

Aggregation of Questions/Clarifications from Oct 17 EGP 2.0 Chat

Materials, including a recording of this meeting, are available here: <https://www.bpa.gov/energy-and-services/transmission/evolving-grid>

BPA is providing a consolidation of the questions and clarifications asked in the Chat widget for the Oct. 17, 2024 public meeting on the Evolving Grid Project 2.0 update. Most questions will have updates at future events; however, where BPA was able to provide responses during the meeting, those responses have been included and attributed to the question.

The public is welcome to submit additional questions/clarifications on the materials to techforum@bpa.gov or through their account executive.

General Questions:

1. How does BPA define “mature” generation?

"Mature" generation is a *resource online* versus a *resource newly submitted* to the generator interconnection (GI) queue. The financial risk of building a transmission expansion project for service from a *resource online* is lower than building an expansion project for a resource that just entered the GI queue.

2. Do EGP projects accommodate current TSRs? Does BPA know the available capacity these projects will create?

Many of these projects resulted from 2023 TSEP cluster study so in a way, yes. Overall capacity is still being worked on.

3. As you go through these projects, can you note which projects are fully funded and which ones require customer funding?

The answer to this question is project dependent. Direct construction costs of expansion projects for transmission service are funded by BPA's capital. Customers provide security for the construction. The scoping, preliminary engineering, and environmental work are customer funded. This includes the EGP 1.0 projects.

4. Is there still time to look at new technology to reduce costs?

BPA is actively involved in the evaluation of new technologies including Grid Enhancing Technologies to reduce costs of EGP 2.0 projects. The applicability of these technologies will be made by the design team based on the needs and requirements specific to each project.

5. Would you please provide a bit more detail on the impact of the proposed work at Hilltop?

The proposed projects for RATS (Path 76) would require the installation of 150+/- MVAR STATCOM devices each at Warner 115 kV and Hilltop 230 kV.

6. What is the primary reason behind the reactive upgrades in the Central Oregon region?

To grant transmission service to 2023 Cluster Study TSRs requesting Big Eddy 500kV POR sourced from the Pacific Direct Current Intertie (PDCI), the Central Oregon 500 kV Dynamic Reactive Upgrades will be required to eliminate thermal overloads on series capacitors and address voltage stability.

7. Will the upgrades include reconductoring with advanced conductors? If not all, which?

The conductor selection is done during the early stages of preliminary engineering. For the projects included in EGP 2.0, that determination hasn't been made yet. The conductor selection is based on many factors that are specific to each project and will be made by the design team as the projects move to execution stage. BPA has used advanced conductors on projects in the past and they will be considered on EGP 2.0 projects.

8. It looks like many of these projects are upgrading existing transmission capacity. Do any of these projects build new high voltage lines across new landscapes?

Final line routes will not be determined until design and environmental review. It is anticipated that most line projects will be within or adjacent to existing BPA transmission rights-of-way. There may be some areas where BPA will need new rights-of-way.

9. When you talk about rebuilds, are you talking about using advanced conductors and, if so, which?

The conductor selection is done during the early stages of preliminary engineering. For the projects included in EGP 2.0 that determination hasn't been made yet. The conductor selection is based on many factors that are specific to each project and will be made by the design team as the projects move to execution stage. BPA has used advanced conductors on projects in the past and they will be considered on EGP 2.0 projects.

10. Can you confirm when the "bigger" EG meeting you mentioned will be?

The next Evolving Grid public meeting is scheduled for Dec. 4, 2024.

11. A number of these projects are enhancements/upgrades of existing lines. Is BPA applying this concept to new lines' rights-of-way & structures so they're most easily, quickly or cheaply upgraded in the future. For example, the new lines which add Total Transfer Capability (TTC) to the Cross Cascades paths are very likely to need later additional E>>W capacity beyond the current planning horizon.

Yes, while new facilities are designed to meet the known future needs through value engineering, where possible, facilities are sized to be able to be further upgraded depending on additional needs that might be identified in the future. For example, BPA may identify a double-circuit configuration but only initially build to single-circuit.

12. Can BPA elaborate on the estimated timeline on when target completion dates will be provided for these projects? Will target completion dates be released per project or once all projects are fully scoped?

All the EGP 2.0 projects are still with planning. If these move forward like the EGP 1.0 projects, they won't make it to Secondary Capacity Model (SCM) ready to scope for another 6 – 12 months. We need to complete our first phase of scoping (duration is 6 – 15 months depending on the project) before we have a better idea on completion dates. Once scoping is completed, then engineering/design can begin. It will be roughly between Q1 FY26 and Q3 FY27 before we can complete scoping on these project and have more information on schedule and cost can be released per project.

13. What proportion of the recent network clusters' studied projects' Available Transfer Capability (ATC) demand is being provided by BPA's in-house expansion plan?

The demand for ATC is a product of load growth and the TSRs submitted by the customers.

14. How do these additions affect the recent clusters' studies showing what network queue applicants would have to fund for service?

All customers must fund Cluster Study projects identified for their respective TSRs.

15. How reliable now are the many applicants' lists of needed upgrades?

The projects are planned to national reliability standards and criteria. As for the TSRs in the queue and already studied, the study has indicated the necessary projects for service.

16. Are all of these projects you discussed already reflected in the planning models, including generation and interconnection study models?

The EGP projects will be modeled in the WECC Planning base cases after BPA makes an official decision to build the project.

17. Do any of these Evolving Grid projects override planned upgrades identified in past TSEPs?

No, they don't override/replace. The new projects build on/expand on the previously identified projects.

18. Have the studies taken into consideration the effect of the Remedial Action Schemes (RAS) and how it affects the Path limits due to these projects?

Yes, existing RAS is considered when developing the EGP 2.0 projects.

19. Should purchase of long lead time items be considered now since the BPA White Book shows we need more in very near future?

A strategy of ordering long lead material items has begun by BPA Supply Chain in coordination with engineering. Transformers and breakers are first to be considered.

Process/Business Case Questions:

20. How certain are these projects to move forward?

BPA would make a decision to move forward after completing the appropriate environmental compliance, including National Environmental Policy Act analysis, for each project.

21. Are all these projects already approved or what is the level of certainty that these projects will be approved for construction?

BPA would make a decision to move forward after completing the appropriate environmental compliance, including National Environmental Policy Act analysis, for each project.

22. When does Engineering/Design start?

All the EGP 2.0 projects are still with planning. If these move forward like the EGP 1.0 projects, they won't make it to SCM ready to scope for another 6 – 12 months. We need to complete our first phase of scoping (duration is 6 – 15 months depending on the project) before we have a better idea on completion dates. Once scoping is completed, then engineering/design can begin. So it will be roughly between Q1 FY26 and Q3 FY27 before we can complete scoping on

these projects and have more information on schedule and cost that can be released per project.

23. Are the criteria on Slide 4 the same that BPA used for EGP 1.0 projects or were there revisions?

The criteria on Slide 4 were developed as part of the TSEP Bi-furcated Model to provide more transparency to customers on BPA's decision making on what projects would be key to meeting regional needs. These characteristics were fully defined and finalized after BPA announced the EGP 1.0 projects and they still form the basis of the EGP 1.0 projects. For both the EGP 1.0 and EGP 2.0 projects, these are the same kind of criteria used to establish the regional need of both groups of projects.

24. From BPA's perspective, are these projects of equal importance from a reliability perspective or are some more/less important?

The designation of a project as “EGP” does not necessarily create prioritization over other “non-EGP” projects. There are many factors that influence how projects move forward, including reliability, customer service, contractual, sustain, etc.

25. Can we get access to the report and base cases that show the reasoning behind the transmission projects.

Customers can request copies of the most recent 2023 Cluster Study and previous Cluster Study reports by emailing studyrequest@bpa.gov. Base cases include proprietary information (e.g. RAS, contingency files) therefore we do not share these files with the general public.

26. When will Environmental Assessments (EA) be started and how long before you know if a full Environmental Impact Statement (EIS) is necessary for the 287 kV line upgrade to 500 kV?

Appropriate NEPA will start when sufficient project design information is available. The NEPA strategy (categorical exclusion, environmental assessment, or environmental impact statement) for each project will be determined based on factors such as project design, environmental resources present, and potential environmental impacts. Specifically, the Grand Coulee-Columbia-Schultz-Olympia project is still in early planning and preliminary design is anticipated to start in six to 12 months. Additional design used to initiate the NEPA review process is anticipated to be available about 24 months after the preliminary design (about three years in total).

27. Regarding the various transmission projects, specifically those in Central Oregon and along the Columbia River, can BPA please provide comment on the regional study process that is or will be considering these projects along with other Transmission Organization (PacifiCorp and Portland General Electric) proposed transmission projects. For example, Portland area reinforcement were discussed. Would like to know how these reinforcements are being evaluated in conjunction with the proposed PGE upgrade of the Round Butte – Bethel 230 kV line.

BPA is coordinating with other impacted utilities on both a peer-to-peer level, regional level (NorthernGrid) and inter-regional level (WestTEC).

In-service Dates:**28. Does BPA have any updated in service dates for these EGP 2.0 projects that were also identified in the 2023 Cluster Study?**

The Grand Coulee-Columbia-Schultz and Schultz-Olympia 500 kV lines have an updated energization date of 2035. These projects were identified with an energization date of 2038 in the 2023 Cluster Study report.

29. Is there a projected timeline on when construction would begin for any of the given projects listed?

All the EGP 2.0 projects are still with BPA Planning. If these move forward like the EGP 1.0 projects, they won't make it to SCM ready to scope for design for another 6 – 12 months. We need to complete our first phase of scoping (duration is 6 – 15 months depending on the project) before we have a better idea of completion dates.

Once scoping is completed, then engineering/design can begin. Appropriate environmental compliance, including NEPA, will start when sufficient project design information is available.

The NEPA strategy (categorical exclusion, environmental assessment, or environmental impact statement) and associated timing for each project will be determined based on factors such as project design, environmental resources present, and potential environmental impacts. In general, the large projects would start construction between 1 – 3 years prior to planned energization.

30. What is the permitting timeline and likelihood these are realistic schedules?

Environmental compliance, including permitting, would be addressed during the NEPA process. The NEPA strategy (categorical exclusion, environmental assessment, or environmental impact statement) for each project will be determined based on factors such as project design, environmental resources present, and potential environmental impacts. Similarly, the environmental compliance schedules would be driven by a variety of factors and would be unique to each project.

Lower Columbia to Nevada-Oregon Border (NOB):**31. Is the "Bonanza to NOB" project in addition to the 2022 Cluster Study identified Bonanza - Captain Jack 500 kV line (BPA C. Oregon 500kV subgrid project that proposed energization 2033), or does it replace that project?**

The Bonanza to NOB project is a different project than the 2022 Cluster Study's Bonanza - Captain Jack 500 kV line. The Bonanza to NOB project does not replace the findings of the 2022 Cluster Study.

32. What line(s) or sub is on the California/Nevada side of this which the new BPA line is aiming to connect with? Is the south end of this new BPA line at Malin/Captain Jack? Would this line be part of the Northwest AC Intertie (NWACI) ownership group agreement?

This potential project could address transmission needs related to load growth, facilitate renewable integration in Central Oregon, and allow bi-directional access to resource diversity to serve loads in the long-term horizon. BPA may develop a new 500 kV substation at NOB. While the potential project could allow for an interregional connection south of NOB, the

specific route has not yet been determined and optionality for any connections south of NOB have not yet been identified.

33. What would the 500kv line to NOB connect to?

This potential project could address transmission needs related to load growth, facilitate renewable integration in Central Oregon, and allow bi-directional access to resource diversity to serve loads in the long-term horizon. BPA may develop a new 500 kV substation at NOB. While the potential project could allow for an interregional connection south of NOB, the specific route has not yet been determined and optionality for any connections south of NOB have not yet been identified.

34. What line would link up from the south at the NOB?

This potential project could address transmission needs related to load growth, facilitate renewable integration in Central Oregon, and allow bi-directional access to resource diversity to serve loads in the long-term horizon. BPA may develop a new 500 kV substation at NOB. While the potential project could allow for an interregional connection south of NOB, the specific route has not yet been determined and optionality for any connections south of NOB have not yet been identified.

35. Is the Nevada NOB to Bonanza be considered as radial, with expected impacts to California/Oregon Intertie (COI) or NWACI? Is BPA considering going through the WECC Project Coordination Process?

BPA may develop a new 500 kV substation at NOB. The specific route has not yet been determined and optionality for any connections south of NOB have not yet been identified. BPA would study the impacts of the potential project, including impacts on existing paths, and expects to coordinate with affected systems and regional processes such as the WECC Procedure for Path Rating process for coordination of path ratings.

36. Is the proposed line down to NOB proposed to be within the designated National Interest Electric Transmission Corridor (NIETC)?

BPA is aware of the NIETC process which indicates a Mountain - Northwest corridor that is geographically similarly situated with the Lower Columbia to NOB line. However, BPA is independently conducting its own analysis of a Lower Columbia - NOB line.

37. Could you discuss how the Lower Columbia to Nevada-Oregon Border line relates to the National Interest Electric Transmission Corridor Designation Process?

BPA is aware of the National Interest Electric Transmission Corridor Designation process which indicates a Mountain - Northwest corridor that is geographically similarly situated with the Lower Columbia to NOB line. However, BPA is independently conducting its own analysis of a Lower Columbia - NOB line.

38. What is the rationale for a Bonanza - NOB 500 kV if it is not to connect to a new 500 kV line going to new load to the south?

This potential project could address transmission needs related to load growth, facilitate renewable integration in Central Oregon, and allow bi-directional access to resource diversity to serve loads in the long-term horizon. BPA may develop a new 500 kV substation at NOB. While the potential project could allow for an interregional connection south of NOB, the

specific route has not yet been determined and optionality for any connections south of NOB have not yet been identified.

EGP 1.0:

39. Have some of the EPG 1.0 timelines come in? I am specifically looking at Cross Cascades south. To clarify, my question on EGP 1.0 is just if things got moved up in time, my last recollection is that some of those dates were out until 2032.

The Big Eddy - Chemawa rebuild which reinforces the Cross Cascades South has an expected energization date of 2030.

40. Is there a map for the EGP 1.0 projects similar to slide 8 from this PPT?

BPA has updated and published maps for the EGP 1.0 portfolio. Those maps are part of the EGP 1.0 Project Summary document posted to BPA's [Evolving Grid website](#).