** Can you explain what in the analysis that caused gas prices to increase. *2020 is an estimate of 2022. Mostly inflation and the price of gas. They are effectively the same.*

**Matt Nykiel (Slide 10):** What is the northwest for solar? Southern Idaho? Are we looking at Idaho? *Southern Idaho or Oregon with a BPA wheel to get to Avista. We are indifferent on location, this is showing the costs and benefits of solar in a better location.*

**Jørgen Rasmussen:** Is liquid air storage included? *Yes, see slide 7, we are modeling it again. It was selected in the last plan.*

**Thomas Dempsey:** We will be reviewing the liquid air energy storage costs further in this plan.

#### **Review of spreadsheet with resource costs and operating characteristics:**

**James Gall:** I've been involved with half a dozen RFPs. Prices vary widely and will be different than the generic modeled prices. We are really seeking input on these costs and assumptions.

**Vlad Gutman-Britten:** Environmental burdens are a wider scope, not just greenhouse gas emissions.

#### **Washington Vulnerable Populations and Highly Impacted Communities – James Gall**

James Gall: Vulnerable populations consider socioeconomic factors and income sensitivity factors. Avista already recognizes that nearly half of our territory is low income and we are economically involved in our communities. This part of CETA is currently in the rule-making process. We hope the TAC and other advisory groups will help guide us in how to address these new requirements. It is possible a new advisory group is needed or we may get more participants in the current TAC or another group.

We need to gather more data and better understand our baseline – where are they at today? The Washington State disparities map rates each census tract between 1 and 10 for socioeconomic factors which seems to align with the proposed rules. We are proposing score of 8 or higher to be considered vulnerable or impacted. We will overlay this on our service territory, noting that Idaho is not subject to CETA. There are overlapping service territories with other utilities in some of the vulnerable areas. Average use per customer – two sets and compare how they change over time. We use that information to estimate how costs can change over time. Whether or not customers have more than 6% of their income goes toward energy. Should the IRP have a monetary preference for these areas, no preference, or no additional preferences?

Reliability/Resiliency metrics are available by feeder. We can show this at a future TAC meeting and compare to the remaining areas. There is a challenge for how this relates to the IRP. For Resource analysis, we can estimate emissions from our facilities located near or removed from these areas. If a new resource, we can discuss how those may change in those areas. Energy security is challenging. The grid works together for the benefit of all customers, not necessarily for certain populations.

**Kate Griffith:** Regarding DOH map. The state Environmental Justice Taskforce is working on guidance as the mapping tool is being developed among other tasks. They have regular meetings. More info is here:  
<https://healthequity.wa.gov/TheCouncilsWork/EnvironmentalJusticeTaskForceInformation>.

**Vlad Gutman-Britten:** Note that the tracts aren't categorized in a population weighted way, so the three most impacted deciles of tracts may not correspond to the three most impacted deciles of people.

**Jennifer Snyder (Slide 7):** No good updates to add [concerning the identification of highly impacted communities or vulnerable populations].

**Amy Wheelless:** How do you define community? *Identified by census tract, so each colored area in Slide 10 is a community.*

**Vlad Gutman-Britten:** It would be helpful to understand how community compares to population and customer share and load share. *Excellent questions. We're going to get to that in metrics.*

**Shawn Bonfield (Slide 14):** What do the figures on the map represent? *The numbers are census tracts and the darker shaded areas are more vulnerable.*

**Kate Griffith:** Do you have a sense for the particular sensitivity factors in Spokane? I apologize, I mean the issues they face such as low birth rates, etc. *I don't know that information.*

**Vlad Gutman-Britten:** The Department of Health map provides component scores, in addition to the rolled up score. *Thank you.*

**Amy Wheeless:** Some of the CAP [Community Action Partnership] agencies may be able to provide more qualitative information.

**Vlad Gutman-Britten:** Yes, monetary preference and extra inducements are important and would go toward equalizing going forward since they haven't received these resources in the past. Equity is worthwhile to perform and pursue. How much is required? Think about what will be necessary for success.

**Kate Griffith:** How is Avista working to contact and engage with these communities around planning? Have you started reaching out to these groups or communities? *We need direction. Are these separate advisory groups. We have had some participation in the past on the TAC from tribes and SNAP. They are not always able to attend. We need to reach out to public officials in these areas and need more outreach and opportunities to include these groups. More to come on this.*

**Jennifer Snyder:** What metrics make sense? It would be helpful to have more representation from these groups for these particular committees to understand what issues to address.

**Corey Dahl:** I'll second conducting outreach. What does it look like? How to address equity? The company has both an obligation to select the lowest cost resource, but a need to comply. Example off the top of my head not sure if real. Natural gas generation facility goes offline and is replaced with solar benefits to the surrounding community, but also benefits of transmission. But jobs are lost.

**Jennifer Snyder:** What type of long- and short-term public health benefits have you looked at? Potentially for DSM and supply-side resources? *Example, wood smoke in energy efficiency. Including things from a TRC point of view. Concentrate on emissions with existing generation. Are there others?*

**Jennifer Snyder:** There are things we didn't take into consideration prior to CETA, but we should. There are a lot of health benefits in some jurisdictions. Not in Washington yet, but new things not taken into account before CETA.

**James Gall:** One other is interplay of gas and electric service territory.

**Amy Wheeless:** The past few slides spurred a lot of thoughts. I'm not really involved with the CETA rulemaking. Great questions to bring forward. Seek potential future and get cost benefits.

**James Gall:** Can look at distribution or opportunities that might be higher cost, but see what those costs might be. The topic will come up again to show some of these metrics. Let John [Lyons] or myself know of any thoughts you have.

**Kate Griffith:** Are these the metrics you're planning to bring into the CEIP? *So far. We may have additional metrics later with input. Meaningful and calculable metrics for a more useful set of data.*

**Kate Griffith:** You mentioned quantifiable, but non quantifiable is also a big piece of this so I'd be interested to hear more about incorporation of less measurable equity measures. *We are looking for any ideas we can look at.*

Meeting adjourned.