

IPR Follow Up Questions

BPA listed approximately 35 Grid Modernization projects that the agency is either currently pursuing or has already completed. From the materials it appears that 25 projects are being planned for the BP 20 rate period. Can BPA provide budget estimates by project as well as the breakdown of where the budget resides? For example, how much of each project is expected to be capital versus expense and where the funding budget is planned for example IT, Power, Transmission, etc.?

BPA has proposed holding spending levels flat, relative to FY 2018 and FY 2019. Incremental expenses will be managed within the \$25M per rate period level. All the Grid Modernization capital dollars have been absorbed in the appropriate business-line capital portfolios. The \$25 million of incremental expense is in the Business Transformation Office (BTO) budget and the BTO will reimburse each business line for actual costs incurred on approved grid modernization projects. BPA has not approved a budget for projects being planned for the BP-20 rate period, but BPA has prioritized workload with limited resources. BPA is developing a dash board that will be posted on our external BPA.gov Initiatives website to provide visibility of our progress in each of the grid modernization focus areas.

Can BPA confirm that the projects listed in red are EIM-related projects and that investment in these projects is contingent on a future decision? Can BPA confirm that all other projects are necessary to modernize the transmission system to provide safe and reliable service? Alternatively, can BPA identify which projects are necessary for the transmission system versus which projects are incremental and EIM dependent?

Yes, *Future Projects* identified in red on slide 21 of the Grid Modernization workshop package are EIM related. If BPA chooses not to join the EIM market, these projects will not be pursued. Portions of non-EIM related Grid Modernization projects help create optionality for potential market participation such as the day ahead market or other ancillary services-type market opportunities. The Grid Modernization projects will also provide safe and reliable service, but not all are purely transmission system related. Projects have been sequenced to mitigate the reliance on legacy systems and non-standard practices in power's and transmission's planning and marketing efforts, which are costly to maintain and have led us to be overly conservative.

During the presentation you mentioned that the Coordinated Transmission Agreement (CTA) has been partially implemented and that full implementation is part of the Grid Modernization effort. What pieces of the agreement have been implemented? What remains to be implemented?

The following Coordinated Transmission Agreement sections have been implemented this year:

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5.1 - Upper and Lower Rate of Change Limits
5.2 - Managing EIM Area Incremental Flows When Bonneville is not Curtailing Transmission Schedules

In Flight for this year and 2019

5.3 - Managing EIM Area Flows When Bonneville is Curtailing Transmission Schedules
5.4 - Adjustment of Generation

The CTA was discussed in a BPA [stakeholder process](#) in 2017 and we are providing a link to the [Agreement](#) including the sections referenced above.

Does BPA believe the \$12.5M is sufficient to fund all projects in the portfolio except for those tied to the EIM? If not, which is it planning to prioritize?

Yes, BPA believes that the \$12.5 million per year is sufficient to fund the non-capital portions of all projects in the grid modernization portfolio, including the Future Projects on related to EIM. Incremental expenses will be managed within this \$25M per rate period level. Priorities will be managed on an ongoing basis. BPA will develop a dash board on our external BPA.gov Initiatives website that will provide visibility of our progress in each of the grid modernization focus areas.

Will customers be consulted if prioritization of projects needs to be revisited (for example if a go decision is made on EIM)?

Customers will be informed and updated on grid modernization projects that directly impact customers, as well as consulted on any potential impacts of BPA policies, processes and significant choices (e.g. EIM). BPA's stakeholder process on EIM begins with the July 24 stakeholder meeting.

Please provide more information on projects in the portfolio including the actual resources required (personnel, consulting, hardware, software, etc.) and the dollar costs and benefits of each project.

BPA will provide updates at the quarterly QBR and is developing a dash board on our external BPA.gov Initiatives website to provide visibility of our progress in each of the grid modernization focus areas.

What substantive benefits can customers expect from each project? Has there been a quantitative cost benefit analysis done for each project that can help answer the preceding question?

Developing a business case, which includes both qualitative and quantitative benefits, is a normal step in BPA's project life cycle and is the basis for approving funding for a grid

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modernization project. At this time, BPA has not approved funding for any work on the projects being planned for the BP-20 rate period.

The discussion around Grid Modernization was a bit confusing in that “EIM Readiness” seemed to be a major driver. The EIM decision has not yet been made and BPA is still conducting an analysis on the business case. At some price, EIM readiness makes good business sense, but on the flip side there is a \$ amount that may prove to be too expensive. Help us understand what the total cost associated with the EIM Readiness option is. Please provide the following:

- **The amount of BPA staff (Federal and contract) dedicated to EIM readiness by department and the associated fully-loaded labor expense. It would be useful to see both headcount and labor-loaded dollar equivalent.**
- **The amount of incremental non-labor operating expense associated with EIM readiness.**
- **The total amount of dollars associated with this effort that are being booked to capital.**
- **If possible, provide these metrics on a total budget basis for the applicable department. I.E. if “X” people from IT are working on EIM Readiness, it would be useful to know the entire “Y” headcount of the IT department.**

To the extent BPA has something similar available, it would help us gain a better understanding of the cost of this effort, but don’t want to create an unreasonable amount of work for Staff. BPA’s stakeholder process on EIM begins with the July 24 stakeholder meeting. BPA’s EIM cost benefit analysis will be discussed in this meeting. We encourage customers to participate in that stakeholder process. BPA will provide updates at the quarterly QBR and is developing a dash board on our external BPA.gov Initiatives website to provide visibility of our progress in each of the grid modernization focus areas.

