

BC Hydro 2025 Integrated Resource Plan (IRP)

Technical Advisory Committee (TAC) – Meeting #2 Summary Notes

Date & location	June 14, 2024 – 9:00 a.m. to 3:00 p.m. BC Hydro Dunsmuir Office, 1 st Floor Auditorium and MS Teams
Committee attendees (members and alternates)	<p>Association of Major Power Consumers (AMPC) – Melissa Davies BC First Nations Energy & Mining Council (FNEMC)– Andrew McLaren BC Public Interest Advocacy Centre (BCPIAC) – Irena Mis BC Sustainable Energy Association (BCSEA) – Tom Hackney British Columbia Utilities Commission (BCUC) – Phil Stallard Canadian Association of Petroleum Producers (CAPP) – Geoff Morrison City of Vancouver – Matt Horne Clean Energy BC (CEBC) – Cole Sayers Climate Action Secretariat (CAS) – Don D’Souza Climate Action Secretariat (CAS) – Hurrian Peyman Commercial Energy Consumers Association of BC (CEC) – David Ince Community Energy Association (CEA) – Dale Littlejohn FortisBC (Gas & Electric) – Ken Ross FortisBC (Gas & Electric) – Jesse Scharf Ministry of Energy, Mines & Low Carbon Innovation – Jack Buchanan Movement of United Professionals (MoveUP) – Jim Quail Pembina Institute – Betsy Agar Residential Consumer Intervener Association (RCIA) – Michael Vaney Urban Development Institute (UDI) – Jeff Fisher</p>
Non-committee attendees	<p>BC Hydro – Bill Clendinning (Director, Energy Planning) BC Hydro – Magdalena Rucker (Policy Specialist) BC Hydro – Basil Stumborg (Decision Analysis Expert) BC Hydro – Frankie Vaide (Regulatory Manager) BC Hydro – Kathy Lee (Technical Strategic Principal) BC Hydro – Stephanie Smith (Manager, Hydrology and Technical Services) BC Hydro – Kevin Zhang (Manager, Resource Integration) BC Hydro – Kala O’Riordain (Sr. Business Portfolio Advisor) BC Hydro – Ryan Rasmussen (Engineering Team Lead – Notetaker) BC Hydro – Sydney Gudmundson (Sr. Regulatory Advisor – Notetaker)</p>
Pre-meeting reading materials	No pre-reading for this meeting
Meeting materials	Meeting presentation

BC Hydro 2025 Integrated Resource Plan (IRP)

Technical Advisory Committee (TAC) – Meeting #2 Summary Notes

Welcome & agenda – Magdalena Rucker (Slides 2-3)

SUMMARY OF COMMENTS

The meeting began with a land acknowledgment and an overview of the agenda.

Housekeeping & follow-ups from last meeting – Magdalena Rucker (Slides 4-8)

SESSION SUMMARY

BC Hydro provided an overview of the new hybrid meeting format. The hybrid meeting format will re-assess after the meeting whether changes should be made. BC Hydro also informed members that a more formal process will now be used to summarize any follow ups at the end of the current meeting and provide status updates at the following meeting.

BC Hydro sought and received support from members for having an extra session in September on reconciliation and UNDRIP implementation.

There was a high-level discussion on the collaboration between BC Hydro and FortisBC on load forecast assumptions. BC Hydro emphasized that the current work is not to coordinate scenarios, but rather to identify and provide information on a set of key assumptions. Some members agreed that BC Hydro and FortisBC do not have to arrive at the same scenarios, but there needs to be an understanding of the differences in approach of each entity so that the regulator doesn't make decisions that contradict between BC Hydro and FortisBC. One member expressed that it is more important for BC Hydro and FortisBC to have resilient plans, rather than being based on the same scenarios.

Finally, BC Hydro mentioned that a summary of the load forecast scenarios feedback forms will be tentatively provided in the fall.

Q&A NOTES

Q: According to the Clean Energy Act amendments, BC Hydro must hold enough electricity for climate change goals. What does this mean in terms of carbon abatement? Is the carbon abatement through accelerated electrification or through low carbon gas?

A: The Province doesn't specify this and so we will rely on scenario analyses to understand variances. We do need to understand BC Hydro and FortisBC assumptions to understand the differences.

Q: What is the process going forward for the BC Hydro / Fortis collaboration?

A: BC Hydro will continue to report out to and will advise TAC members as progress is made. Currently, BC Hydro and Fortis are still working through key assumptions.

Updates from other engagement streams – Frankie Vaide (Slides 9-17)

SESSION SUMMARY

An overview of the three IRP engagement streams and their timelines was provided. Survey results and other engagement updates will be provided at future TAC meetings once available.

BC Hydro 2025 Integrated Resource Plan (IRP)

Technical Advisory Committee (TAC) – Meeting #2 Summary Notes

Q&A NOTES

Q: Have invitations for local government engagement sessions gone out?

A: BC Hydro will circle back and confirm.

→ Follow-up: BC Hydro confirmed after the meeting that invitations had gone out to municipalities, including the city of Vancouver, as planned.

Resource adequacy – Kathy Lee and Stephanie Smith (Slides 18-33)

SESSION SUMMARY

An overview of three main planning criteria used in long-term planning was provided, with energy planning criteria being the main topic.

There was a discussion regarding self-sufficiency and markets. Some members expressed the view that if other jurisdictions were building out their resources so that there was excess energy in regional markets, then it could make less sense for BC Hydro to build out its system. However, if there were a regional shortage, then it could make economic sense to build out the system to benefit from the export potential. Since BC Hydro benefits from export income, it would be useful to understand how other jurisdictions are planning. BC Hydro reminded members that electricity self-sufficiency is a legislative requirement, and that we don't plan within long-term resource plans for exports, but that it might be useful to look at this for BC Hydro's costs.

Another detailed discussion revolved around distribution planning. Some members shared the view that land use patterns are changing, and that densification and electrification are already having a big impact on existing distribution infrastructure. One member expressed the view that there is a disconnect between planning processes for the distribution system, and that this is creating uncertainty and unpredictability which may hinder decarbonization in the building sector. BC Hydro acknowledged the recent changes with how the IRP interfaces with distribution planning procedures and that we are still deciding on how to divide these issues between the IRP, distribution planning and the capital planning process.

The second half of the presentation focused on the projections and effects of climate change, including how the variability of annual inflows is projected to increase under future climate projections. There was recognition that the current drought situation will not impact how the critical water period is defined (since the drought is still ongoing), and that it may be updated in following IRPs as part of the evergreen resource planning approach. BC Hydro also acknowledged that contingency plans can be used if conditions deviate from our assumptions for the base plan. One member encouraged BC Hydro to examine what the impact of climate change on inflows means for future revenue and risk. For short droughts, BC Hydro could benefit from trade revenue. Another member mentioned that other utilities look at hydrology as a sensitivity analysis for financial impacts.

Q&A NOTES

Q: Regarding the regional market of energy, how will the resource plan include analysis of regional trends and resulting self-sufficiency?

A: The market price forecast, which is a proxy of the energy build-out, is updated as a part of the resource plan.

BC Hydro 2025 Integrated Resource Plan (IRP)

Technical Advisory Committee (TAC) – Meeting #2 Summary Notes

Q: How is the distribution system capacity being dealt with, either in this process or in terms of forecasts? As we go to more building electrification and electric vehicle charging, distribution capacity is going to become a significant issue.

A: Traditionally, the IRP has dealt with generation and bulk transmission, but the Commission has asked for more on the distribution system. In the IRP, we lay out the strategy at the system level, and then the capital planning and asset planning processes build from there.

We will bring forward some of that information on how we know if the decisions we are making on the transmission system and the non-bulk system impact distribution. We will include that in some of the analysis and will provide visibility to the planning processes that we have in place.

Q: Can you share corrections to emission statements if, for example, power generated from coal is imported due to drought?

A: We will need to get back to you on this.

→ Follow-up: We will follow-up on this question in the November TAC meeting.

Q: The lack of distribution planning in the IRP feels like a weakness. Can we include it in the IRP?

A: We'll explore with our distribution colleagues in terms of what could be done.

Q: Why is BC Hydro more conservative with regard to IPP hydro projects; that is, planning to critical instead of average water conditions?

A: It has to do with the water variability we see from IPP hydro projects compared to the water variability we see from our Heritage Hydro projects. To compare, for the heritage hydro system we have an 80-year water record where we are able to characterize performance over time, what the minimums look like, and what a dry or wet spell looks like. We have fewer years of data for IPPs, and so in our view it is riskier to determine what the average is. This is why we have adopted this criteria until we get to the point where we feel more comfortable with the characterization of average water for long term planning purposes.

Q: For the annual inflow graphs presented on slide 31, where do F2022 and F2023 fall?

A: I would have to check.

→ Follow-up: It is noted that the historic variability shown in the first panel for each basin (labelled 1980) is not based on the historic observed mean annual inflows, but rather the simulated mean annual inflows for the representative baseline period of 1971-2000 using the global climate models input into the hydrologic model. This allows direct comparison of the "historic" baseline simulation to the future simulation to show the change on the modelled inflows due to climate change.

With that in mind, below are the actual mean annual flows for F2022 and F2023.

Mean Annual Flow (cms) fiscal year April - March		
	F2022	F2023
Williston	1151	946
Kinbasket	610	610

BC Hydro 2025 Integrated Resource Plan (IRP)

Technical Advisory Committee (TAC) – Meeting #2 Summary Notes

Q: Do you know how much above differs from a more traditional effective flow carrying capability (ELCC) method for these types of resources?

A: ELCC is used to determine the capacity contribution whereas this is an annual energy metric. We don't use ELCC for energy.

Q: With regard to slide 28, is RCP 8.5 a high-end scenario? Do the diagrams represent bookends of what might happen?

A: Yes, we are looking at two of the scenarios that are available from the CMIP5 suite – RCP 4.5 and RCP 8.5. RCP 4.5 is considered the representative concentration pathway in terms of how much GHG intensity is in the projections. There is some recent research that suggests that RCP 8.5 represents a too extreme scenario, but it allows us to stress test the system.

Q: Do these projections assume an increase in overall water inflows?

A: Yes, the projections show overall wetter conditions, but drier conditions in the summer, and a shift to earlier spring run-off. The variability in future inflows is expected to increase. We use the output from 6 global climate models, but this is a small sample size when looking at extreme events (i.e., the tails).

Q: How do you build a system that can handle the variability?

A: We update the inflow records as we progress in time, but we are also thinking about whether to shift the inflows for future climate change.

Q: In the last IRP, BC Hydro considered climate change, but did not introduce a trend analysis in the load forecast. Is that the same for this plan?

A: There is a trend analysis, but need to ask the load forecast team. We will take that question away and get back to you.

→ Follow-up: This will be addressed when the load forecast scenarios are presented to TAC.

Q: If a trend were introduced, would you expect to see a reduction in the load?

A: All other things being equal, yes, there would be a net load reduction over time. But based on the legislated emissions reduction targets and what we are required to electrify, we could see a higher load.

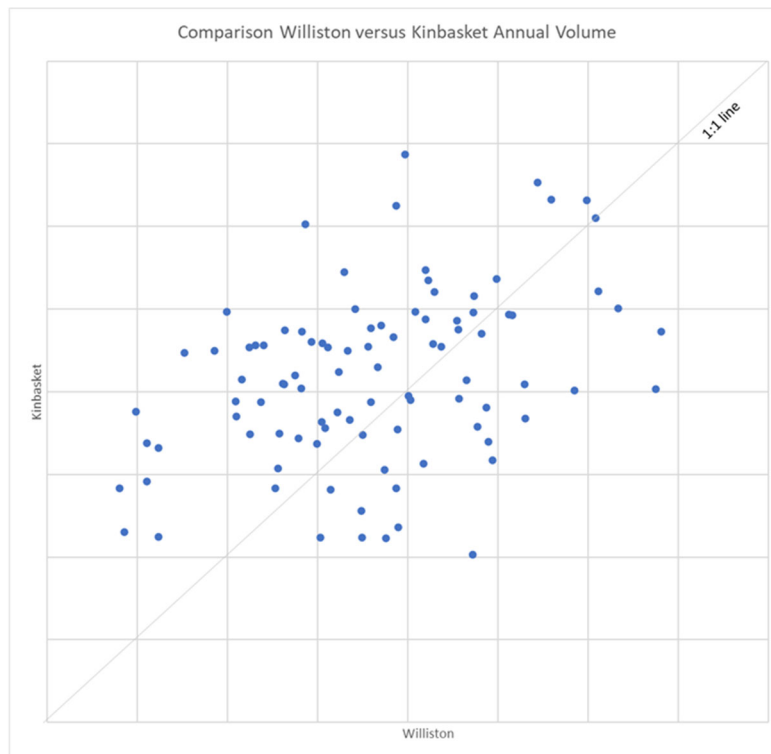
Q: Is there a plot that shows the correlation between Williston and Mica inflows?

A: We are working on that right now. Can follow up with that later.

→ Follow-up: The graph below shows a scatterplot of annual volumes for Williston vs Kinbasket for the period 2029 - 2023 ($r = 0.39$, $r^2 = 0.15$).

BC Hydro 2025 Integrated Resource Plan (IRP)

Technical Advisory Committee (TAC) – Meeting #2 Summary Notes



Q: Is there a correlation between water years that stands out?

A: If we have a lower water year in the Williston reservoir, it can lead to a lower water year in the following year due to low ground water.

Supply-side resource options – Kevin Zhang (Slides 35-51)

SESSION SUMMARY

A summary of the scope and approach to updating the generation resource options for the 2025 IRP analysis was provided. The group had a fulsome discussion on topics such as the factors of cost of capital, and the pricing, status and expectations of resources such as solar and wind. Members also examined aspects of renewable natural gas (RNG), including its level of availability and its place in planning and in the current political climate.

Some TAC members also expressed their view that there needs to be forward-thinking and proactive planning in order to provide sectors, like the building sector, the certainty they need to move forward.

One member noted their view that battery storage needs need to be discussed at the local government level. Another member suggested that the cost of capital depends on the size of developer, and hence BC Hydro should consider different sizes of projects.

With regard to the questions (slides 46-47) posed to TAC members, the following input was shared by various members:

- The idea of using RNG in SCGT is valid, but availability is an issue. Gas by-products can be valuable, so BC Hydro should look at that.

BC Hydro 2025 Integrated Resource Plan (IRP)

Technical Advisory Committee (TAC) – Meeting #2 Summary Notes

- “Notional” RNG delivery is politically difficult. Would flag this as a large issue.
- Using electricity to produce hydrogen is nonsensical. However, turquoise hydrogen seems important.
- Electricity generation is not the best way for FortisBC to use its small supply of RNG.
- Difficult to estimate tax incentives that are not fully defined.
- BC Hydro should only include ‘known’ factors, but conduct sensitivity analyses if we think it will have an impact on planning.
- Call for power will be useful in terms of showing current costs.
- Market prices are always cheaper than building. Hence, BC Hydro should build in time and just enough.

Q&A NOTES

Q: Are the industrial demand load centers reflected in the location of the resources?

A: No. Roughly 30% of our load is industrial. Much of that future load could be in the northeast or west of the province. This map is just for supply resources. The map shows that there are onshore wind resources in those areas.

Q: For the 2021 IRP, BC Hydro assumed that BC Hydro and IPPs had the same cost of capital. What is the assumption for this IRP?

A: We are still considering what to do. We don't have an answer for you today.

Q: What is the definition of community-scale solar? Does it exclude individually owned rooftop solar?

A: Yes, community scale solar is larger and connects to BC Hydro distribution system. It is a distributed resource. Rooftop solar is owned by the customer and so we classify it as part of demand-side management.

Q: Does vehicle to grid fit in supply or demand?

A: We can take this question offline if it isn't answered in the upcoming Demand Side portion of the presentation.

→ Follow-up: This was addressed in the following session.

Q: Hydro Quebec recently announced that they were going to develop a 10 MW wind farm project. Is BC Hydro considering developing something similar?

A: Right now, we are looking to the private sector to develop renewable resources (e.g., Call for Power). The exception to that is utility-scale battery since we need to manage its operation. However, we're not precluding future battery deployments with the private sector once we understand the operational / real-time requirements.

Q: I see dense clusters of distributed solar in Vancouver and Vancouver Island, but very few in the West Kootenay area. Why is that?

A: These are the low-hanging fruit population centers. We'll take that question back with us and get you more information on distributed solar.

→ Follow-up: The process for identifying distributed solar resource options involves two steps. First, suitable parcels of urban land that could notionally host a solar project are identified, based on spatial GIS analysis done by the National

BC Hydro 2025 Integrated Resource Plan (IRP)

Technical Advisory Committee (TAC) – Meeting #2 Summary Notes

Renewable Energy Laboratory (NREL). This step does not include consideration of the quality of the solar resource. The NREL analysis shows approx. 130 sites in BC. Only 13 of those sites are located in the Selkirk and East Kootenay regions.

In the second step, the list of candidate sites from step 1 is further scrutinized based on where the new resource is likely to connect on the BC Hydro distribution system (note that a defining characteristic of distributed solar is that it will connect to the distribution system at distribution voltage) and the existing capability of the distribution system to incorporate additional generation. Where the distribution system at the point of interconnection is unable to accommodate injection of new energy, that distributed solar resource is removed from consideration in RODAT. As a result of this second step, only one distributed solar resource in the Selkirk region and six in the East Kootenay region were added to RODAT.

Q: For battery storage, why those specific spots and not somewhere else?

A: Batteries can be located anywhere, but we want them to be as close to the load as possible, e.g., the South Coast area. The locations shown on the map are substations where we have extra real estate available and where there is access to the transmission system. These batteries are quite large – tractor trailer size units deployed up to the size of a football field size. We would be looking at 16-hour availability, not 4-hour like other jurisdictions.

Q: Is there any differentiation between BC Hydro owned versus IPP owned?

A: No.

Q: Regarding the three different categories on slide 38, I understand the ‘innovative’ is not captured when you populate all the information. Does the fact that a resource was ‘evolving’ versus ‘conventional’ have a bearing on how it’s characterized?

A: No, it’s more about how we monitor and update the characterization of those resources. We don’t put as much effort into updating the conventional resources because we know what those costs are. The costs for wind and solar, however, are evolving. The Call for Power will provide an indication of how the resource costs have changed but we’ll have to determine how we can incorporate those costs. The price curves we will show you this afternoon are inflated figures from what we used in the last IRP.

Q: In the last IRP, BC Hydro had quite a lot of net metering, which would have been mainly solar - is that going to be the same in this IRP?

A: It will be treated the same. On the supply side, we will have utility scale, solar and community solar, but individual solar at the residential level will be accounted for on the demand side management side. The forecast for individual solar in the 2025 IRP will be similar to what we had in 2021 but with updates on the incentives and programs that we have in place.

Q: Can you offer a more qualitative description as to why there is such a steep climb in the solar cost curve?

A: Solar is a resource as well, and so some sites are better suited. Generally speaking, projects that are closer to transmission lines will be cheaper. We will have to get back to with regard to what causes the very steep climb in the solar cost curve.

→ Follow-up: The solar cost curve is made up of projects with a range of sizes, a range of solar intensities, and a range of distances from existing transmission lines. The lowest cost resources are all large projects, with good solar insolation, and very close to existing transmission. The highest cost resources are all small projects, with relatively poor solar resources, and far from transmission. At this high end of the cost curve, the cost of transmission

BC Hydro 2025 Integrated Resource Plan (IRP)

Technical Advisory Committee (TAC) – Meeting #2 Summary Notes

interconnection is extremely high relative to the costs of the solar facility itself and the unit costs of energy are in general proportional to the distance to existing transmission. So, the very steep part of the supply curve is the point where we only have relatively small solar projects with a range of distances to existing transmission. As the distance from transmission increases, the unit energy cost of those projects rapidly increases. This is the phenomenon at work as the solar supply curve hits its inflection point.

Q: Why is municipal solid waste (MSW) a capacity resource? Is it dispatchable?

A: We consider MSW to be dependable, but not dispatchable. Dependable capacity is what is available during our peak hours for planning purposes.

Q: Fortis assumes a peaking plant when projecting the demand for RNG (renewable natural gas). RNG is best for peaking because of the high demand on RNG itself. Does your RNG resource assume the use of a simple cycle gas turbine?

A: Yes.

Q: Is its treatment of RNG informed to any extent by affordances from other long-term electrical resource plan?

A: We may have to get back to you.

We are interested in seeing what the price curve and availability is for decarbonized gas in Fortis's TAC meeting. We would love to update our database with exactly what Fortis and other independent third parties are thinking.

→ Follow-up: We have not examined how other long term resource plans consider RNG. In the 2021 IRP, BC Hydro made the determination that locally sited biogas (or physical RNG) for large-scale power production was unlikely in BC due to competition from Fortis (gas) for the biogas resource. Also in the 2021 IRP, BC Hydro assumed that notional RNG from Fortis could be provided for large-scale power production, but there were substantial risks around availability of the RNG and acceptability as a clean and renewable resource at the time. These conclusions from the 2021 IRP were shared with FortisBC Electric and informed their long-term resource plan at the time.

Q: Onshore wind is the lowest curve. It gets out to 45,000 GW hours, then starts to go up steeply. If you add these up horizontally, could you get the lowest options for all the available generation?

A: Yes. Taking out all other things being equal in terms of delivery, your cost curve would be wind until it gets to the same level. I wonder about the utility of it though, given that all things are not equal. I think what we are seeing here is this curve not inflated for 2024 and selected resources. But this is based on our assumptions and work with developers on what the actual resource base is.

What we are expecting to see in the call are different choices. These curves don't optimize for transmission, or how proponents are able to leverage their skills, pricing, location for connection – all of that is going to be different here. What we model conceptually in the IRP is going to look different from what any calls for power are actually going to bring in.

Then there is an iterative process on how we update the RODAT to be able to reflect what comes in from the market during calls. There are practical considerations not within an integrated resource planning level that lower levels of planning are going to include, so it will look different. But your point is well made that one could construct a single cost curve with those factors kept outside by showing wherever the intersection was with previous resources.

BC Hydro 2025 Integrated Resource Plan (IRP)

Technical Advisory Committee (TAC) – Meeting #2 Summary Notes

Q: How do you account for the end user as a cost?

A: We get at that question by doing a rate analysis (i.e., look at the effects of rates on customers). We'll have more of a view on that as we get into portfolio modeling.

Q: We have discussed how if we were to have surpluses, that's when Powerex would come in, but we don't plan around that. What is the potential for interties?

A: We include existing interties to AB and US in the modelling. We need to be electrically self-sufficient and so we haven't considered the expansion of interties in the IRP. But it is considered in other processes.

Q: Do you contemplate the expansion of interties to other provinces or other states in terms of exchanging capacity and energy resources? When is it contemplated if not part of the long-term resource planning?

A: If we find ourselves on the distribution that we showed this morning, either wetter than average or drier than average, the multi-year storage allows us to generate revenue for customers. But when it comes to planning the system, other utilities generally don't have legislation that governs their planning criteria, but we do.

To answer your question – no, we do not consider the expansion of interties for the purpose of meeting domestic need. But that's not to say that BC Hydro isn't working with other utilities and government to contemplate expansion of interties.

Demand-side measures (DSM) resource options – Kala O'Riordain (Slides 52-62)

SESSION SUMMARY

The scope and the approach for updating the DSM resource options for the 2025 IRP was provided, followed by a closer look at options associated with energy efficiency, demand response, new and updated rate suites, customer solar and battery, and new construction.

Feedback was sought from members on new DSM ideas and methodology. Members were encouraged to share any suggestions for new technologies or areas of focus, which BC Hydro can work to integrate with future IRPs. Some members inquired about the potential use of technologies like blockchain and microgrid trading, and also discussed impacts on the distribution system.

Q&A NOTES

Q: Regarding energy efficiency, what bucket will customer rooftop solar net metering generation fit into?

A: We are going to consider that as a separate DSM option. So we will have our energy efficiency options and demand response options alongside the time varying rates, and then we are going to have a third bucket that looks at rooftop customer solar and battery potential.

Q: The cost for rooftop solar seemed unreasonably high in the last IRP and the option was not pursued?

A: We are undertaking a much more fulsome update of the solar option this time around. That work is underway, but it is too early to tell what the costs are going to end up this time.

Q: Some of these options involve the customers contributing their own resources, which will improve the utility cost test, which is the key test now. So it skews in favor of these resources?

A: Yes.

BC Hydro 2025 Integrated Resource Plan (IRP)

Technical Advisory Committee (TAC) – Meeting #2 Summary Notes

Q: Is it fair to add the technological advances of heat pumps as a factor to be considered, as well as market acceptability of heat pumps?

A: We had a quite aggressive assumption around the uptake of heat pumps in the last IRP and so there was quite a lot of savings potential already coming from heat pumps.

In preliminary talks with our program folks, they think that the estimate of the heat pump potential is still reasonable even though we are seeing more market acceptance and more specialized areas where heat pumps can be deployed now versus before. They believe that what we included last time around was relatively aggressive, so they are not seeing the need to update that. However, we will continue to monitor.

Q: Regarding specifically on industrial rates, do you know what they're looking at?

A: I do not, but we can follow up with the Rates team. Engagement on that will start very soon.

→ Follow-up: We plan to file an industrial time-of-use rate in 2025. The first engagement session will start on July 18. A draft presentation deck is available if anyone is interested in more details.

Q: We filed evidence in the IRP about interruptible rates which isn't yet accounted for in your load planning.

A: We can pass that on to the Rates team.

Q: I know that BC Hydro has been looking at phasing out the Tier 2 rates. Where is that going and what does that mean in terms of demand side management impacts?

A: I do not have an answer readily available, but we'll get answers for the members.

→ Follow-up: BC Hydro filed the 2024 Rate Design Application with the BCUC on June 27, 2024. In this application, we are proposing to expand the Availability of an existing flat energy charge rate and make it available to all residential customers. The BCUC has ordered BC Hydro to freeze the residential tier 2 rate for the past three years. In this application, we are proposing to continue to freeze the tier 2 rate and increase the tier 1 rate more to recover the required revenue. Based on the current rate increase forecast, the residential tiered rate is expected to be flattened in approximately three years.

BC Hydro expects a flat base rate can be more flexible to offer optional rates to residential customers. In addition to the Time-of-Day rate (which was launched in early June) and the proposed Flat rate (which is expected to be effective April 2025), we plan to file 1-2 more optional residential rates that can encourage demand responses in 2025.

Q: With regard to EV battery to grid – BC Hydro could get arbitrated if people buy power off peak and then sell it back to BC Hydro at peak. Is this an issue?

A: The Rates team is considering this.

Q: Resource planning and other jurisdictions that look at distributed generation at this level, there are generally large impacts on the distribution system. Is that going to be a component of this review?

A: We have incentivized DSM in zones where there are constrained feeders and substations, but the IRP does not look at the impact on the distribution system. It's more about what the theoretical potential of savings is.

BC Hydro 2025 Integrated Resource Plan (IRP)

Technical Advisory Committee (TAC) – Meeting #2 Summary Notes

Q: If it doesn't show up in the IRP, how do you bring it up?

A: The decisions about the distribution system are more detailed than the “do we have enough generation and transmission” question in the IRP. We will find a better way to explain the relationships between the different planning processes.

Q: How will new construction be looked at in the demand response part of the work?

A: Based on our load forecast, our consultants will come up with a forecast of, for example, how many people have electric vehicles, how many people have electric space heating that we could control, how many people would have electric water heating that we could control, and so forth. New construction and existing buildings will be captured in that overall population of people.

Q: It may be an educational component that has to be looked at in terms of how these multiplexes are being designed from an electricity use point of view. I'm interested in the impact of peak shaving versus the highest step of the energy step code. Because when the step code was designed in the beginning, it was really more of a tool to reduce energy and an indirect tool to reduce carbon emissions.

A: There will be overall updates. We will have a load forecast team member at the next TAC so they can provide access to that data and those kinds of projections.

→ Follow-up: We will include this information when the load forecast scenarios are presented.

Q: There has been talk about microgrids and even using technologies like blockchain for micro grid trading, creating a kind of community solar but using rooftop solar as the source. Is this something that's BC Hydro has looked at?

A: No, not within our team. We could take it away and try find out if there are other teams across the company that have been looking at that type of thing.

→ Follow-up: In the 2024 Rate Design Application, BC Hydro also included a proposal to offer a Community Generation Rate to allow customers to collectively contribute to, and benefit from, a shared community generation project of up to 1 MW net-injection limit (participating customer can only inject up to 1MW of energy to the BC Hydro grid).

For more information on BC Hydro's 2024 Rate Design Application, please see:

- BCUC proceeding site: [BC Hydro 2024 Rate Design - BCUC](#)
- Application link: [doc 77680 b-1-bch-2024-ratedesign-application.pdf \(bcuc.com\)](#)
 - Residential proposal can be found in chapter 4.
 - Customer generation proposal can be found in chapter 5.
- More details on the proposed Community Generation Rate (the rate sheets that include specific terms and conditions): [doc 77817 b-1-2-bch-2024-ratedesign-application-appendixb-revised.pdf \(bcuc.com\)](#)

BC Hydro 2025 Integrated Resource Plan (IRP)

Technical Advisory Committee (TAC) – Meeting #2 Summary Notes

Q: Are you looking at codes and standards that lead to more demand response outcomes?

A: Savings resulting from codes and standards are not explicitly included in our demand response. We are not including them because some of the technologies that enable demand response on the codes and standards side are still a bit nascent, and our codes and standards team hasn't been able to quantify what those savings might look like over time. But they are definitely aware of them, and we will start to roll those in once they are able to quantify what the savings might be like.

Q: Could we be provided tabulated numbers for the unit energy costs (not just graphs)?

A: Yes, we'll make that an action item.

Next steps & close – Magdalena Rucker (Slides 63-66)

BC Hydro provided a high-level timeline of what TAC members can expect to cover in the coming months. Work will be done over the summer with the inputs provided in the first two sessions; the reconciliation and UNDRIP session will be done in September (date to be confirmed); in late October, the group will discuss the inputs; and in mid-November, load forecast and load resource balances will be discussed.

The overall meeting feedback from some members was that materials should be provided at least 48 hours in advance; the slides and content were very good; the hybrid style worked well and it was appreciated as an option; and the auditorium layout worked well for in-person attendees.

BC Hydro reminded that if attendees had any feedback that they didn't feel comfortable providing in the group, they can reach out directly to BC Hydro team members.

Follow-up: Since this meeting, the topics and dates for the October and November sessions have changed. We are continuing to work through the details and will share them shortly.

Q&A NOTES

Q: Will the fourth session include the Call for Power results?

A: No, we won't have all the information by then yet, and we may not be able to discuss the results outside of BC Hydro, but I will check and let you know when we expect to have information about the call.

BC Hydro 2025 Integrated Resource Plan (IRP) Technical Advisory Committee (TAC) – Meeting #2 Summary Notes

SUMMARY OF CONSIDERATIONS PROVIDED BY TAC

Considerations
Some members suggested that although self-sufficiency is a legislative requirement, it would be useful to look at it in terms of costs to BC Hydro.
Other members suggested BC Hydro consider hydrology as a sensitivity for financial impacts.
Some members thought battery storage should be discussed at the local government level.
Several TAC members requested to see UEC in tabulated format (i.e., not just graphs).
Some members would like to have more information on how distribution capacity planning is being done at BC Hydro.
Some members would like to see clear discussion whether solar rooftop is a good idea or not.

* * * * *