
From: Aaron Burdick <aaron.burdick@ethree.com>
Sent: Friday, March 18, 2022 12:27 PM
To: James,Eve A L (BPA) - PG-5 <eajames@bpa.gov>; Koehler,Birgit G (BPA) - PG-5 <bgkoehler@bpa.gov>; Diffely,Robert J (BPA) - PGPL-5 <rjdiffely@bpa.gov>
Cc: Jack Moore <jack@ethree.com>; Arne Olson <arne@ethree.com>; Angineh Zohrabian <angineh.zohrabian@ethree.com>; Sierra Spencer <sierra.spencer@ethree.com>
Subject: [EXTERNAL] RE: BPA-E3 Check-In

Deliberative; FOIA-exempt

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I also forgot to mention on my Tues email that I did confirm we would like to use the 2032 removal year as the primary assumption with 2024 as a scenario.

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Thanks for sending out the action items Aaron. Here's the information for the BPA bullets:

- The F&W cost in the CRSO EIS was \$34,060,200 and spread evenly across the four plants results in a cost of generation:

FY2022 \$/MWh

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|------------------|----------------------------|
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| Ice Harbor | \$15.84 |

Cost Calculation: The O&M budgets used a flat 2% inflation rate. Capital numbers were based on modeled replacement needs influenced by asset risk so they varied year-to-year before levelizing. The capital replacement assumptions were inflated per asset using the 2021 BPA common planning assumptions for inflation (attached). Costs were levelized using BPA's nominal discount rate of 6.2% so the result is a levelized cost in real 2022 dollars.

Data availability: The hourly modeling data available is only for the 80 water year set which ends in 2008. We are working on adding another 10 years to the water year set which would include 2011 but that won't be completed in time for this analysis. Either a different wet year would need to be selected (e.g. 1996 or 1997) or if wet year cannot be changed than some sort of adjustment to the Pmin, Pmax, and the daily MWh budget could be made to adjust the historical data to reflect higher spill operations and less generation for fish passage season. Let me know which option you would prefer.

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Deliberative; FOIA-exempt

Capturing action items from today's meeting:

- BPA to share fish and wildlife costs for continuing LSR dam operations
- BPA to share cost calculation details (levelization, dollar year, etc.) for the \$/MWh values provided
- E3 to continue developing hydro constraints based on historical data and share w/ BPA in next couple days
- BPA to confirm availability of simulated hydro data w/ more recent biological operating constraints for the historical years currently being used in RESOLVE (calendar years 2001, 2005, and 2011)
- E3 to incorporate today's discussion and share an updated scenario design for BPA review

All the best,
 Aaron

From: Aaron Burdick
Sent: Tuesday, March 15, 2022 9:56 AM
To: Koehler,Birgit G (BPA) - PG-5 <bgkoehler@bpa.gov>; James,Eve A L (BPA) - PG-5 <eajames@bpa.gov>; rjdiffely@bpa.gov
Cc: Jack Moore <Jack@ethree.com>; Arne Olson <arne@ethree.com>; Angineh Zohrabian <angineh.zohrabian@ethree.com>; Sierra Spencer <sierra.spencer@ethree.com>
Subject: RE: BPA-E3 Check-In

Hi all,

Suggested agenda for today's check in:

- **Costs:** confirm scope/use of \$/MWh data provided
- **Operational constraints:** E3 is still developing our proposed Pmin, Pmax, daily MWh budgets to share w/ BPA, but it may be useful to discuss Eve's notes (fish constraints, GENESYS heuristics, etc.)
- **Scenarios:** present an initial set of scenario inputs and get BPA's feedback

All the best,
Aaron

-----Original Appointment-----

From: Aaron Burdick

Sent: Wednesday, March 2, 2022 4:53 PM

To: Aaron Burdick; Arne Olson; Jack Moore; Koehler, Birgit G (BPA) - PG-5; James, Eve A L (BPA) - PG-5; rjdiffely@bpa.gov; Angineh Zohrabian; Sierra Spencer

Subject: BPA-E3 Check-In

When: Tuesday, March 15, 2022 11:00 AM-12:00 PM (UTC-08:00) Pacific Time (US & Canada).

Where: <https://ethree.webex.com/ethree/j.php?MTID=m228a4e26c5b763d73adb84c525782f42>

Updating series from 30 mins to 1 hr.

Purpose: check-in on lower snake river dams analysis.

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You can also dial 173.243.2.68 and enter your meeting number.

If you are a host, [click here](#) to view host information.

Need help? Go to <https://help.webex.com>

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Sent: Friday, March 18, 2022 3:16 PM
To: Aaron Burdick; Koehler,Birgit G (BPA) - PG-5; Diffely,Robert J (BPA) - PGPL-5
Cc: Jack Moore; Arne Olson; Angineh Zohrabian; Sierra Spencer
Subject: RE: BPA-E3 Check-In
Attachments: SpringSpillRequirements.xlsx

Deliberative; FOIA-exempt

Next week is Oregon's spring break so my availability will be limited and I will be in the virtual office Friday. Attached is a spreadsheet with the spill parameter information that can be used to adjust the spill levels on the LSN and LCOL projects. I also included some snippets of the requirements and highlighted the assumptions I would use in modeling the adjustment. The summer spill in the CRSO EIS is actually lower than the 2005, 2011 operations so generation credit should be applied during summer spill and then the spring spill months have much higher levels so the generation needs to be decreased. 2001 historical data has no spill operation so the spill requirements will reduce generation from 4/3 – 8/31.

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