
From: Aaron Burdick <aaron.burdick@ethree.com>
Sent: Wednesday, May 4, 2022 11:38 AM
To: James,Eve A L (BPA) - PG-5
Subject: [EXTERNAL] RE: Scheduling E3+BPA check in this week

Deliberative; FOIA Exempt

Thanks Eve. I'll include these updates.

From: James,Eve A L (BPA) - PG-5 <eajames@bpa.gov>
Sent: Wednesday, May 4, 2022 11:34 AM
To: Aaron Burdick <aaron.burdick@ethree.com>
Subject: RE: Scheduling E3+BPA check in this week

Deliberative; FOIA Exempt

I realize I forgot to explain the blue edit- that description will need to read current BPA Tier I rate instead of Generation rate.

From: James,Eve A L (BPA) - PG-5
Sent: Wednesday, May 4, 2022 9:55 AM
To: Aaron Burdick <aaron.burdick@ethree.com>
Subject: RE: Scheduling E3+BPA check in this week

Deliberative; FOIA Exempt

Hi Aaron-

Thanks for sending out the meeting for tomorrow. Since you are expecting to have the updated RESOLVE power point later today I wanted to send you a note on some edits that would be helpful to Slide 20. After our Exec meeting there was some questions around the information on that slide so thought it might help clarify a few things:

Incremental LSR Dam Replacement Resource Costs

**Lower Snake River Dams
All-in Generation Costs
(2022 \$/MWh)**

\$17/MWh w/LSRCP

13

**Current BPA Generation
Rate
(cent/kWh)**

3.5 cent/kWh

Scenario	2045 Costs to replace LSR Generation* (real 2022 \$/MWh)	2045 Incremental Tier 1 BPA Customer Costs** (real 2022 cents/kWh)
S0: No Policy Reference	\$85/MWh	+ 0.7 cents/kWh
S1: 100% Clean Retail Sales	\$95/MWh	+ 0.8 cents/kWh
S1a: 100% Clean Retail Sales (no carbon price)	\$90/MWh	+ 0.8 cents/kWh
S2: Deep Decarb	\$189/MWh	+ 1.8 cents/kWh
S2b: Deep Decarb, w/ Emerging Tech	\$87/MWh	+ 0.7 cents/kWh
S2a1: Deep Decarb, Limited Tech (no new combustion)	\$535/MWh	+ 5.6 cents/kWh
S2a2: Deep Decarb, Limited Tech (no new gas, H2 allowed)	\$427/MWh	+ 4.5 cents/kWh

Replacement \$/MWh costs are calculated as CoreNW revenue requirement increase with LSR dams removed divided by the annual h of the LSR dams. These costs includes replacement of the LSR dam energy, capacity, and reserve provision. A significant portion ie costs is capacity costs to replace the dams' RA capacity contributions.
Incremental BPA customers costs calculated as the incremental annual revenue requirement divided by BPA's Tier 1 annual sales (3,888 GWh/yr per FY2022 BPA forecast)

And since my mouse edits are messy the red edits would look:

LSR Dam all-in Generation
costs (2022 \$/MWh)

\$13/MWh without LSRCP *

\$17/MWh with LSRCP

* add footnote about LSRCP

Bonneville directly funds the annual operations and maintenance of the Lower Snake River Compensation Plan (LSRCP) facilities. Congress authorized the LSRCP as part of the Water Resources Development Act of 1976 (90 Stat.2917) to offset fish and wildlife losses caused by construction and operation of the four lower Snake River projects.

From: Aaron Burdick <aaron.burdick@ethree.com>

Sent: Tuesday, May 3, 2022 10:34 AM

To: James,Eve A L (BPA) - PG-5 <eajames@bpa.gov>

Cc: Koehler,Birgit G (BPA) - PG-5 <bgkoehler@bpa.gov>; Arne Olson <arne@ethree.com>

Subject: [EXTERNAL] Scheduling E3+BPA check in this week

Deliberative; FOIA Exempt

Hi Eve,

We have all our final cases now run, but are still working to package the final results. No major changes so not much to discuss. (The only big new finding is the early LSR removal case in 2024, which increases the replacement costs to ~\$7B

NPV vs. \$3.3B NPV in the baseline S1 case on which we ran it.) One thing however we should briefly discuss is whether we want to show all cases or remove some – I can note our recommendation when I send over the updated slides.

Do you have availability any of these times for a check in this week? I think we can primarily focus on the peer review email that Eve sent. We are certainly open to it and think a short discussion to align on the objectives/scope would be useful.

- Wed 12-1 or 3-4
- Thurs 11-12 or 2:30-4

We should have the updated RESOLVE PPT package done by end of day Wednesday, but, again, since there aren't really substantive changes in the results, I don't think we need to walk through them. So that needn't constrain when we meet.

Thanks,

Aaron Burdick, Associate Director

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