

combined under ALT3A compared to the NAA. Generation differences between NAA and ALT3B primarily result from the following:

SEPT – JAN: In the fall and early winter, ALT3B average generation is substantially reduced from the NAA at all projects. Fall deep reservoir drawdowns (Green Peter, Hills Creek, Cougar, Lookout Point, and Detroit dams) and spill operations conducted for fish passage (Green Peter, Foster, Hills Creek, Dexter, and Big Cliff dams) contribute to lower generation as a result of associated decreases in outflows through turbines.

FEB: This is the only period in which ALT3B generation at all WVS projects combined is higher than the NAA. Higher flows at Green Peter, Hills Creek, Foster, and Lookout Point appear primarily responsible for the increase in generation. Spill and drawdown operations are not in effect during this period.

MAR – AUG2: In the spring and summer, ALT3B average generation is substantially reduced from the NAA at most projects. The impact is most pronounced at Cougar associated with the deep spring reservoir drawdown to the diversion tunnel. There is higher spring/summer generation at Detroit and Big Cliff in the summer compared to the NAA. Deep spring drawdown at Hills Creek and Green Peter is allowed in ALT3B, which can be seen by the sharp reduction in generation at Green Peter from March to April. From April through June, several projects have average generation values of less than 1 aMW. Looking at the Green Peter operations in June over several historical water years, for example, reveals that the combination of high spill values, lower flows, and lower elevations in the deep drawdown regime lead to less turbine flows and less corresponding generation.

ALT3B: CRITICAL WATER YEAR (1937) AVERAGE GENERATION VS. 73-YEAR AVERAGE GENERATION

Overall, the annual average generation (aMW) under ALT3B was less than the NAA by approximately 55.3 and 45.6 percent in the Critical Water Year (1937) Average Generation and 73-Year Average Generation scenarios, respectively (Table 2.2-7). Lower annual average generation in Alt3B was primarily driven by spill operations and deep fall and spring season reservoir drawdowns, which reduced generation at several projects as a result of associated decreases in outflows through turbines. Decreases were particularly pronounced from April through June. It appears that deep spring drawdown and/or summer spills in the critical water year scenario would result in greater generation reductions compared to the NAA than over the 73 year average. It is also worth noting in the ALT3B critical water year, winter generation (NOV – JAN) is less than 20 aMW for the combined WVS projects.

Energy: ALT4 compared to NAA

Table 2.2-8 depicts the differences between ALT4 and the NAA for the 73-Year Average Generation and Critical Water Year (1937) Average Generation for the WVS projects. Positive

differences indicate an increase, and negative differences indicate a decrease in average generation (aMW) from the NAA.

Table 2-7. 73-Year Average Generation and Critical Water Year (CWY, 1937) Average Generation at the WVS Projects: ALT4 relative to NAA, in aMW.¹

	AVG GEN NAA	AVG GEN ALT4	AVG GEN Difference	CWY GEN NAA	CWY GEN ALT4	CWY GEN Difference
Oct	134	160	26	119	129	10
Nov	230	250	20	156	174	18
Dec	231	223	-8	80	59	-21
Jan	235	228	-7	47	36	-11
Feb	147	147	0	67	59	-8
Mar	143	132	-11	121	115	-6
Apr I	177	151	-26	188	176	-12
Apr II	182	145	-37	227	227	0
May	222	199	-22	356	325	-31
Jun	162	189	27	264	285	21
Jul	106	126	19	111	134	23
Aug I	114	128	15	115	123	8
Aug II	118	130	13	124	126	2
Sep	151	137	-14	155	137	-18
Annual Average²	171	172	1	150	148	-2

1/ HYDSIM uses a 14-period time step. April and August are split into two half-month periods because these months tend to have substantial natural flow differences between their first and second halves.

2/ The Annual Average is a weighted average to account for the different number of days in the 14 periods.

Source: HYDSIM modeling results.

Figure 2.2-13 and Figure 2.2-14 illustrate the differences in generation of individual WVS projects between ALT4 and the NAA for the 73-Year Average Generation and Critical Water Year (1937) Average Generation, respectively. Individual project blocks indicate the amount of change in each project’s monthly average generation (aMW) from the NAA. Project blocks above the zero line indicate a project under ALT4 generated more than the NAA; blocks below the zero line indicate less generation under ALT4 than the NAA. The total line indicates the difference in monthly average generation (aMW) for all WVS projects combined from the NAA.

ALT4: 73-YEAR AVERAGE GENERATION

Table 2.2-8 indicates an annual average increase of 1 aMW for the WVS projects combined under ALT 4 compared to the NAA. Generation differences between NAA and ALT4 primarily result from the following:

OCT - NOV: Higher ALT4 generation at combined WVS projects during this period is largely driven by increases at Detroit, Lookout Point, and to a lesser degree, Hills Creek dams, which may be driven by water temperature control operations instead of NAA spill operations. Cold water regulating outlet discharge during this period may also contribute to reduction of generation at Green Peter Dam compared to the NAA.

DEC – MAY: During December through March, the ALT4 operations generally result in minor changes, typically reduction, in generation at all WVS projects without a main driver. In April and May, reduced generation at Green Peter Dam may be attributed to the start of surface spill measures.

JUN – AUG: Higher ALT4 generation at combined WVS projects during this period is largely driven by increases at Detroit Dam that are likely due to decreased temperature spill relative to the NAA. Conversely, Green Peter Dam has lower generation in this period, likely from the ALT4 surface spillway operation compared to the NAA.

SEPT: Lower ALT4 generation compared to NAA is driven by reductions at Green Peter and Foster dams during September. At Green Peter Dam, surface spill measures are still in effect, and at Foster Dam increased spill is accompanied by decreased flows.

ALT4: CRITICAL WATER YEAR (1937) AVERAGE GENERATION VS. 73-YEAR AVERAGE GENERATION

Overall, the annual average generation (aMW) for the combined WVS projects under ALT4 was similar to the NAA for both the Critical Water Year (1937) Average Generation and the 73-Year Average Generation scenarios with a 1.3 percent decrease and 0.6 percent increase, respectively (Table 2.2-8). Over the 73 year average, there were decreases in generation during the months of December through May and September, which were offset by increased generation during other months. A similar pattern of decreased generation was seen for the critical water year with the exception that there was no change in generation in the latter half of April.

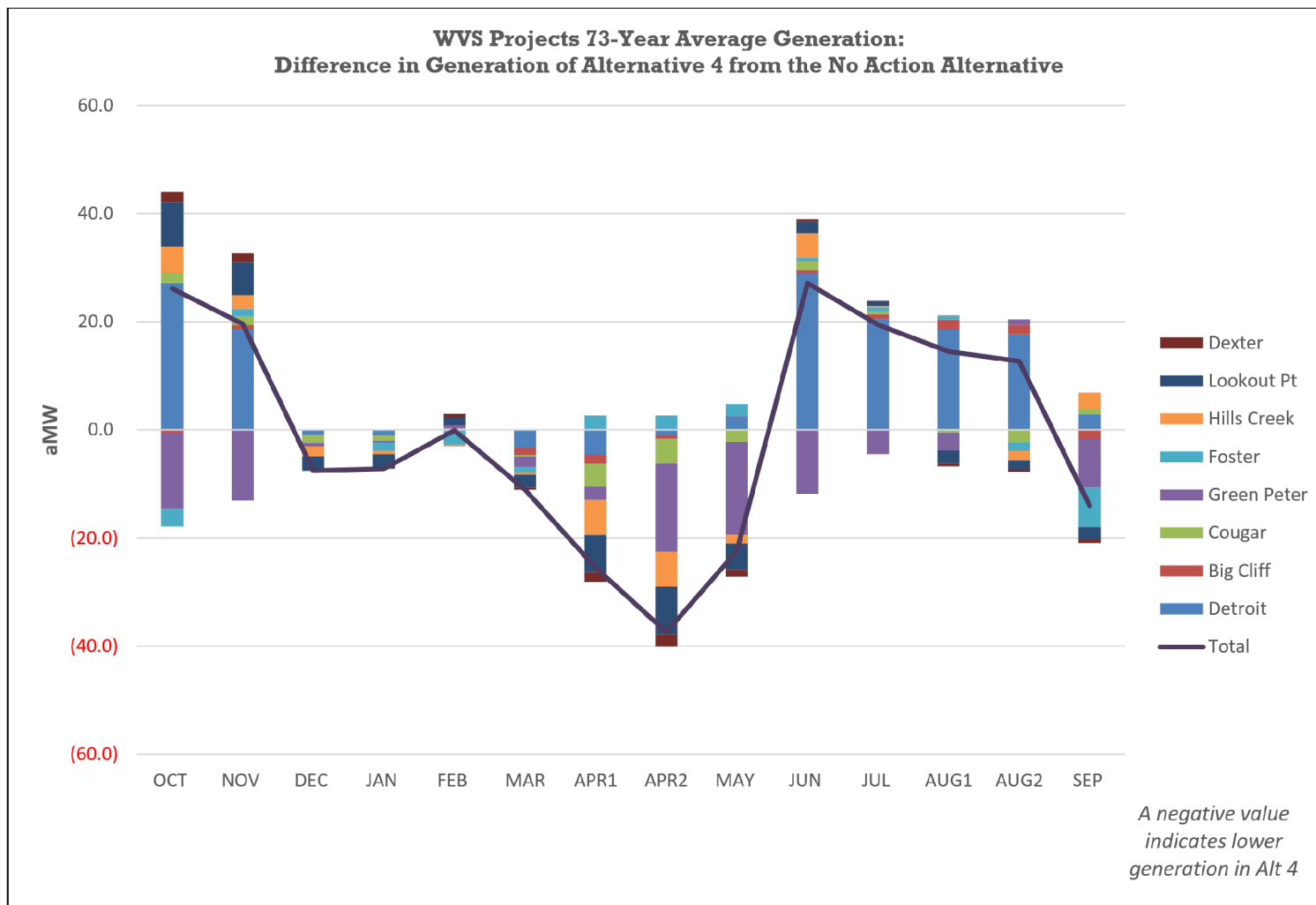


Figure 2-13. 73-Year Average Generation: Difference in Generation of ALT4 from the NAA.

Note: HYDSIM uses a 14-period time step. April and August are split into two half-month periods because these months tend to have substantial natural flow differences between their first and second halves.

Source: HYDSIM modeling results.

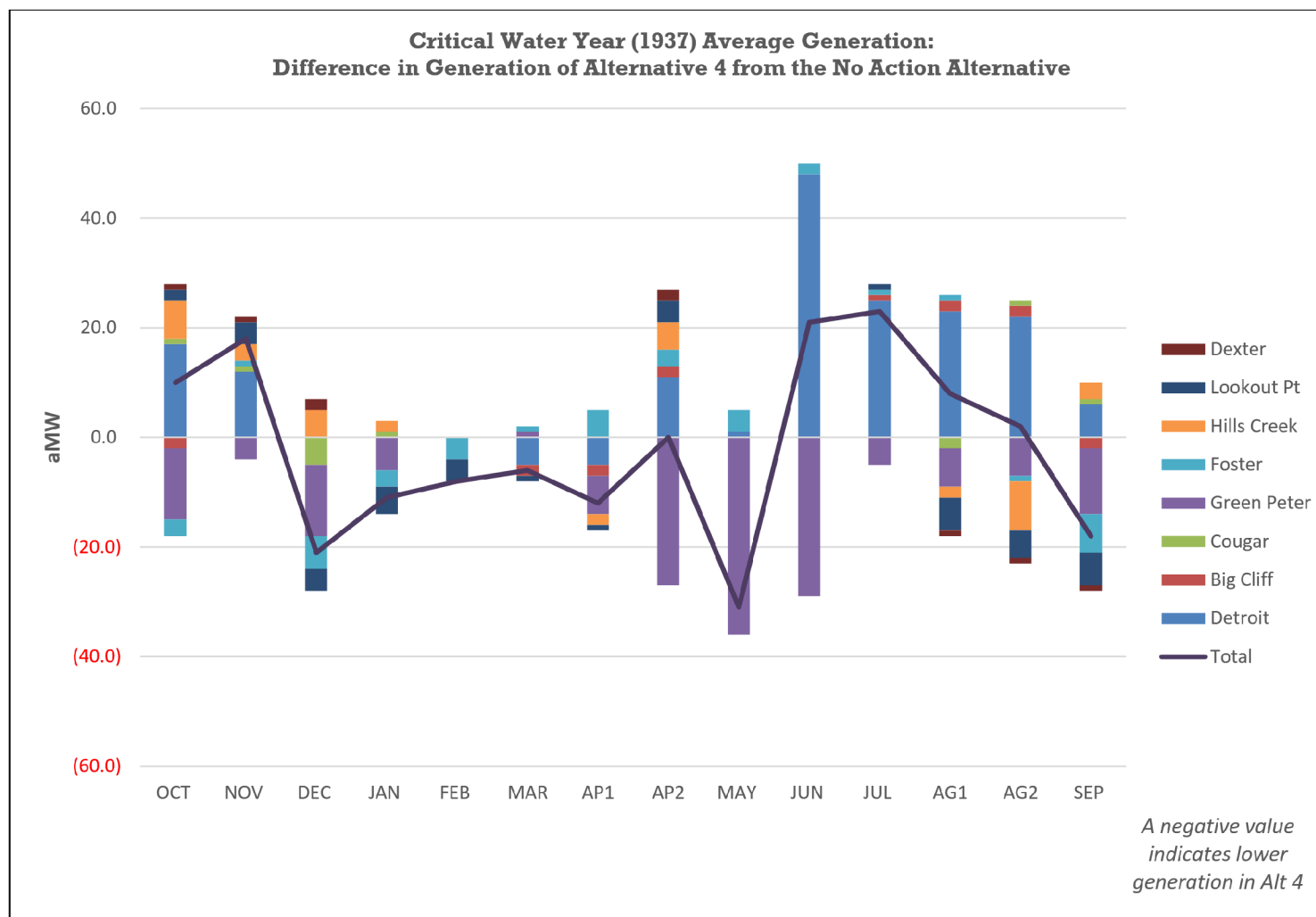


Figure 2-14. Critical Water Year (1937) Average Generation: Difference in Generation of ALT4 from the NAA.

Note: HYDSIM uses a 14-period time step. April and August are split into two half-month periods because these months tend to have substantial natural flow differences between their first and second halves.

Source: HYDSIM modeling results.

Energy: NEAR-TERM OPERATIONS compared to NAA

Table 2.2-9 depicts the differences between NEAR-TERM OPERATIONS MEASURE Near-term Operations Measure and the NAA for the 73-Year Average Generation and Critical Water Year (1937) Average Generation for the WVS projects. Positive differences indicate an increase, and negative differences indicate a decrease in average generation (aMW) from the NAA.

Table 2-8. 73-Year Average Generation and Critical Water Year (CWY, 1937) Average Generation at the WVS Projects: NEAR-TERM OPERATIONS MEASURE relative to NAA, in aMW.¹

	AVG GEN NAA	AVG GEN NEAR-TERM OPERATIONS MEASURE	AVG GEN Difference	CWY GEN NAA	CWY GEN NEAR-TERM OPERATIONS MEASURE	CWY GEN Difference
Oct	134	129	-5	119	108	-11
Nov	230	112	-118	156	74	-82
Dec	231	107	-124	80	35	-45
Jan	235	159	-76	47	20	-27
Feb	147	127	-20	67	27	-40
Mar	143	100	-43	121	78	-43
Apr I	177	81	-96	188	106	-82
Apr II	182	72	-110	227	87	-140
May	222	133	-89	356	211	-145
Jun	162	152	-10	264	250	-14
Jul	106	111	5	111	131	20
Aug I	114	98	-16	115	107	-8
Aug II	118	100	-18	124	102	-22
Sep	151	132	-19	155	159	4
Annual Average²	171	120	-52	150	108	-42

1/ HYDSIM uses a 14-period time step. April and August are split into two half-month periods because these months tend to have substantial natural flow differences between their first and second halves.

2/ The Annual Average is a weighted average to account for the different number of days in the 14 periods.

Source: HYDSIM modeling results.

Figure 2.2-15 and Figure 2.2-16 illustrate the differences in generation of individual WVS projects between NEAR-TERM OPERATIONS MEASURE and the NAA for the 73-Year Average Generation and Critical Water Year (1937) Average Generation, respectively. Individual project blocks indicate the amount of change in each project’s monthly average generation (aMW) from the NAA. Project blocks above the zero line indicate a project under NEAR-TERM OPERATIONS MEASURE generated more than the NAA; blocks below the zero line indicate less generation under NEAR-TERM OPERATIONS MEASURE than the NAA. The total line indicates

the difference in monthly average generation (aMW) for all WVS projects combined from the NAA.

Near-term Operations Measure: 73-YEAR AVERAGE GENERATION

Table 2.2-9 indicates an annual average decrease of 52 aMW for the WVS projects combined under ALT 5 compared to the NAA. Generation differences between NAA and NEAR-TERM OPERATIONS MEASURE primarily result from the following:

AUG 1 – OCT: In the late summer and early fall, overall generation for NEAR-TERM OPERATIONS MEASURE is lower than NAA, largely due to decreased generation at Lookout Point. At Lookout Point, summer and fall downstream passage operations include deep drawdowns, increased spill and limited use of turbines.

NOV - JAN: In the winter months, generation under NEAR-TERM OPERATIONS MEASURE is markedly lower than NAA. This change is driven by significantly decreased generation at Detroit, Green Peter, and Lookout Point, accompanied by moderately decreased generation at Foster and Cougar. At Detroit, NEAR-TERM OPERATIONS MEASURE measures for improved downstream fish passage includes modeling approximately 60% of daily flow going through the upper regulating outlet and approximately 40% through the penstock and turbines; the corresponding decrease in generation follows. NEAR-TERM OPERATIONS MEASURE contains a deep drawdown operation for improved fish passage at Green Peter which, as modeled, leads to a 73-year average generation of 0.5 aMW in NOV (67 of 73 years no generation) and 2.9 aMW (50 of 73 years no generation) in DEC.

FEB: Decreased generation at Detroit, and to a lesser extent Foster, drives the lowered NEAR-TERM OPERATIONS MEASURE generation compared to NAA. At Foster, a delayed refill measure keeps the reservoir at minimum conservation pool, the spillway is operated at night, and only one turbine unit will be operated.

MAR – MAY: All projects have decreased spring generation with the exception of Hills Creek in March and Green Peter and Big Cliff in May. At Detroit, spring downstream fish passage via strategic use of the spillway and turbines results in decreased generation as the operation calls for generation during the day and spill at night. Green Peter operations for improved juvenile fish passage with continuous spill in the spring lead to decreased generation through the beginning of May.

JUN – JUL: JUL is the only period in which the NEAR-TERM OPERATIONS MEASURE WVS has marginally higher total generation than the NAA, though the decrease in generation at Lookout Point largely offsets the increased generation at Green Peter.

NEAR-TERM OPERATIONS MEASURE: CRITICAL WATER YEAR (1937) AVERAGE GENERATION VS. 73-YEAR AVERAGE GENERATION

Overall, the annual average generation (aMW) for the combined WVS projects under NEAR-TERM OPERATIONS MEASURE was lower than the NAA for both the Critical Water Year (1937) Average Generation and the 73-Year Average Generation scenarios with a 28.2 percent decrease and 30.1 percent decrease, respectively (Table 2.2-9). Over the 73 year average, there were decreases in generation in all months except July. A similar pattern of decreased generation was seen for the critical water year with the exception that there was marginally more generation in September compared to NAA.

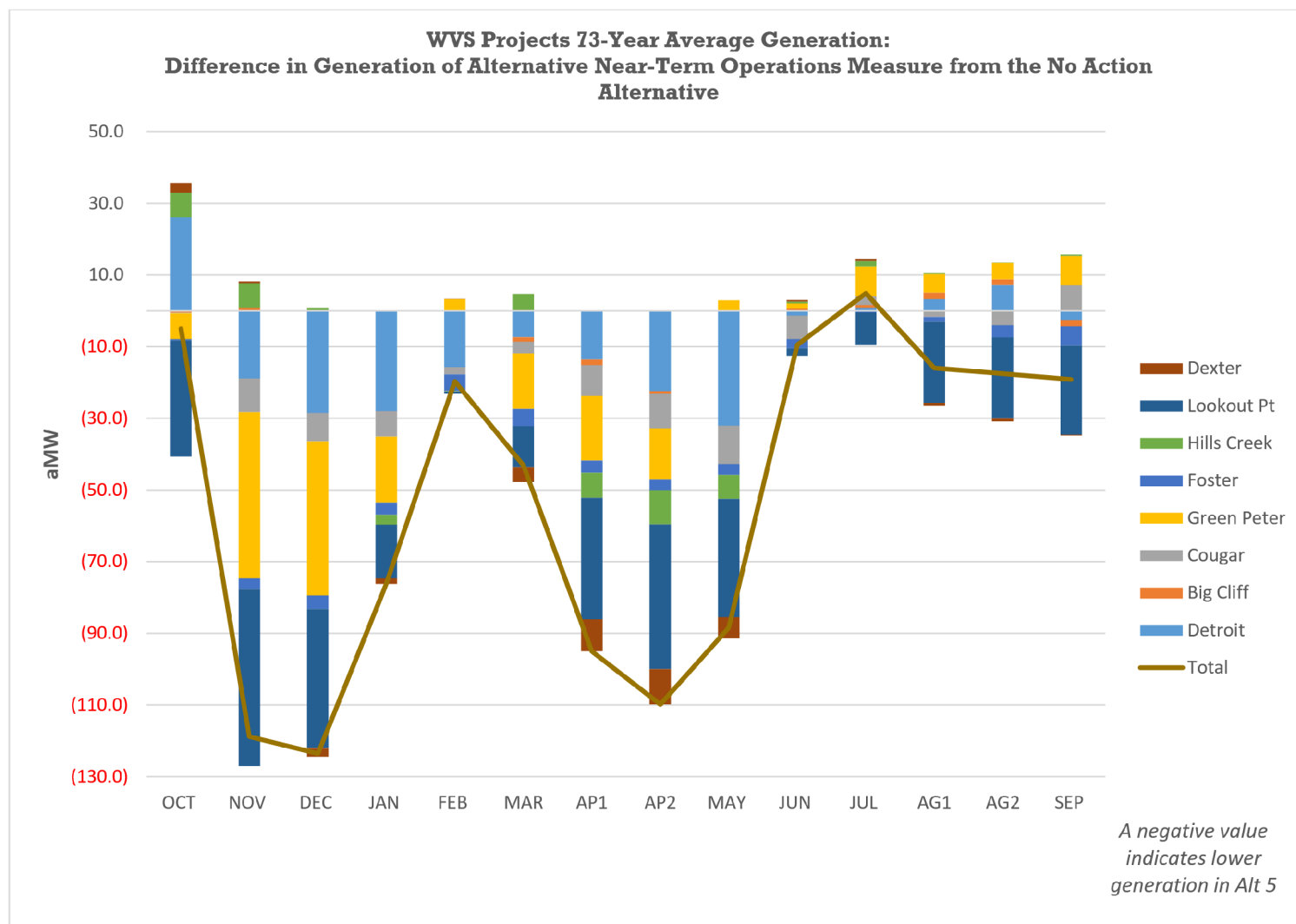


Figure 2-15. 73-Year Average Generation: Difference in Generation of NEAR-TERM OPERATIONS MEASURE from the NAA.

Note: HYDSIM uses a 14-period time step. April and August are split into two half-month periods because these months tend to have substantial natural flow differences between their first and second halves. Source: HYDSIM modeling results.

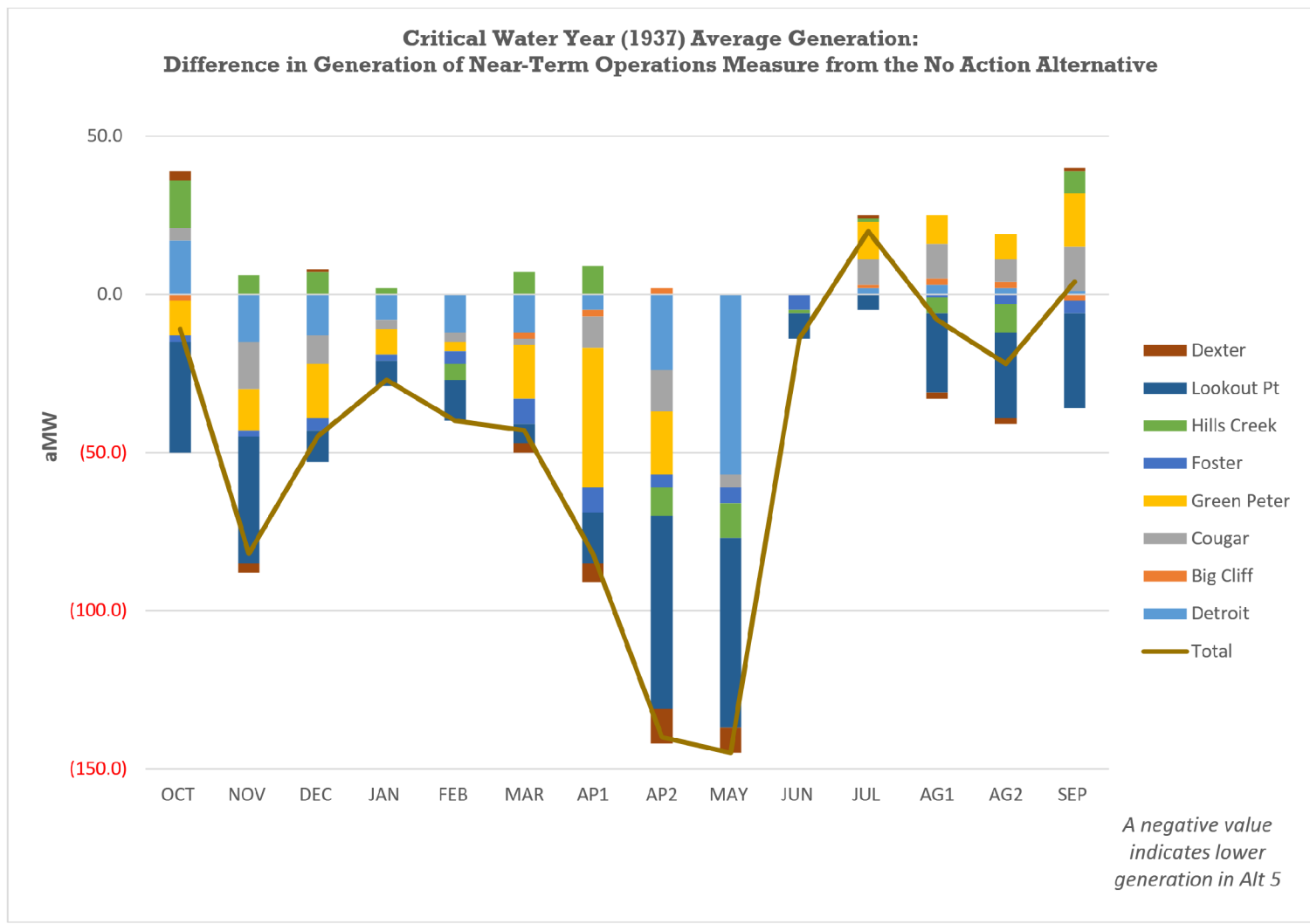


Figure 2-16. Critical Water Year (1937) Average Generation: Difference in Generation of NEAR-TERM OPERATIONS MEASURE from the NAA.

Note: HYDSIM uses a 14-period time step. April and August are split into two half-month periods because these months tend to have substantial natural flow differences between their first and second halves. Source: HYDSIM modeling results

Energy: ALT5 compared to NAA

Table 2.2-5 depicts the differences between Alt5 and the NAA for the 73-Year Average Generation and Critical Water Year (1937) Average Generation for the WVS projects. Positive differences indicate an increase, and negative differences indicate a decrease in average generation (aMW) from the NAA. The following sections show the results for Alternative 2B, which was chosen as the preferred alternative with some changes to flow. Models were not run for the preferred alternative, some potential qualitative differences due to the flow changes are described. Otherwise, specific results are shown for Alternative 2B and should be very similar.

At Green Peter and Foster, the minimum outflow target has shifted from 1,000 cfs under Alt 2B to 700 cfs under Alt 5. This could potentially lead to slightly lower generation than reported in the summary below.

At Hills Creek, the elevation reaches the top conservation storage less frequently under Alternative 5 than under Alt 2B. Additionally, the lower minimum elevation is met more frequently. This could potentially lead to slightly lower generation than reported in the summary below.

Table 2-9. 73-Year Average Generation and Critical Water Year (CWY, 1937) Average Generation at the WVS Projects: Alt5 relative to NAA, in aMW.¹

	AVG GEN NAA	AVG GEN Alt5	AVG GEN Difference	CWY GEN NAA	CWY GEN Alt5	CWY GEN Difference
Oct	134	149	15	119	151	32
Nov	230	181	--49	156	107	-49
Dec	231	161	-69	80	38	-42
Jan	235	197	-38	47	27	-20
Feb	147	142	-5	67	47	-20
Mar	143	120	-23	121	67	-54
Apr I	177	143	-34	188	158	-30
Apr II	182	136	-46	227	183	-44
May	222	184	-38	356	303	-53
Jun	162	169	7	264	272	8
Jul	106	114	8	111	125	14
Aug I	114	118	5	115	116	1
Aug II	118	120	3	124	126	2
Sep	151	157	6	155	173	18
Annual Average²	171	153	-19	150	134	--17

1/ HYDSIM uses a 14-period time step. April and August are split into two half-month periods because these months tend to have substantial natural flow differences between their first and second halves.

2/ The Annual Average is a weighted average to account for the different number of days in the 14 periods.

Source: HYDSIM modeling results.

Figure 2.2-7 and Figure 2.2-8 illustrate the differences in generation of individual WVS projects between Alt5 and the NAA for the 73-Year Average Generation and Critical Water Year (1937) Average Generation, respectively. Individual project blocks indicate the amount of change in each project's monthly average generation (aMW) from the NAA. Project blocks above the zero line indicate a project under Alt5 generated more than the NAA; blocks below the zero line indicate less generation under Alt5 than the NAA. The total line indicates the difference in monthly average generation (aMW) for all WVS projects combined from the NAA.

Alt5: 73-YEAR AVERAGE GENERATION

Table 2.2-5 indicates an annual average decrease of 18 aMW for the WVS projects combined under Alt5 compared to the NAA. Generation differences between NAA and Alt5 primarily result from the following:

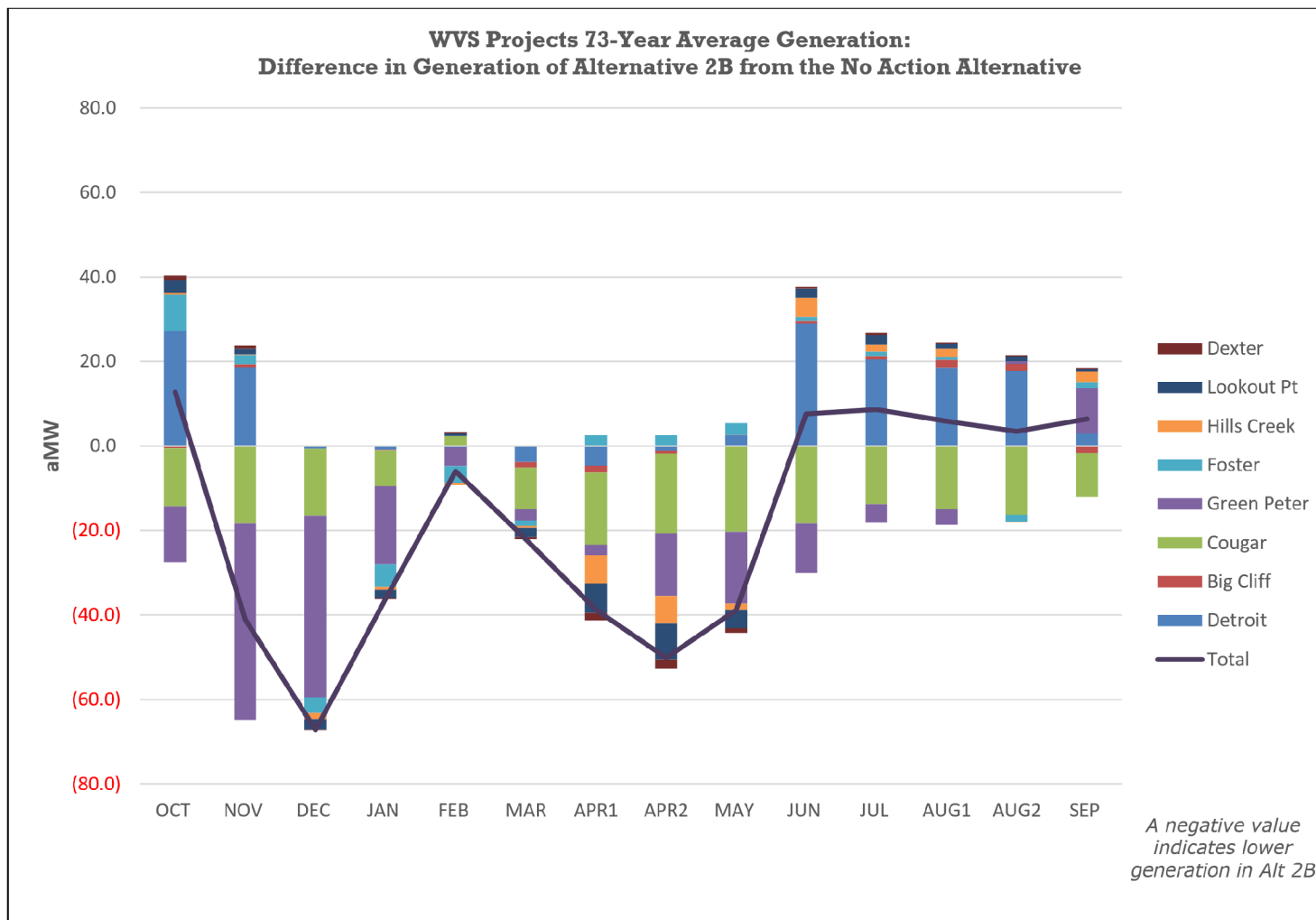


Figure 2-17. 73-Year Average Generation: Difference in Generation of Alt5 from the NAA.

Note: HYDSIM uses a 14-period time step. April and August are split into two half-month periods because these months tend to have substantial natural flow differences between their first and second halves.

Source: HYDSIM modeling results.

Figure 2-18. Critical Water Year (1937) Average Generation: Difference in Generation of Alt5 from the NAA.

Note: HYDSIM uses a 14-period time step. April and August are split into two half-month periods because these months tend to have substantial natural flow differences between their first and second halves.

Source: HYDSIM modeling results.

OCT: Higher average generation at Detroit and Foster dams under Alt5 offset reduced generation at Cougar and Green Peter, resulting in an increase of approximately 13 aMW of generation for all WVS projects combined in October.

NOV - MAY: Alt5 has lower average generation compared to the NAA for all WVS projects combined during these months. Cougar and Green Peter dams are the primary drivers of the difference. In fact, Cougar Dam has negligible generation in all months except January and February.

JUN – SEPT: Alt5 has higher average generation compared to the NAA for all WVS projects combined during these months. Higher Alt5 average generation at Detroit and Foster dams was the largest contributor to this increase. Reduced generation at Cougar Dam and other projects moderated the increase in average generation during this period.

Alt5: CRITICAL WATER YEAR (1937) AVERAGE GENERATION VS. 73-YEAR AVERAGE GENERATION

Overall, the annual average generation (aMW) for the combined WVS projects under Alt5 was lower than the NAA by approximately 9.3 and 10.5 percent in the Critical Water Year (1937) Average Generation and 73-Year Average Generation scenarios, respectively (Table 2.2-3). Lower annual average generation in Alt5 was primarily driven by reduced generation at Cougar and Green Peter dams in the late fall through spring, especially in the winter months. Generation increases in summer and early fall months were primarily driven by increased outflows through turbines at Detroit Dam (associated with replacement of temperature management spills with a temperature control tower), which offset the extent of the annual average reduction.

CHAPTER 3 - REGIONAL POWER SUPPLY AND REPLACEMENT RESOURCES

The operation, configuration, and maintenance changes described in the WVS ALTs would affect the magnitude of power generated from the eight WVS projects, as detailed in Chapter 3 of this appendix. The WVS projects are a subset of the FCRPS (31 Federal dams), and the associated transmission infrastructure. The WVS projects are operated independently from all other resources of the FCRPS. For all other FCRPS resources, they are all modeled consistently with the Preferred Alternative of the CRSO Preferred Alternative (i.e., their project storage operations, outflows, and generation are the same in each WVS alternative). The FCRPS and other resources acquired by Bonneville to meet its firm power supply obligations constitute what is known as the Federal Base System. Fluctuations in power generation at the WVS projects would therefore trigger adjustments in not only the Federal Base System but also the larger regional system of aggregated resources (e.g., incorporating additional generating capacity) to ensure the system is capable of supplying the demand for power, which fluctuates over the course of minutes, hours, days, months, and years.

This chapter describes the methods employed to identify how changes in generation at the WVS projects under the Alternatives would affect the adequacy and reliability of the regional power supply system absent any adjustments to existing resources. It then describes the approach used to identify and quantify the costs of “replacement resources,” which are investments that would be needed to add capacity to maintain power system reliability at a level consistent with the No Action Alternative.

This stage of the analysis is scenario based. It evaluates the sensitivity of the results to assumptions regarding how the system would respond to changes stemming from the WVS Alternatives (i.e., changes in generation at the WVS projects).

3.1 REGIONAL POWER SYSTEM RELIABILITY METHODOLOGY

Bonneville modeled regional power system reliability for the WVS DEIS alternatives using the Northwest Power and Conservation Council’s (NW Council) GENERation Evaluation SYStem (GENESYS) model as described in section 3.1.1 below. The analysis applies the GENESYS model to determine the LOLP metric (measures the likelihood of at least one power supply shortfall occurring in a future year) for the NAA and each of the Alternatives.

3.1.1 GENESYS

GENESYS is an economic dispatch model that uses Monte Carlo sampling to simulate short-term load uncertainty, and uncertainty in streamflows, wind, solar, and forced outages for thermal generation plants. The model performs a detailed constrained dispatch of the regulated hydropower projects in the Columbia River watershed and a simple dispatch of Pacific Northwest regional thermal plants against an extra-regional import market.

The model was developed by the NW Council, Bonneville, and other regional entities, and is used to perform studies requiring detailed hydropower dispatch for planning purposes.¹² More specifically, NW Council uses GENESYS for annual adequacy assessments, periodic regulated hydropower flow studies and periodic analysis of lost revenue due to hydropower dispatch change. The adequacy of the regional power supply is assessed probabilistically in GENESYS by evaluating any regional shortfall against NW Council's adequacy standard (i.e., a LOLP of 5 percent or less). This standard was designed to assess whether the region has sufficient resources to meet growing demand for electricity in future years. Regulated hydropower flow studies have been performed for fish passage survival and life-cycle studies, and climate change scenarios.

For the WVS DEIS alternatives, datasets containing hydropower generation plant-specific parameters and constraints (inputs similar to those used in HYDSIM and ResSim models), thermal generation plant parameters and constraints, and other generation sources and constraints (i.e., wind and solar power plants) were input into the model. Additional inputs to the model include power demand (i.e., "loads") produced by the NW Council and assumptions regarding the availability of independent power producers and imports from outside the region.¹³ The NW Council's 2017 data set was used with specific parameters and constraints for the main stem hydroelectric system updated to reflect the recently completed CRSO EIS' Preferred Alternative conditions. The Willamette Projects are hydraulically independent of the main stem FCRPS Projects and are included as hydro independents in the GENESYS studies. For each of the WVS EIS Alternatives, the GENESYS model was updated to reflect the generation of the Willamette Projects of that particular alternative.

The GENESYS model relies on Monte Carlo simulations of the system to estimate LOLP based on weather-related load uncertainty, in addition to uncertainties in streamflows, wind, solar, and forced outages for thermal generation.¹⁴ The model performs a detailed dispatch of the regulated hydropower projects in the watershed of the Columbia River, Pacific Northwest regional thermal plants, wind, solar, along with other renewable energy resources, to determine the power imports that would be necessary to meet the load (demand) of the Pacific Northwest.

Bonneville used the GENESYS model to conduct the studies and ran 6,160 Monte Carlo simulations for each WVS DEIS alternative involving hydropower (i.e., HYDSIM results for WVS Projects), wind, and solar energy variability; forced outages on thermal plant generation; and hourly historical temperature variations (1936 to 2008). This provided the LOLP frequency (i.e.,

¹² The GENESYS model used for modeling is the classic version of GENESYS, which is available to Bonneville and the public by the Council as part of their 7th Power Plan (documentation in NW Council 2016). In the 8th Power Plan (in draft), the Council uses a new version of GENESYS which is not currently available to Bonneville or the public.

¹³ Details for load descriptions are provided in NW Council 2017.

¹⁴ In general, Monte Carlo simulation is a statistical technique that uses random events, or probability analysis, to simulate an outcome. Bonneville uses it to forecast potential regional load growth.

how many games out of 6,160 had instances of insufficient resources to meet the demand), but did not measure the magnitude or duration of an outage.

The reliability analyses were regional (NW-US) and were not performed for the CRS (Federal), Mid-Columbia, or Canadian systems. Because the utilities in the region can buy and sell power bilaterally with one another that is surplus to their retail load needs, the loss of generation by one entity can have adverse consequences to utilities relying on such generation. If the Federal system loses generation, BPA may be obligated to acquire resources to replace losses in the Federal Base System consistent with Bonneville's long-term firm power sales contracts or its customers may do so. Therefore, this analysis included identification of whether replacement resources would need to be acquired by Bonneville or its customers to serve Bonneville's firm power load obligations.

3.2 REGIONAL POWER SYSTEM RELIABILITY RESULTS

This section presents the LOLP results for the NAA and for the Alternatives with comparisons to the NAA. LOLP is expressed as a percentage that reflects the probability that the WVS and the larger regional power supply is adequate to meet the region's expected load demand for electricity in a year. Higher LOLPs reflect the increased likelihood that the power system would be unable to meet demand and lower LOLPs reflect a decreased likelihood that the power system would be unable to meet demand. The LOLP is a measure of the frequency of outages but not a measure of their duration or magnitude. While LOLP reflects the adequacy of the aggregated regional power supply, individual utilities within the Pacific Northwest, such as Bonneville, face a wide range of future resource needs that are unique to them which trigger actions and/or decisions to develop, add, or acquire resources to meet their obligations.

Achieving a higher level of power system reliability (a lower LOLP) requires the development of resources to meet either load growth or as replacement for losses in existing resources. Resources are developed by either individual utilities to meet their load serving obligations or by commercial/ independent power producers that assume the risk of building resources to meet forecasted supply needs.

In 2011, the NW Council set a regional standard for LOLP to be no higher than 5 percent. That is, in roughly one of every 20 years, the region would experience one or more energy shortages (potentially blackouts). The NW Council recommends investments in the power and transmission systems until the LOLP reaches 5 percent.

3.2.1 Regional Power System Reliability Summaries

Table 3.2-1 presents the LOLP results for each alternative. Based on the modeled changes in power generation, existing load forecasts, and coal plant retirements anticipated as of 2017, the NAA would result in an LOLP of 6.5 percent in 2022. This would exceed the current NW

Council target of 5 percent.¹⁵ However, because the NW Council’s target is useful regional guidance, and 6.5 percent is within the range of the Pacific Northwest (PNW) Power System LOLP in recent years, this analysis considers the 6.5 percent NAA LOLP a reasonable benchmark level during the timeframe of this analysis.

Changes in power generation anticipated from structural and operational changes specified by the alternatives may affect the LOLP of the regional power system. As identified in Table 3.2-1, the differences between all of the Action Alternatives and the NOAA are indistinguishable (i.e., within the +/- 1 percent range of modeling accuracy) and the risk of blackouts or power shortages for all alternatives (including the NAA) is about once every 15 years. Since the WVS projects represent a small part of the overall PNW Power System and the LOLPs are not materially different from the NAA, no replacement resources are required to bring the LOLPs in alignment with the NAA.

Table 3-1. LOLP Results for WVS Alternatives.

Alternative	LOLP (%)	LOLP Difference from No Action	Blackout(s)/Power Shortage(s) Every x Years
No Action	6.5	N/A	1 year in every 15 years
ALT1	6.4	-0.1	1 year in every 15 years
ALT2A	6.5	0	1 year in every 15 years
Alt2B	6.6	+0.1	1 year in every 15 years
ALT3A	7.0	+0.5	1 year in every 15 years
ALT3B	7.0	+0.5	1 year in every 15 years
ALT4	6.5	0	1 year in every 15 years
NEAR-TERM OPERATIONS MEASURE	6.8	+0.3	1 year in every 15 years
Alt5	6.6		1 year in every 15 years

3.2.2 Regional Power System Reliability: Alternative Comparisons to NAA

3.2.2.1 No-Action Alternative

Bonneville’s analysis of the LOLP for the NAA is 6.5 percent for the PNW, which means there was at least one blackout/power shortage in 6.5 percent of the simulation games. An LOLP of 6.5 percent means that the region could experience a significant power shortage (or recurring power shortages) in roughly one in every 15 years. These would be power shortages because

¹⁵ Note that LOLP is a probabilistic estimate and does not indicate magnitude or scale of potential power system outages and it is also not linear in effects, however, it is a useful metric of overall system reliability and stability. See NW Council Document Number 2011-14, Page 4, available at: https://www.nwcouncil.org/sites/default/files/2011_14_1.pdf.

loads would be greater than the power system's ability to generate electricity and would not be caused by power outages on the distribution system, such as when a tree hits a power line and blacks out a neighborhood for a few hours. An LOLP event could result in rolling blackouts lasting up to several days.

The NAA LOLP does not meet the NW Council's 5 percent LOLP standard. Because the 6.5 percent NAA LOLP value is above the regional standard, regional utility planners (and potentially Bonneville is requested by its customers) should be building or acquiring new generating resources. However, the WVS Projects' NAA LOLP of 6.5 is not substantially different than the PNW Power System LOLP in recent years. The region has accepted this higher level of LOLP over the past 5 years in absence of replacement resources, and it has become the status quo. As such, the 6.5 percent LOLP of the NAA will serve as the measure of comparison for the effects of the other WVS DEIS alternatives.

3.2.2.2 Alt 1: Change from NAA

Bonneville estimates the LOLP for Alt1 is 6.4 percent for the PNW, which means there was a blackout/power shortage (or multiple blackouts) in 6.4 percent of the simulation games or approximately one every 15 years.

The LOLP changes from the NAA (6.5 percent) to Alt1 (6.4 percent) are indistinguishable (i.e., within the +/- 1 percent range of modeling accuracy); therefore, no replacement resources would be needed to return the LOLP to the NAA level.

3.2.2.3 Alt 2A: Change from NAA

Bonneville estimates the LOLP for Alt2A is 6.5 percent for the PNW, which means there was a blackout/power shortage (or multiple blackouts) in 6.5 percent of the simulation games or approximately one loss of load event or events (i.e., power shortages resulting in blackouts or emergency actions) every 15 years.

There is no difference between the LOLP of the NAA (6.5 percent) and Alt2A; therefore, no replacement resources would be needed to return the LOLP to the NAA level.

3.2.2.4 Alt 2B: Change from NAA

Bonneville estimates the LOLP for Alt2B is 6.6 percent for the PNW, which means there was a blackout/power shortage (or multiple blackouts) in 6.6 percent of the simulation games or approximately one loss of load event or events (i.e., power shortages resulting in blackouts or emergency actions) every 15 years.

The LOLP changes from the NAA (6.5 percent) to Alt2B (6.6 percent) are indistinguishable (i.e., within the +/- 1 percent range of modeling accuracy); therefore, no replacement resources would be needed to return the LOLP to the NAA level.

3.2.2.5 Alt 3A: Change from NAA

Bonneville estimates the LOLP for Alt3A is 7.0 percent for the PNW, which means there was an outage (or multiple outages) in 7.0 percent of the simulation games or approximately one loss of load event or events (i.e., power shortages resulting in blackouts or emergency actions) every 15 years.

The LOLP changes from the NAA (6.5 percent) to Alt3A (7.0 percent) are negligible and are indistinguishable (i.e., within the +/- 1 percent range of modeling accuracy); therefore, no replacement resources would be needed to return the LOLP to the NAA level.

3.2.2.6 Alt 3B: Change from NAA

Bonneville estimates the LOLP for Alt3B is 7.0 percent for the PNW, which means there was an outage (or multiple outages) in 7.0 percent of the simulation games or approximately one loss of load event or events (i.e., power shortages resulting in blackouts or emergency actions) every 15 years.

The LOLP changes from the NAA (6.5 percent) to Alt3B (7.0 percent) are indistinguishable (i.e., within the +/- 1 percent range of modeling accuracy); therefore, no replacement resources would be needed to return the LOLP to the NAA level.

3.2.2.7 Alt 4: Change from NAA

Bonneville estimates the LOLP for Alt4 is 6.5 percent for the PNW, which means there was an outage (or multiple outages) in 6.5 percent of the simulation games or approximately one loss of load event or events (i.e., power shortages resulting in blackouts or emergency actions) every 15 years.

There is no difference between the LOLP of the NAA (6.5 percent) and Alt4; therefore, no replacement resources would be needed to return the LOLP to the NAA level.

3.2.2.8 Near-Term Operations Measure: Change from NAA

Bonneville estimates the LOLP for Near-term operations measure is 6.8 percent for the PNW, which means there was an outage (or multiple outages) in 6.8 percent of the simulation games or approximately one loss of load event or events (i.e., power shortages resulting in blackouts or emergency actions) every 15 years.

The LOLP changes from the NAA (6.5 percent) to Near-term operations measure (6.8 percent) are indistinguishable (i.e., within the +/- 1 percent range of modeling accuracy); therefore, no replacement resources would be needed to return the LOLP to the NAA level.

3.2.2.9 Alt5: Change from NAA

Bonneville estimates the LOLP for Alt2B is 6.6 percent for the PNW, which means there was a blackout/power shortage (or multiple blackouts) in 6.6 percent of the simulation games or approximately one loss of load event or events (i.e., power shortages resulting in blackouts or emergency actions) every 15 years.

The LOLP changes from the NAA (6.5 percent) to Alt2B (6.6 percent) are indistinguishable (i.e., within the +/- 1 percent range of modeling accuracy); therefore, no replacement resources would be needed to return the LOLP to the NAA level.

For this, LOLP for Alt2B is assumed to be the same as Alt5.

CHAPTER 4 - TRANSMISSION PATHS INCREMENTAL ANALYSIS

This chapter describes the methodology, data, and results of the transmission paths incremental analysis that estimates the incremental power flow change on Bonneville Transmission Network Paths between the NAA and Alternatives during multiple seasons as a result of generation output changes at the Federal WVS projects with hydropower facilities (Detroit, Big Cliff, Cougar, Foster, Hills Creek, Lookout Point, and Dexter).

The purpose of the transmission paths incremental analysis was to evaluate expected changes in power flows that may occur under each of the Alternatives.

4.1 TRANSMISSION PATHS METHODOLOGY

Bonneville Transmission Services' most recent (September 2021) Long Term Available Transfer Capability (LT ATC) power flow base cases were used as the starting point for loads, resource dispatch, and transmission topology. These cases estimate utilization of Bonneville's Long Term Firm (LTF) transmission service commitments for a ten-year planning horizon under "All Lines in Service" conditions in selected seasonal conditions that may stress the transmission system. These cases simulate snapshots for 2031¹⁶. A single power flow case was used to represent each of the following seasonal conditions:

- Winter Peak (January), Upper Columbia stress zone;
- Spring Off-peak (May), Lower Snake stress zone; and
- Summer Peak (August), Upper Columbia stress zone.

NAA reference power flow cases were created by adjusting the output of each Willamette project to match the monthly average energy over 73 years of historical hydrology runoffs provided in the HYDSIM outputs for the three respective months listed above.

The LOLP analysis results (in Section 3 of this appendix) were also used as the basis for the assumptions to inform the case for the alternatives. In scenarios where development of new replacement resources would not be needed to return the LOLP to the NAA level, it was assumed that generation decreases at the Willamette projects would be balanced by increases at either the Upper Columbia or Lower Snake generation facilities.

The differences in power flows were calculated on Bonneville Transmission Network Paths between the NAA reference case and each EIS Alternative case for each of the three seasonal conditions (i.e., Winter Peak, Spring-Off-peak, and Summer Peak).

¹⁶ WECC produces power flow models for the Western Interconnect power system for different planning horizons. A 10-year case is the farthest case WECC produces.

4.2 TRANSMISSION PATHS RESULTS

This section provides the transmission power flow results from the NAA and for the Alternatives with comparisons to the NAA.

4.2.1 Transmission Paths Summaries

Tables 4.2-1 through 4.2-3 represent the seasonal MW values for the WVS projects generation outputs and the Bonneville Transmission Network Paths and comparison of the changes in power flows between the NAA and the Alternatives.

With the NAA as the reference case, incremental power flow increases greater than 25 MW for Alt 3A and Alt 3B occurred on the Cross Cascades South path for all seasons. This results from the decreases in the Willamette Valley generation for those two alternatives with generation being replaced at either Upper Columbia (Winter and/or Summer peak cases) or Lower Snake (Spring Off-Peak case) generation facilities. Specific to only the Winter and Summer peak seasons for Alternatives 3A and 3B, incremental flow increases greater than 25 MW also occurred on North of Hanford due to the shift in generation from Willamette Valley to Upper Columbia. The Alt 3A and Alt 3B generation values for the Spring Off-peak season reflected the highest MW difference from the NAA; therefore, that season generally yielded the largest magnitude change in flows across Bonneville's network flow gates in comparison to the other two seasonal cases. For the Spring Off-Peak case, the largest change in flow of 118 MW occurred on the West of Lower Monumental path with other noticeable changes (greater than 25 MW) on Cross Cascades South, West of John Day, West of McNary, and West of Slatt due to the shift of generation from Willamette Valley to Lower Snake generation facilities. For Alt 3A and Alt 3B, the Summer Peak case resulted in the least amount of MW differences across Bonneville Transmission Network Paths.

Alt 2A for the Winter Peak case was the midpoint between Alt 3A and Alt 3B, and Alt 1 and Alt 4. For the Spring Off-Peak, the results were a bit higher than Alt 4 results, which had a slightly different generation output profile than Alt 2A. For the Summer Peak case, Alt 2A had the least amount of impacts on Bonneville Transmission Network Paths and Generation re-dispatch with respect to the NAA.

Generally, the network flow changes for all alternatives represent little to no impact for most paths. As discussed above, there is moderate impact on the congested Cross Cascades South path for some alternatives. This path supplies power from generators east of the Cascade Range to load centers in Portland and areas to the south. While some capacity on the path remains, decreases in generation for alternatives 2A, 2B, 3A, and 3B would have an incremental impact and may lead to minor cost increases for ratepayers and minor complications for meeting state climate goals.

Alt5 is shown to have the same results as Alt2B in the section below.

Table 4-1. Winter Peak Case (January); FCRPS Upper Columbia generation facilities replacement generation.

Generation Outputs (MW)	NAA	Alt 1	Alt 1 vs. NAA	Alt 2A	Alt 2A vs. NAA	Alt 2B	Alt 2B vs. NAA	Alt 3A	Alt 3A vs. NAA	Alt 3B	Alt 3B vs. NAA	Alt 4	Alt 4 vs. NAA	NTOM	NTOM vs. NAA	Alt5	Alt5 vs. NAA
Detroit	56.9	56.2	-0.7	56	-0.9	56	-0.9	39.8	-17.1	39.5	-17.4	56	-0.9	28.8	-28.1	56	-0.9
Big Cliff	12.9	12.8	-0.1	12.8	-0.1	12.8	-0.1	11	-1.9	10.9	-2	12.8	-0.1	12.8	-0.1	12.8	-0.1
Cougar	17.6	17.7	0.1	16.5	-1.1	9.2	-8.4	17.5	-0.1	9.1	-8.5	16.6	-1	10.7	-6.9	9.2	-8.4
Green Peter	45.5	45.5	0	27.0	-18.5	27	-18.5	26.9	-18.6	28.5	-17	45.3	-0.2	27.1	-18.4	27	-18.5
Foster	17.6	15.4	-2.2	12.2	-5.4	12.3	-5.3	14.4	-3.2	14.6	-3	16.1	-1.5	14.2	-3.4	12.3	-5.3
Hills Creek	22	21.9	-0.1	21.1	-0.9	21.3	-0.7	20.5	-1.5	21.3	-0.7	21.3	-0.7	19.2	-2.8	21.3	-0.7
Lookout Pt	49.5	47.3	-2.2	46.9	-2.6	47.5	-2	33.4	-16.1	31.8	-17.7	46.9	-2.6	34.5	-15.0	47.5	-2
Dexter	12.9	12.8	-0.1	12.8	-0.1	12.7	-0.2	11.3	-1.6	11.3	-1.6	12.8	-0.1	11.3	-1.6	12.7	-0.2
Combined WVS Projects	234.9	229.6	-5.3	205.3	-29.6	198.8	-36.1	174.8	-60.1	167	-67.9	227.8	-7.1	158.7	-76.2	198.8	-36.1
Bonneville Transmission Network Paths(MW)	NAA	Alt 1	Alt 1 vs. NAA	Alt 2A	Alt 2A vs. NAA	Alt 2B	Alt 2B vs. NAA	Alt 3A	Alt 3A vs. NAA	Alt 3B	Alt 3B vs. NAA	Alt 4	Alt 4 vs. NAA	Alt 5	Alt 5 vs. NAA	PA	PA vs. NAA
Cross Cascades North E>W	9445.7	9446.9	1.2	9452.8	7.1	9454.2	8.5	9459.8	14.1	9461.3	15.6	9447.2	1.5	9463.2	17.5	9454.2	8.5
Cross Cascades South E>W	6475.5	6478.7	3.2	6493.9	18.4	6497.4	21.9	6512.7	37.2	6516.9	41.4	6479.7	4.2	6522.5	47.0	6497.4	21.9
North of Echo Lake S>N	2362.6	2362.2	-0.4	2360.2	-2.4	2359.8	-2.8	2357.9	-4.7	2357.3	-5.3	2362.1	-0.5	2356.7	-5.9	2359.8	-2.8
North OF Hanford N>S	-1150.9	-1147.9	3	-1133.2	17.7	-1129.5	21.4	-1115	35.9	-1110.5	40.4	-1146.8	4.1	-1105.8	45.1	-1129.5	21.4
Paul to Allston N>S	245.6	246.5	0.9	251.3	5.7	252.4	6.8	256.9	11.3	258.2	12.6	246.8	1.2	259.7	14.1	252.4	6.8
Raver to Paul N>S	725.3	726	0.7	729.8	4.5	730.7	5.4	734.2	8.9	735.2	9.9	726.3	1	736.4	11.1	730.7	5.4
South of Allston N>S	1183	1184.2	1.2	1189.9	6.9	1191.3	8.3	1196.6	13.6	1198.2	15.2	1184.5	1.5	1200.0	17.0	1191.3	8.3
South of Custer N>S	-1371	-1371	0	-1370.8	0.2	-1370.8	0.2	-1370.7	0.3	-1370.7	0.3	-1370.9	0.1	-1370.7	0.3	-1370.8	0.2
West of Hatwai E>W	908.5	908.3	-0.2	907.1	-1.4	906.8	-1.7	905.6	-2.9	905.2	-3.3	908.2	-0.3	904.9	-3.6	906.8	-1.7
West of John Day E>W	3358.6	3359.3	0.7	3362.8	4.2	3363.4	4.8	3366.5	7.9	3367.2	8.6	3359.5	0.9	3368.6	10.0	3363.4	4.8
West of Lower Monumental E>W	2420.9	2421.2	0.3	2422.9	2.0	2423.3	2.4	2425	4.1	2425.4	4.5	2421.3	0.4	2426.0	5.1	2423.3	2.4
West of McNary E>W	2389.1	2389.9	0.8	2393.4	4.3	2394.3	5.2	2397.7	8.6	2398.8	9.7	2390.1	1	2399.9	10.8	2394.3	5.2
West of Slatt E>W	2679.7	2680.6	0.9	2685.1	5.4	2686.3	6.6	2690.8	11.1	2692.3	12.6	2681	1.3	2693.7	14.0	2686.3	6.6

Table 4-2. Spring Off-peak Case (May); FCRPS Lower Snake generation facilities are replacement generation.

Gen Outputs (MW)	NAA	Alt 1	Alt 1 vs. NAA	Alt 2A	Alt 2A vs. NAA	Alt 2B	Alt 2B vs. NAA	Alt 3A	Alt 3A vs. NAA	Alt 3B	Alt 3B vs. NAA	Alt 4	Alt 4 vs. NAA	Alt NTOM	Alt NTOM vs. NAA	Alt5	Alt5 vs. NAA
Detroit	59.8	63.2	3.4	34.1	-25.7	62.4	2.6	0	-59.8	27.5	-32.3	62.3	2.5	27.8	-32.0	62.4	2.6
Big Cliff	12.6	12.8	0.2	8.0	-4.6	12.7	0.1	0	-12.6	0	-12.6	12.7	0.1	12.7	0.1	12.7	0.1
Cougar	20.3	16.8	-3.5	10.8	-9.5	0	-20.3	18.4	-1.9	0	-20.3	18.1	-2.2	9.6	-10.7	0	-20.3
Green Peter	28.6	28.8	0.2	22.1	-6.5	11.6	-17	11.6	-17	0	-28.6	11.4	-17.2	31.5	2.9	11.6	-17
Foster	9.5	11.2	1.7	10.1	0.6	12.3	2.8	9.5	0	9.4	-0.1	11.6	2.1	6.4	-3.1	12.3	2.8
Hills Creek	24.1	21	-3.1	12.5	-11.6	22.6	-1.5	12.2	-11.9	21.1	-3	22.6	-1.5	17.4	-6.7	22.6	-1.5
Lookout Pt	54.9	49	-5.9	26.6	-28.3	50.6	-4.3	4.7	-50.2	24.2	-30.7	50.1	-4.8	21.9	-33.0	50.6	-4.3
Dexter	11.7	10.1	-1.6	6.5	-5.2	10.5	-1.2	0	-11.7	0	-11.7	10.4	-1.3	5.8	-5.9	10.5	-1.2
Combined WVS Projects	221.5	212.9	-8.6	130.7	-90.8	182.7	-38.8	56.4	-165.1	82.2	-139.3	199.2	-22.3	133.1	-88.4	182.7	-38.8
Bonneville Transmission Network Paths(MW)	NAA	Alt 1	Alt 1 vs. NAA	Alt 2A	Alt 2A vs. NAA	Alt 2B	Alt 2B vs. NAA	Alt 3A	Alt 3A vs. NAA	Alt 3B	Alt 3B vs. NAA	Alt 4	Alt 4 vs. NAA	Alt NTOM	Alt NTOM vs. NAA	Alt5	ALT5 vs. NAA
Cross Cascades North E>W	5652.7	5653.7	1	5666.9	14.2	5657.5	4.8	5676.9	24.2	5673.5	20.8	5655.7	3	5666.5	13.8	5657.5	4.8
Cross Cascades South E>W	4100.5	4105.7	5.2	4161.8	61.3	4125.6	25.1	4214.2	113.7	4195.3	94.8	4115.5	15	4160.3	59.8	4125.6	25.1
North of Echo Lake S>N	1297.0	1296.9	-0.1	1297.4	0.4	1296.5	-0.5	1296.4	-0.6	1296.7	-0.3	1296.7	-0.3	1297.4	0.4	1296.5	-0.5
North OF Hanford N>S	-333.8	-334.1	-0.3	-338.5	-4.7	-335.5	-1.7	-342.2	-8.4	-341	-7.2	-334.9	-1.1	-338.4	-4.6	-335.5	-1.7
Paul to Allston N>S	613.6	614.5	0.9	623.6	10.0	617.9	4.3	632.3	18.7	629.3	15.7	616.2	2.6	623.2	9.6	617.9	4.3
Raver to Paul N>S	881.3	882.0	0.7	889.4	8.1	884.8	3.5	896.5	15.2	894.1	12.8	883.5	2.2	889.1	7.8	884.8	3.5
South of Allston N>S	732.1	733.9	1.8	743.9	11.8	737.2	5.1	754.4	22.3	750.8	18.7	735.3	3.2	743.5	11.4	737.2	5.1
South of Custer N>S	-1368.3	-1368.2	0.1	-1370.2	-1.9	-1367.9	0.4	-1369.4	-1.1	-1369.7	-1.4	-1368.1	0.2	-1370.2	-1.9	-1367.9	0.4
West of Hatwai E>W	3088.1	3087.7	-0.4	3086.2	-1.9	3086.3	-1.8	3082.5	-5.6	3083.8	-4.3	3087	-1.1	3086.4	-1.7	3086.3	-1.8
West of John Day E>W	2997.4	2998.6	1.2	3014.3	16.9	3004.4	7	3029.1	31.7	3024	26.6	3001.7	4.3	3013.7	16.3	3004.4	7
West of Lower Monumental E>W	3728.5	3734.3	5.8	3793.0	64.5	3754.7	26.2	3846.7	118.2	3827.6	99.1	3744.3	15.8	3791.3	62.8	3754.7	26.2
West of McNary E>W	2305.9	2308.4	2.5	2334.3	28.4	2317.5	11.6	2358.2	52.3	2349.6	43.7	2312.9	7	2333.6	27.7	2317.5	11.6
West of Slatt E>W	2833.7	2836.0	2.3	2857.7	24.0	2843.6	9.9	2877.7	44	2870.5	36.8	2839.6	5.9	2857.1	23.4	2843.6	9.9

Table 4-3. Summer Peak Case (August); FCRPS Upper Columbia generation facilities replacement generation.

Gen Outputs (MW)	NAA	Alt 1	Alt 1 vs. NAA	Alt 2A	Alt 2A vs. NAA	Alt 2B	Alt 2B vs. NAA	Alt 3A	Alt 3A vs. NAA	Alt 3B	Alt 3B vs. NAA	Alt 4	Alt 4 vs. NAA	Alt NTOM	Alt NTOM vs. NAA	Alt5	Alt5 vs. NAA
Detroit	13.6	27.2	13.6	31.4	17.8	31.8	18.2	1.2	-12.4	25.3	11.7	31.8	18.2	18.9	5.3	31.8	18.2
Big Cliff	6	6	0	7.6	1.6	7.7	1.7	4.7	-1.3	8.1	2.1	7.7	1.7	7.7	1.7	7.7	1.7
Cougar	16.1	15.7	-0.4	14.4	-1.7	0.5	-15.6	5.7	-10.4	0.5	-15.6	14.7	-1.4	13.3	-2.8	0.5	-15.6
Green Peter	15.9	14.1	-1.8	16.5	0.6	14.5	-1.4	14.5	-1.4	1.1	-14.8	14.8	-1.1	20.8	4.9	14.5	-1.4
Foster	5.9	1	-4.9	5.3	-0.6	5.4	-0.5	9	3.1	3.9	-2	5.8	-0.1	3.5	-2.4	5.4	-0.5
Hills Creek	17	19.8	2.8	15.7	-1.3	17.9	0.9	19.2	2.2	6.4	-10.6	16.2	-0.8	17.1	0.1	17.9	0.9
Lookout Pt	33	40.8	7.8	31.0	-2.0	34.2	1.2	8.7	-24.3	17.8	-15.2	31	-2	10.4	-22.6	34.2	1.2
Dexter	8	9.9	1.9	7.6	-0.4	8.3	0.3	4.9	-3.1	8	0	7.5	-0.5	7.2	-0.8	8.3	0.3
Combined WVS Projects	115.5	134.5	19	129.6	14.1	120.3	4.8	67.9	-47.6	71.1	-44.4	129.5	14	98.8	-16.7	120.3	4.8
Bonneville Transmission Network Paths(MW)	NAA	Alt 1	Alt 1 vs. NAA	Alt 2A	Alt 2A vs. NAA	Alt 2B	Alt 2B vs. NAA	Alt 3A	Alt 3A vs. NAA	Alt 3B	Alt 3B vs. NAA	Alt 4	Alt 4 vs. NAA	Alt NTOM	Alt NTOM vs. NAA	Alt5	Alt5 vs. NAA
Cross Cascades North E>W	5327	5322.6	-4.4	5317.3	-9.7	5325.6	-1.4	5338.1	11.1	5337.6	10.6	5323.6	-3.4	5330.8	3.8	5325.6	-1.4
Cross Cascades South E>W	5862.9	5851.3	-11.6	5836.6	-26.3	5858.6	-4.3	5891.2	28.3	5888.5	25.6	5853.5	-9.4	5872.1	9.2	5858.6	-4.3
North of Echo Lake S>N	14.9	16.3	1.4	18.0	3.1	15.3	0.4	11.2	-3.7	11.4	-3.5	16	1.1	13.6	-1.3	15.3	0.4
North OF Hanford N>S	2478.8	2467.3	-11.5	2454.4	-24.4	2475.5	-3.3	2507.7	28.9	2505.9	27.1	2470.3	-8.5	2489.1	10.3	2475.5	-3.3
Paul to Allston N>S	1441.3	1437.9	-3.4	1433.8	-7.5	1440.2	-1.1	1450	8.7	1449.6	8.3	1438.7	-2.6	1444.3	3.0	1440.2	-1.1
Raver to Paul N>S	1270.8	1268.1	-2.7	1264.8	-6.0	1269.9	-0.9	1277.7	6.9	1277.4	6.6	1268.7	-2.1	1273.2	2.4	1269.9	-0.9
South of Allston N>S	2525.1	2521.9	-3.2	2516.1	-9.0	2523.8	-1.3	2535.4	10.3	2534	8.9	2522.4	-2.7	2528.7	3.6	2523.8	-1.3
South of Custer N>S	1088.4	1088.5	0.1	1088.5	0.1	1088.4	0	1088.4	0	1088.4	0	1088.5	0.1	1088.4	0.0	1088.4	0
West of Hatwai E>W	1100.2	1101	0.8	1101.8	1.6	1100.3	0.1	1098.1	-2.1	1098.2	-2	1100.7	0.5	1099.4	-0.8	1100.3	0.1
West of John Day E>W	2619.3	2617.1	-2.2	2613.4	-5.9	2618.2	-1.1	2624.9	5.6	2624.4	5.1	2617.2	-2.1	2620.8	1.5	2618.2	-1.1
West of Lower Monumental E>W	2108.1	2106.8	-1.3	2105.2	-2.9	2107.7	-0.4	2111.4	3.3	2111.2	3.1	2107.1	-1	2109.3	1.2	2107.7	-0.4
West of McNary E>W	2411.8	2409	-2.8	2405.8	-6.0	2410.9	-0.9	2418.6	6.8	2418.1	6.3	2409.6	-2.2	2414.1	2.3	2410.9	-0.9
West of Slatt E>W	3363.6	3360	-3.6	3356.3	-7.3	3362.7	-0.9	3372.7	9.1	3371.8	8.2	3361.1	-2.5	3367.0	3.4	3362.7	-0.9

4.2.2 Transmission Paths: Alternative Comparisons to NAA

4.2.2.1 *No-Action Alternative*

Generation outputs at WVS projects under the NAA vary seasonally ranging from a total of 234.9 MW in the Winter Peak, 221.5 MW in the Spring Off-peak, and 115.5 MW in the Summer Peak cases as shown in Table 4.2-1 through Table 4.2-3. These generation outputs contribute to varying power flows through Bonneville Network Paths ranging from -1371 MW and -1368.3 at South of Custer to 9445.7 and 5652.7 MW at Cross Cascades North during the Winter Peak and Spring Off-peak cases respectively; and from 14.9 MW at North of Echo Lake and 5862.9 MW at Cross Cascades South during the Summer Peak case.

4.2.2.2 *Alt 1: Change from NAA*

With the NAA as the reference case, most incremental changes on Bonneville Transmission Network Paths for Alternative 1 were less than +/-10 MW under all seasonal cases as shown in Table 4.2-1 through Table 4.2-3. The largest incremental changes on Bonneville Transmission Network Paths for Alternative 1 occurred under the Summer Peak case (Table 4.2-3), specifically Cross Cascades South and North of Hanford paths (-11.6 MW and -11.5 MW, respectively), which can be attributed to the 19 MW increase in Willamette Valley generation compared to the NAA.

4.2.2.3 *Alt 2A: Change from NAA*

With the NAA as the reference case, most incremental changes on Bonneville Transmission Network Paths for Alternative 2A under all seasonal cases were less than +/- 25 MW as shown in Table 4.2-1 through Table 4.2-3. The largest incremental changes on Bonneville Transmission Network Paths for Alternative 2B occurred under the Spring Off-peak case at the West of Lower Monumental (64.5 MW) and Cross Cascades South (61.3 MW) paths as shown in Table 4.2-2, which can be attributed to the 90.8 MW decrease in Willamette Valley generation in this seasonal case with generation being replaced at Lower Snake generation facilities.

4.2.2.4 *Alt 2B: Change from NAA*

With the NAA as the reference case, most incremental changes on Bonneville Transmission Network Paths for Alternative 2B under all seasonal cases were less than +/- 25 MW as shown in Table 4.2-1 through Table 4.2-3. The largest incremental changes on Bonneville Transmission Network Paths for Alternative 2B occurred under the Spring Off-peak case at the West of Lower Monumental (26.2 MW) and Cross Cascades South (25.1 MW) paths as shown in Table 4.2-2, which can be attributed to the 38.8 MW decrease in Willamette Valley generation in this seasonal case with generation being replaced at Lower Snake generation facilities.

4.2.2.5 *Alt 3A: Change from NAA*

With the NAA as the reference case, most incremental changes on Bonneville Transmission Network Paths for Alternative 3A under all seasonal cases were less than +/- 25 MW as shown

in Table 4.2-1 through Table 4.2-3. The largest incremental changes on Bonneville Transmission Network Paths for Alternative 3A occurred under the Spring Off-peak case (Table 4.2-2), specifically Cross Cascades South and West of Lower Monumental paths (-113.7 MW and -118.2 MW, respectively). Other locations with greater than 25 MW differences from the NAA include West of John Day (31.7 MW), West of McNary (52.3 MW), and West of Slatt (44 MW) under the Spring Off-peak case and the Cross Cascades South (37.2 MW and 28.3 MW) and North of Hanford (25.2 MW and 28.9 MW) under the Winter and Summer Peak cases, respectively. These noted differences can be attributed to decreases in Willamette Valley generation under all seasonal cases (ranging between 47.6 MW and 165.1 MW) with generation being replaced at either Upper Columbia (Winter and/or Summer peak cases) or Lower Snake (Spring Off-Peak case) generation facilities.

4.2.2.6 Alt 3B: Change from NAA

With the NAA as the reference case, many incremental changes on Bonneville Transmission Network Paths for Alternative 3A under all seasonal cases were less than +/- 25 MW as shown in Table 4.2-1 through Table 4.2-3. The largest incremental changes on Bonneville Transmission Network Paths for Alternative 3B occurred under the Spring Off-peak case as shown in Table 4.2-2, specifically Cross Cascades South and West of Lower Monumental paths (-94.8 MW and -99.1 MW, respectively). Other locations with greater than 25 MW differences from the NAA include West of John Day (26.6 MW), West of McNary (43.7 MW), and West of Slatt (36.8 MW) under the Spring Off-peak case and Cross Cascades South (41.4) and North of Hanford (40.4 MW) under the Winter Peak case as shown in Table 4.2.2 and Table 4.2.1, respectively. These noted differences can be attributed to the decreases in the Willamette Valley generation under all seasonal cases (ranging between 47.6 MW and 165.1 MW) with generation being replaced at either Upper Columbia (Winter and/or Summer peak cases) or Lower Snake (Spring Off-Peak case) generation facilities.

4.2.2.7 Alt 4: Change from NAA

With the NAA as the reference case, most incremental changes on Bonneville Transmission Network Paths for Alternative 4 were less than +/-10 MW as shown in Table 4.2-1 through Table 4.2-3. The largest incremental changes on Bonneville Transmission Network Paths for Alternative 4 occurred under the Spring Off-peak case (Table 4.2-23), specifically Cross Cascades South and West of Lower Monumental paths (15 MW and 15.8 MW, respectively), which can be attributed to the 14 MW increase in Willamette Valley generation compared to the NAA.

4.2.2.8 Alt Near-Term Operations Measure: Change from NAA

With the NAA as the reference case, many incremental changes on Bonneville Transmission Network Paths for Alternative 5 under all seasonal cases were less than +/- 25 MW as shown in Table 4.2-1 through Table 4.2-3. The largest incremental changes on Bonneville Transmission Network Paths for Alternative 5 occurred under the Spring Off-peak case as shown in Table 4.2-2, specifically Cross Cascades South and West of Lower Monumental paths (59.8 MW and 62.8 MW, respectively). Other locations with greater than 25 MW differences from the NAA include

West of McNary (27.7 MW) under the Spring Off-peak case and Cross Cascades South (47.0) and North of Hanford (45.1 MW) under the Winter Peak case as shown in Table 4.2.2 and Table 4.2.1, respectively. These noted differences can be attributed to the decreases in the Willamette Valley generation under all seasonal cases (ranging between 16.7 MW and 88.4 MW) with generation being replaced at either Upper Columbia (Winter and/or Summer peak cases) or Lower Snake (Spring Off-Peak case) generation facilities.

4.2.2.9 Alt5: Change from NAA

With the NAA as the reference case, most incremental changes on Bonneville Transmission Network Paths for Alternative 2B under all seasonal cases were less than +/- 25 MW as shown in Table 4.2-1 through Table 4.2-3. The largest incremental changes on Bonneville Transmission Network Paths for Alternative 2B occurred under the Spring Off-peak case at the West of Lower Monumental (26.2 MW) and Cross Cascades South (25.1 MW) paths as shown in Table 4.2-2, which can be attributed to the 38.8 MW decrease in Willamette Valley generation in this seasonal case with generation being replaced at Lower Snake generation facilities.

CHAPTER 5 - ECONOMIC VIABILITY OF POWER GENERATION

To determine the long-term financial viability of power operations at Willamette Valley projects, the NPV and LCOG are analyzed under each Action Alternative. The analysis considers the Bonneville direct funded capital, operations, and maintenance programs as well as the structural and operational measures identified in the Action Alternatives. Costs and generation are forecast over a 30-year study period, consistent with typical economic analyses for investments in the FCRPS.

5.1 POWER GENERATION ECONOMIC ANALYSES METHODOLOGIES

Bonneville is obligated to first provide contracted preference customers the opportunity to purchase power generation at the Tier 1 preference rate. Once Bonneville's Tier 1 obligations are fulfilled, Bonneville can then sell surplus energy in secondary markets. Through the end of Bonneville's current contract period with its customers in 2028, a reasonable estimate of the revenue produced by the WVS projects under each Alternative during this period can be based on the assumption that power generation at critical water is valued at Tier 1 rates and generation in excess of critical water is valued at Mid-Columbia (Mid-C) market price forecasts. Since post-2028 contractual conditions are not yet clear, Tier 1 rates were not applied during this period and instead all energy was valued at the forecasted Mid-Columbia market price from 2029 through the end of the 30-year study period. Given the LOLP analysis in Section 3 indicates replacement resources would not be needed to return the LOLP to the NAA level under any of the Alternatives, the forecasted market value of generation from the facilities was considered a reasonable assumption to use for post-2028 revenue estimates. The assumption is that differences in generation under the Alternatives would result in either lost secondary sales opportunities or forced market purchases but no long-term acquisitions would be required. As a result, the Mid-Columbia market price is the most representative value available for post-2028.

Figure 5.1-1 presents the framework for the economic analyses. Bonneville uses HYDSIM (Section 2.1.1) and AURORA (Section 5.1.1) models to produce a range of outputs for generation and energy pricing, respectively, that vary by water year. The AURORA model employs a Monte Carlo simulation to generate a robust distribution of potential future states governing the wholesale energy market in the Pacific Northwest. Joining the generation and wholesale market price forecasts on common water years allows for the construction of a distribution of revenue streams associated with each Willamette Valley project.

Estimated revenue at each project was then compared with the long-term cost to sustain the projects identified in the 2022 FCRPS Strategic Asset Management Plan (SAMP) plus any structural measures contained within the Action Alternatives. Finally, these net revenues were discounted to arrive at a distribution of NPVs and Levelized Costs of Generation.

5.1.1 Aurora

AURORA is a production cost model, developed by Energy Exemplar, Ltd Pty., used by hundreds of utilities globally to forecast short- and long-term electricity prices. Given model inputs (resource build, load forecast, fuel cost, etc.), AURORA produces a price forecast by calculating the least cost solution of meeting system-wide load on

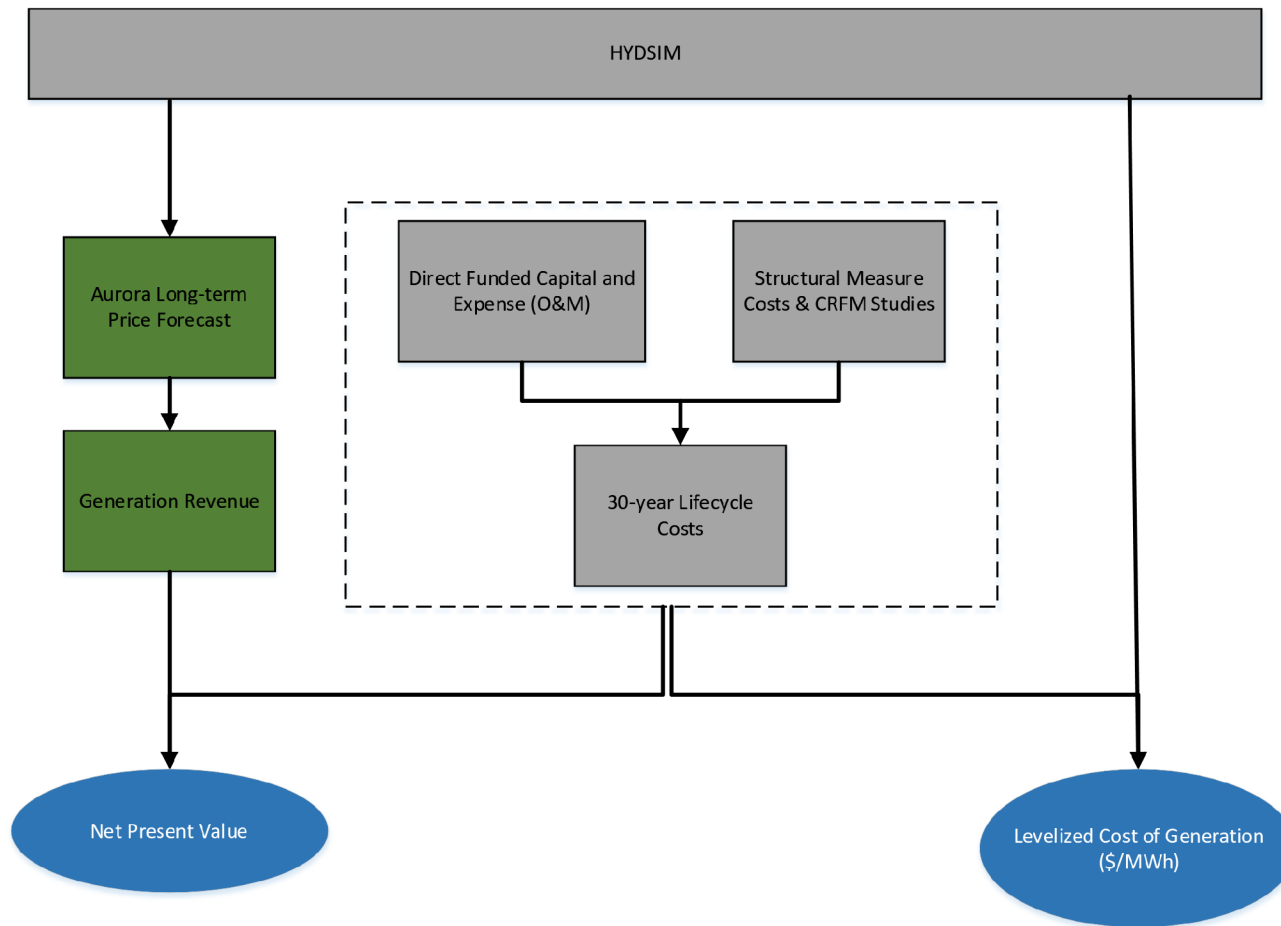


Figure 5-1. Analytical Approach for Evaluating Power Generation Economic Effects of the WVS Action Alternatives.

Notes: HYDSIM (Generation by month, 73 Water Years); Aurora Long-term Price Forecast (1600 games correlated with 73 Water Years); Direct Funded Capital and Expense (O&M) Forecasts (2022 SAMP and Corps' budget submissions used in support of the BP-24 Integrated Program Review); and Generation Revenue, NPV, and LCOG (1600 games each).

an hourly basis, subject to a number of operating constraints. The cost of producing and delivering an additional unit of energy to a location in the system is assumed to approximate the price at that location. Bonneville uses AURORA to create price distributions by using Monte Carlo sampling of projected loads, hydro generation, gas prices, transmission capacity, wind generation, and Columbia Generating Station (CGS) capability. Bonneville uses the AURORA model to produce a range of price forecasts by year, month, and water year. Standard AURORA runs consist of 3200 iterations (80 Water Years and 40 iterations per Water Year) that vary loads, hydro generation, gas prices, transmission capability, wind generation, and Columbia Generating Station availability to produce a distribution of price forecasts. However, the most recent long term forecast had 1600 iterations (80 Water Years and 20 iterations per Water Year) due to modeling changes that resulted in longer run times.

5.1.2 Generation Revenue

Section 2.2.1 describes how generation for each Action Alternative was modeled using HYDSIM to produce expected monthly generation for each facility across 73 water years from 1936 to 2008. To calculate generation revenue, the HYDSIM modeling results were correlated with forward looking energy prices that relate to each of the 73 water year conditions. Energy prices were modeled from 2024 through 2033 with subsequent years escalated at the rate of inflation (2022 inflation forecast averaging 2.4%).

Before pricing was applied, generation was split between generation under critical water year and surplus generation conditions. This was performed by comparing the monthly generation from each water year to the monthly generation from 1937 critical water for each generation facility, respectively. Monthly generation less than or equal to the monthly generation from 1937 was valued at Tier 1 Priority Firm Power (PF) rates. Incremental generation in excess of 1937 generation was assumed to be valued at the Mid-C market price forecast. After 2028, the year in which Bonneville’s current long-term contracts with its customer expire, all generation was valued at the Mid-C market price forecast. **Error! Reference source not found.** shows an example of how the generation split was determined.

Table 5-1.. Example - Generation Pricing Methodology.

Plant	Water Year	October Generation (MWh)	Critical Year Generation (MWh)	Generation at Tier 1 (MWh)	Surplus Generation at Mid C (MWh)
Big Cliff	1937	7440	7440	7440	0
Big Cliff	1938	9672	7440	7440	2232
Big Cliff	1941	6696	7440	6696	0

5.1.3 30-year Lifecycle Costs¹⁷

5.1.3.1 Direct Funded Capital and Expense (Operations and Maintenance) Costs

Direct funded capital forecasts were sourced from the 2022 FCRPS Strategic Asset Management Plan (SAMP; Bonneville 2022). The SAMP is produced every two years in support of BPA's Integrated Program Review (IPR) process to set capital and expense budgets. The SAMP analysis produces a 50-year capital forecast for equipment replacement need based on equipment condition, criticality, and risk; the first 30-years was used for this analysis. The Corps' budget submissions used in support of the BP-24 Integrated Program Review were used as a source for expense (operations and maintenance) values.

5.1.3.2 Structural Measure Costs

Structural Measure costs (capital and operations and maintenance) were estimated by the Corps at the Class 5 level for each Action Alternative with structural measures (see Appendix M). Class 5 estimates (commonly referred to as "Rough Order of Magnitude") inherently have considerable risk and uncertainty resulting in high contingencies. For purposes of this analysis, it is assumed that contingencies are 50%, capital costs are incurred in Year 1 (2024), and operations and maintenance of the structural measures are escalated at the rate of inflation (2022 inflation forecast averaging 2.4%) for the 30-year study period.

5.1.4 Net Present Value Calculation

The NPV compares the present value of benefits to the present value of costs. It considers the direct funded capital and expense (operations, routine and non-routine maintenance) forecasts, as well as the capital, operations and maintenances cost associated with structural measures. System-wide costs, such as Bonneville's fish and wildlife program, are not included in the NPV. The NPV is calculated as:

$$NPV = \sum_{t=1}^n \frac{B_t - C_t}{(1 + i)^t}$$

B = Benefits (generation revenue)

C = Costs (direct funded capital, expense, structural measures)

i = Discount Rate

n = Study period (30 years)

¹⁷ Bonneville's share of basin-wide costs (e.g., RME) were not included in analysis. With inclusion of those costs, the Net Present Value estimates would be incrementally lower and the Levelized Costs of Generation estimates would be incrementally higher.

Benefits and costs are forecast over the 30-year study period for each of the 1600 iterations. These cash flows are discounted using Bonneville’s Risk Free 2022 discount rate of 2.81%. The Bonneville’s Official Agency Discount Rate was determined to be the best applicable rate in this power specific NPV evaluation. A positive NPV indicates that power generation at the dams is economically justified, while a negative NPV indicates that costs outweigh the benefits.

5.1.5 Levelized Cost of Generation Calculation

The LCOG evaluates the incremental cost of producing power at a facility. It considers the direct funded capital and expense (operations, routine and non-routine maintenance) forecasts, as well as the capital, operations and maintenances costs associated with structural measures. System-wide costs, such as Bonneville’s fish and wildlife program, are not included in LCOG. The LCOG is calculated as:

$$\text{Levelized Cost of Generation} = \frac{\sum_{t=1}^n \frac{C_t + E_t}{(1+i)^t}}{\sum_{t=1}^n \frac{G}{(1+i)^t}}$$

C = Direct funded capital + Structural measure costs
E = Expense (operations and maintenance)
G = Average annual generation
i = Discount rate
n = Study period (50 years)

The LCOG takes the stream of forecasted costs over the 30-year study period and “levelizes” them to produce an annualized cost of power production. This measure, in \$/MWh, is then compared to the levelized cost of alternative resources to understand the relative competitiveness and affordability of each dam.

5.2 POWER GENERATION ECONOMIC RESULTS

5.2.1 Power Generation Economics Summaries

5.2.1.1 Net Present Value

Median NPVs from the 1600 iterations are shown in Table 5.2-1. The combined WVS projects with hydropower facilities have a positive median Net Present Value of \$225 million over the 30-year study period under the NAA.

All of the Action Alternatives result in a negative median NPV for all WVS projects combined ranging from approximately -\$196 million to -\$933 million. For individual WVS projects, only Hills Creek and Detroit/Big Cliff have a positive NPV under one or more alternatives. Hills Creek has a positive median NPV in the No Action Alternative, Alternative 1, Alternative 2A, Alternative 2B, and Alternative 5. It’s NPV ranges from \$37 million in Alternative 5 to \$49

million under the **near-term operations measure**¹⁸. Detroit/Big Cliff also have a positive NPV of \$5 million under the **near-term operations measure**.

Table 5.2-2 provides the percentage of the 1600 iterations that resulted in a positive NPV under each alternative. Approximately 77.7 percent of iterations for the No Action Alternative resulted in a positive NPV for the Willamette Valley system. Across the Action Alternatives, between 0.3 and 20.9 percent of the iterations resulted in a positive NPV for the combined WVS projects.

5.2.1.2 Levelized Cost of Generation

Median LCOG are shown in Table 5.2-3 for each alternative. Under the NAA, median levelized costs for the combined WVS projects are estimated to be \$26.70, which is \$8.23 less than current average Tier 1 rates (\$34.93¹⁹) and within the range of recent

¹⁸ **The near term operations measure** includes near term operational measures only and does not consider the effects of near term structural measures identified under the court order, nor does it account for operational changes that may occur as a result of implementing the near term structural measures.

¹⁹ Bonneville. 2021. BP-22 Rate Proceeding, Administrator's Final Record of Decision, BP-22-A-02, July 2021. [https://www.bpa.gov/Finance/RateCases/BP-22-Rate-Case/Documents/BP-22 Final Proposal/BP-22-A-02_BP-22 Final ROD.pdf](https://www.bpa.gov/Finance/RateCases/BP-22-Rate-Case/Documents/BP-22%20Final%20Proposal/BP-22-A-02_BP-22%20Final%20ROD.pdf)

Error! Reference source not found. **30-year Net Present Value by Alternative in Millions of 2024 Dollars (Median of 1600 iterations, 2.81 % Risk Free Bonneville Discount Rate).**^{3,4}

Project	NAA	ALT1	ALT2A	ALT2B	ALT3A	ALT3B	ALT4	ALT5	Near-term Operations Measure
Detroit/Big Cliff ¹	84	-351	-353	-354	-189	-73	-356	-354	5
Green Peter/Foster ¹	-3	-296	-208	-207	-172	-231	-134	-209	-123
Lookout Point/Dexter ¹	109	-309	-28	-30	-144	-83	-304	-33	-94
Cougar	-3	-22	-90	-152	-86	-152	-76	-153	-32
Hills Creek	39	45	43	39	-41	-68	-67	37	49
Combined WVS Projects²	225	-934	-638	-708	-628	-604	-937	-714	-196

1/ Cougar and Hills Creek dams are operated as individual projects. Additionally, peaking dams and their respective re-regulating dams are functionally operated together as individual projects; therefore, the combined peaking/reregulating dams (Detroit/Big Cliff, Green Peter/Foster, and Lookout Point/Dexter) are treated as individual projects.

2/ Net Present Values for combined WVS projects are calculated from the sum of benefits and costs across each project for 1600 iterations. The median result may not equal the sum of median results for individual plants.

3/Bonneville’s share of basin-wide costs (e.g., RME) were not included in this analysis. With inclusion of those costs, the Net Present Value would be incrementally lower and the Levelized Costs of Generation would be incrementally higher. Additionally, structural cost estimates used in the analysis of Action Alternatives were at a conceptual design level with a 50% contingency. For other projects of similar size and complexity, the conceptual design cost estimates increased by 137% to 215% upon completion of the detailed design report. Post-construction, the complexity of these systems has typically resulted in further costs to improve performance. Higher implementation costs than currently estimated would result in additional reductions of the Net Present Value and increases in the levelized costs of generation.

4/ Alternative 5 effects are only inclusive of near-term operational measures and do not account for structural measures that have been proposed under the court order (e.g., upgrades to the Dexter adult fish facility), nor do they account for operational changes that could occur as a result of structural measure implementation.

Table 5-2. Percent of 1600 Iterations with a Positive NPV by Alternative.

Project	NAA	ALT1	ALT2A	ALT2B	ALT3A	ALT3B	ALT4	ALT5	Near-term Operations Measure
Detroit/Big Cliff ¹	84.7	0.2	0.2	0.2	0.4	12.7	0.2	0.2	52.8
Green Peter/Foster ¹	48.6	0.2	0.1	0.1	0.3	0.2	2.1	0.1	1.4

Project	NAA	ALT1	ALT2A	ALT2B	ALT3A	ALT3B	ALT4	ALT5	Near-term Operations Measure
Lookout Point/Dexter ¹	89.6	0.4	38.8	38.2	0.8	11.2	0.4	36.6	7.1
Cougar	46.3	25.6	0.4	0.0	0.3	0.0	0.9	0.0	14.4
Hills Creek	89.8	92.3	91.4	89.8	6.6	0.6	3.9	88.6	94.1
Combined WVS Projects¹	77.8	0.7	3.0	1.3	0.3	0.5	0.6	1.3	20.9

1/ Cougar and Hills Creek dams are operated as individual projects. Additionally, peaking dams and their respective re-regulating dams are functionally operated together as individual projects; therefore, the combined peaking/reregulating dams (Detroit/Big Cliff, Green Peter/Foster, and Lookout Point/Dexter) are treated as individual projects.

2/Net Present Values for combined WVS projects are calculated from the sum of benefits and costs across each project for 1600 iterations. The Combined WVS project value is not an average of the individual plants.

Table 5-3. 2024 Cost of Generation (\$/MWh) by Alternative (Median of 1600 iterations).^{3,4}

Project	NAA	ALT1	ALT2A	ALT2B	ALT3A	ALT3B	ALT4	ALT5	Near-term Operations Measure
Detroit/Big Cliff ¹	\$25.24	\$57.50	\$57.50	\$57.52	\$81.57	\$41.25	\$57.71	\$57.52	\$31.97
Green Peter/Foster ¹	\$33.86	\$66.01	\$64.74	\$64.68	\$58.85	\$86.99	\$52.03	\$64.90	\$50.40
Lookout Point/Dexter ¹	\$22.96	\$57.87	\$34.52	\$34.52	\$64.14	\$42.92	\$57.17	\$34.52	\$44.93
Cougar	\$32.49	\$38.22	\$56.24	\$340.57	\$80.53	\$346.18	\$52.34	\$363.99	\$42.76
Hills Creek	\$21.85	\$21.26	\$21.54	\$21.95	\$44.79	\$67.13	\$46.48	\$22.20	\$21.57
Combined WVS Projects²	\$26.70	\$53.84	\$47.45	\$50.66	\$64.32	\$59.42	\$54.54	\$50.81	\$38.35

1/ Cougar and Hills Creek dams are operated as individual projects. Additionally, peaking dams and their respective re-regulating dams are functionally operated together as individual projects; therefore, the combined peaking/reregulating dams (Detroit/Big Cliff, Green Peter/Foster, and Lookout Point/Dexter) are treated as individual projects.

2/ Cost of Generation for combined WVS projects are calculated from the sum of costs and generation across each project for 1600 iterations. The median result from the 1600 iterations is displayed. Combined WVS project Cost of Generation is not an average across the individual projects as each project contributes a different amount of generation per year.

3/Bonneville’s share of basin-wide costs (e.g., RME) were not included in this analysis. With inclusion of those costs, the Net Present Value would be incrementally lower and the Levelized Costs of Generation would be incrementally higher. Additionally, structural cost estimates used in the analysis of Action Alternatives were at a conceptual design level with a 50% contingency. For other projects of similar size and complexity, the conceptual design cost estimates increased by 137% to 215% upon completion of the detailed design report. Post-construction, the complexity of these systems has typically resulted in further costs to improve performance. Higher implementation costs than currently estimated would result in additional reductions of the Net Present Value and increases in the levelized costs of generation. Additionally, 4/Alternative 5 effects are only inclusive of near-term operational measures and do not account for structural measures that have been proposed under the court order (e.g., Dexter Hatchery improvements), nor do they account for operational changes that could occur as a result of structural measure implementation.

average Mid-C market energy prices. Under the Action Alternatives, costs of generation for the combined WVS projects would be expected to exceed both current Tier 1 rates and expected energy prices. For individual WVS projects, the costs of generation at Hills Creek, Lookout Point, and Detroit/Big Cliff under some Action Alternatives are estimated to be below current average Tier 1 rates ranging from approximately \$21.54/MWh (Hills Creek under Alternative 2A) to \$34.52/MWh (Lookout Point/Dexter under Alternative 2A, 2B and 5).

5.2.2 Power Generation Economics: Alternative Comparisons to NAA

5.2.2.1 No-Action Alternative

Over the 30-year study period, the median Net Present Value for the combined WVS projects under the No Action Alternative is about \$225 million and the median Levelized Cost of Generation is estimated to be \$26.70/MWh²⁰.

As Table 5.2-1 and Table 5.2-3 indicate, only three individual projects²¹ have positive median NPVs including Hills Creek (\$39 million), Detroit/Big Cliff (\$84 million), and Lookout Point/Dexter (\$109 million); and their levelized costs range from \$21.85/MWh (Hills Creek) and \$25.24/MWh (Detroit/Big Cliff). As shown in Table 5.2-2, these same three projects are the only ones having a positive Net Present Value in more than 50% of the 1,600 iterations. Cougar and Green Peter/Foster, respectively, have negative median Net Present Values of -\$3 million; levelized costs of generation of \$32.49/MWh and \$33.86/MWh; and proportion of 1,600 iterations resulting in a positive Net Present Value at 46.3 percent and 48.6 percent.

5.2.2.2 Alt 1: Change from NAA

Over the 30-year study period, power operations are estimated to have a median Net Present Value of -\$934 million under Alternative 1²². This is a \$1.159 billion, or 515 percent, reduction in Net Present Value compared to the No Action Alternative. Across the 1,600 iterations that varied energy prices and water conditions, only 0.7 percent resulted in a positive Net Present Value for the combined WVS projects. The median Levelized Cost of Generation for the

²⁰ Bonneville's share of basin-wide costs (e.g., RME) were not included in this analysis. With inclusion of those costs, the Net Present Value would be incrementally lower and the levelized costs of generation would be incrementally higher.

²¹ Cougar and Hills Creek dams are operated as individual projects. Additionally, peaking dams and their respective re-regulating dams are functionally operated together as individual projects; therefore, the combined peaking/re-regulating dams (Detroit/Big Cliff, Green Peter/Foster, and Lookout Point/Dexter) are treated as individual projects.

²² Bonneville's share of basin-wide costs (e.g., RME) were not included in this analysis. With inclusion of those costs, the Net Present Value would be incrementally lower and the Levelized Costs of Generation would be incrementally higher. Additionally, structural cost estimates used in the analysis were at a conceptual design level with a 50% contingency. For other projects of similar size and complexity, the conceptual design cost estimates increased by 137% to 215% upon completion of the detailed design report. Post-construction, the complexity of these systems has typically resulted in further costs to improve performance. Higher implementation costs than currently estimated would result in additional reductions of the Net Present Value and increases in the levelized costs of generation.

combined WVS projects is estimated to rise from \$26.70/MWh under the No Action Alternative to \$53.84/MWh under Alternative 1²⁰, which is a \$27.14, or 102 percent, increase.

As Table 5.2-1 through Table 5.2-3 indicate, all WVS projects except Hills Creek have negative median Net Present Values ranging from -\$22 million (Cougar) to -\$351 million (Detroit/Big Cliff); levelized costs of generation ranging from \$38.22/MWh (Cougar) to \$66.01/MWh (Green Peter/Foster); and proportion of 1,600 iterations resulting in a positive Net Present Value ranging from 0.2 percent (Detroit/Big Cliff and Green Peter/Foster) to 25.6 percent (Cougar). Hills Creek has the only positive Net Present Value at \$45 million. It had a positive Net Present Value in 92.3 percent of the 1600 iterations and has a median levelized cost of generation of \$21.26.

5.2.2.3 Alt 2A: Change from NAA

Over the 30-year study period, power operations are estimated to have a median Net Present Value of -\$638 million under Alternative 2A²⁰. This is a \$863 million, or 384 percent, reduction in Net Present Value compared to the No Action Alternative. Across the 1,600 iterations that varied energy prices and water conditions, only 3.0 percent resulted in a positive Net Present Value. The median Levelized Cost of Generation for the combined WVS projects is estimated to rise from \$26.70/MWh under the No Action Alternative to \$47.45/MWh under Alternative 2A²⁰, which is a \$20.75, or 78 percent, increase.

As Table 5.2-1 and Table 5.2-3 indicate, Hills Creek is the only WVS project that has a positive median Net Present Value at \$43 million under Alternative 2A. It's levelized cost of generation is \$21.54/MWh. Hills Creek is the only project that has a positive Net Present Value in more than 50% of the 1600 iterations from the economic analysis. Other projects have negative median Net Present Values ranging from -\$28 million (Lookout Point/Dexter) to -\$353 million (Detroit/Big Cliff); levelized costs of generation ranging from \$34.52/MWh (Lookout Point/Dexter) to \$64.74/MWh (Green Peter/Foster); and a proportion of 1,600 iterations resulting in a positive Net Present Value ranging from 0.1 percent (Green Peter/Foster) to 38.81 percent (Lookout Point/Dexter).

5.2.2.4 Alt 2B: Change from NAA

Over the 30-year study period, power operations are estimated to have a median Net Present Value of -\$708 million under Alternative 2B²⁰. This is a \$933 million, or 415 percent, reduction in Net Present Value compared to the No Action Alternative. Across the 1,600 iterations that varied energy prices and water conditions, only 1.3 percent resulted in a positive Net Present Value. The median Levelized Cost of Generation for the combined WVS projects is estimated to rise from \$26.70/MWh under the No Action Alternative to \$50.66/MWh under Alternative 2B²⁰, which is a \$23.96, or 90 percent, increase. This is substantially greater than expected market prices and less competitive compared to other renewable resources that are expected to become more affordable in the future.

As Table 5.2-1 and Table 5.2-3 indicate, Hills Creek is the only WVS project under Alternative 2B that has a positive median Net Present Value at \$39 million. Its levelized cost of generation is \$21.95/MWh. Hills Creek is the only project that has a positive Net Present Value in more than 50% of the 1600 iterations from the economic analysis. Other projects have negative median Net Present Values ranging from -\$30 million (Lookout Point/Dexter) to -\$354 million (Detroit/Big Cliff); levelized costs of generation ranging from \$34.52/MWh (Lookout Point/Dexter) to \$340.57 MWh (Cougar); and proportion of 1,600 iterations resulting in a positive Net Present Value ranging from 0 percent (Cougar) to 38.19 percent (Lookout Point/Dexter).

5.2.2.5 Alt 3A: Change from NAA

Over the 30-year study period, power operations are estimated to have a median Net Present Value of -\$628 million under Alternative 3A²⁰. This is a \$853 million, or 379 percent, reduction in Net Present Value compared to the No Action Alternative. Across the 1,600 iterations that varied energy prices and water conditions, only 0.3 percent resulted in a positive Net Present Value. The median Levelized Cost of Generation for the combined WVS projects is estimated to rise from \$26.70/MWh under the No Action Alternative to \$64.32/MWh under Alternative 3A²⁰, which is a \$37.61, or 141 percent, increase. This is substantially greater than expected market prices and less competitive compared to other renewable resources that are expected to become more affordable in the future.

As Table 5.2-1 and Table 5.2-3 indicate, all of the WVS projects under Alternative 3A have negative median Net Present Values ranging from -\$41 million (Hills Creek) to -\$189 million (Detroit/Big Cliff) and levelized costs of generation ranging from \$44.79/MWh (Hills Creek) to \$81.57/MWh (Detroit/Big Cliff); and a proportion of 1,600 iterations resulting in a positive Net Present Value ranging from 0.25 percent (Cougar) to 6.7 percent (Hills Creek).

5.2.2.6 Alt 3B: Change from NAA

Over the 30-year study period, power operations are estimated to have a median Net Present Value of -\$604 million under Alternative 3B²⁰. This is a \$829 million, or 369 percent, reduction in Net Present Value compared to the No Action Alternative. Across the 1,600 iterations that varied energy prices and water conditions, only 0.5 percent resulted in a positive Net Present Value. The median Levelized Cost of Generation for the combined WVS projects is estimated to rise from \$26.70/MWh under the No Action Alternative to \$59.42/MWh under Alternative 3B²⁰, which is a \$32.72, or 123 percent, increase). This is substantially greater than expected market prices and less competitive compared to other renewable resources that are expected to become more affordable in the future.

As Table 5.2-1 and Table 5.2-3 indicate, all of the WVS projects have negative median Net Present Values ranging from -\$68 million (Hills Creek) to -\$231 million (Green Peter/Foster) and their levelized costs of generation range from \$41.25/MWh (Detroit/Big Cliff) to \$346.18/MWh (Cougar). None of the projects had a positive Net Present Value in more than 50% of the

iterations, with the proportion of 1,600 iterations resulting in a positive Net Present Value ranging from 0 percent (Cougar) to 12.69 percent (Detroit/Big Cliff).

5.2.2.7 Alt 4: Change from NAA

Over the 30-year study period, power operations are estimated to have a median Net Present Value of -\$937 million under Alternative 4²⁰. This is a \$1.162 billion, or 517%, reduction in Net Present Value compared to the No Action Alternative. Across the 1,600 iterations that varied energy prices and water conditions, only 0.6 percent resulted in a positive Net Present Value. The median Levelized Cost of Generation for the combined WVS projects is estimated to rise from \$26.70/MWh under the No Action Alternative to \$54.54/MWh under Alternative 4²⁰, which is a \$27.84, or 104 percent, increase). This is substantially greater than expected market prices and less competitive compared to other renewable resources that are expected to become more affordable in the future.

As Table 5.2-1 and Table 5.2-3 indicate, all of the WVS projects under Alternative 4 have negative median Net Present Values ranging from -\$67 million (Hills Creek) to -\$356 million (Detroit/Big Cliff) and their levelized costs of generation range from \$46.48/MWh (Hills Creek) to \$57.71/MWh (Detroit/Big Cliff). None of the projects had a positive Net Present Value in more than 50% of the iterations, with the proportion of 1,600 iterations resulting in a positive Net Present Value ranging from 0.2 percent (Detroit/Big Cliff) to 3.9 percent (Hills Creek).

5.2.2.8 Near-term Operations Measure: Change from NAA

Over the 30-year study period, power operations are estimated to have a median Net Present Value of -\$196 million under Alternative 5²⁰. This is a \$421 million, or 187%, reduction in Net Present Value compared to the No Action Alternative²⁰. Across the 1,600 iterations that varied energy prices and water conditions, only 20.9 percent resulted in a positive Net Present Value. The median Levelized Cost of Generation for the combined WVS projects is estimated to rise from \$26.70/MWh under the No Action Alternative to \$38.35/MWh under Alternative 4²⁰, which is an \$11.65, or 44 percent, increase). This is substantially greater than expected market prices and less competitive compared to other renewable resources that are expected to become more affordable in the future.

As Table 5.2-1 and Table 5.2-3 indicate, Detroit/Big Cliff and Hills Creek are the only WVS projects having positive median Net Present Values of \$5 million and \$49 million, respectively; and their levelized costs of generation are \$31.97/MWh and \$21.57/MWh, respectively. They are also the only projects having a positive Net Present Value in more than 50% of the iterations. Other projects have negative median Net Present Values ranging from -\$32 million (Cougar) to -\$123 million (Green Peter/Foster) and levelized costs of generation ranging from \$42.76/MWh (Cougar) to \$50.40/MWh (Green Peter/Foster); and a proportion of 1,600 iterations resulting in a positive Net Present Value ranging from 1.4 percent (Green Peter/Foster) to 14.4 percent (Cougar).

5.2.2.9 Alt5: Change from NAA

Over the 30-year study period, power operations are estimated to have a median Net Present Value of -\$714 million under Alternative 5²⁰. This is a \$939 million, or 417 percent, reduction in Net Present Value compared to the No Action Alternative. Across the 1,600 iterations that varied energy prices and water conditions, only 1.31 percent resulted in a positive Net Present Value. The median Levelized Cost of Generation for the combined WVS projects is estimated to rise from \$26.70/MWh under the No Action Alternative to \$50.81/MWh under Alternative 5²⁰, which is a \$24.11, or 90 percent, increase. This is substantially greater than expected market prices and less competitive compared to other renewable resources that are expected to become more affordable in the future.

As Table 5.2-1 and Table 5.2-3 indicate, Hills Creek is the only WVS project under Alternative 5 that has a positive median Net Present Value at \$37 million. Its levelized cost of generation is \$22.20/MWh. Hills Creek is also the only projects that has a positive Net Present Value in more than 50% of the 1600 iterations from the economic analysis. Other projects have negative median Net Present Values ranging from -\$33 million (Lookout Point/Dexter) to -\$354 million (Detroit/Big Cliff); levelized costs of generation ranging from \$34.52/MWh (Lookout Point/Dexter) to \$363.99/MWh (Cougar); and proportion of 1,600 iterations resulting in a positive Net Present Value ranging from 0 percent (Cougar) to 33.63 percent (Lookout Point/Dexter).

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EXHIBIT 1. HYDSIM MODELING BACKGROUND

The Willamette Basin is primarily rain based, and the projects are operated to flood control fall through spring. Flood risk management in the Willamette basin is accomplished by drafting the reservoirs behind the dams to low levels in the late fall before the rains start in order to provide storage space to retain inflow during downstream flood events. The release of any retained water during the flood season is regulated by the flow levels at downstream control points such as Albany and Salem whenever possible. After the flood season has passed, the reservoirs are filled with the spring inflows to their maximum conservation season level. Summer is climatically very dry, and the outflows are set for recreation, flow objectives for fish and wildlife, and irrigation. There are eight projects that generate hydropower and they have minimal capability to shape generation to load. This cycle of drafting and filling is guided by a “Conservation Curve” at each storage project that specifies the timing of each of these phases of regulation. The Conservation Curve is the pool elevation that the reservoir is managed to stay at or below when possible, with pool levels above the curve when operating for flood risk management, and pool levels below the curve when inflows are low and the stored water is released to meet the various, mostly BiOp related, needs of the system.

The objective of the Willamette EIS is to assess the impacts of proposed changes to the Willamette Valley reservoir operations. Simulating reservoir operations over a wide variety of hydrologic conditions provides a quantitative tool to assess impacts and compare different alternative operations. Several existing datasets that extend to 2009 are already available to provide the inflow, evaporation, and irrigation data. ResSim models are used to model the system on a daily basis, which is better suited to simulate intra-month reservoir elevations, dam outflows, and evaluate potential flooding events (flood risk management). The NAA and alternatives were first modeled in ResSim by USACE before HYDSIM models the system in 14 periods, monthly with two split months, April and August. The outputs are end of period project elevations, period average turbine outflow, spillway outflows, and period average generation.

The general hydroregulation simulation process is for Bonneville staff to develop inputs for HYDSIM from inflow data provided by USACE, the 2010 Modified Flow dataset (80 water years, 2008 levels of irrigation depletion), the run-off forecast at The Dalles (1929 – 2009), upper rule curves from the HYSSR and HEC5 models, plant data from Pacific Northwest Coordination Agreement submissions by the USACE, and other requirements and flow priorities. Input quality control is provided by modeling staff before the HYDSIM model is run. Outputs are reviewed by multiple modeling staff to ensure the model is implementing the conditions as desired, and no conflicting requirements cause the model to not satisfy a desired operating condition. Further, all the hydroregulation of the alternatives were run through both the HYDSIM and ResSim models, and the outputs, specifically end of month elevation at projects, was compared by a group of hydro modelers for quality control.

The modeling approach for the WVS EIS aligned different model approaches and types to provide similar representations of key operations for all impact assessments. The three primary steps of the modeling approach: input, modeling (or study/task), and output. This section

describes the steps applied to achieve outputs for each alternative. Results from the hydroregulation modeling were used in subsequent modeling steps to provide results for different impact assessments. The results from the Bonneville hydropower simulation model (HYDSIM) portion of the hydroregulation studies were detailed sets of 73-year by 14-period (April and August being split months, Water Years 1935/36 – 2007/08) project outflows, reservoir elevations, reservoir contents, spillway flows at 11 projects and power generation data at the 8 power generating projects in the WVS. Specifically, the WVS HYDSIM model includes the hydroindependent Portland General Electric projects on the Clackamas River: Timothy, Oak Grove, North Fork, Faraday, and River Mill as well as the USACE projects on the Santiam River: Detroit, Big Cliff, Green Peter, Foster; the McKenzie River project Cougar; and Upper Willamette River projects Hills Creek, Lookout Point, Dexter, and the Lost Creek on the Rogue River. These projects were not connected as a complete system in HYDSIM, rather each tributary's projects were connected as individual system.

Five non-generating projects and three control points were added to the HYDSIM plant file during WVS EIS development. New project numbers and control point numbers were created from downstream to upstream in ascending order and are Fern Ridge, Cottage Grove, Dorena, Fall Creek and Blue River. The new control points Albany, Salem, and TW Sullivan. The control points are connected to the upstream projects as like actual physical location. For each project, the storage-elevation, maximum discharge, and project limits are from the HYSSR model and are verified by the HEC5 model from the USACE, Portland District. These tables are also used for calculating average generation at each project. Period average generation is calculated in HYDSIM based on run of river vs. reservoir project type. For reservoir type projects, average generation is determined mathematically by taking the product of turbine flow and H/K at a project, limited by a maximum generation constraint that is project dependent. Generation at Detroit, Cougar, Green Peter, Foster, Hills Creek, and Lookout Point is modeled in this way. H/K ("H over K") tables are from the Columbia HYDSIM model used in the CRSO and cross-checked against the HEC5 and HYSSR models. These tables relate H/K to head where "head" refers to the forebay elevation minus the tailwater elevation. The forebay elevation is the elevation that corresponds to the *average* storage for the project during the period of interest, not the difference between initial and ending elevation. Storage-elevation tables are provided and validated for each project by USACE, Portland District. Tailwater is constant for the Willamette projects. The re-regulation projects Dexter and Big Cliff are modeled as run of river, and in this case the average generation can be found by interpolating on the generation-discharge table using turbine flow.

The WVS EIS consists of several alternative operations that incorporate structural, flow, fish spill, and temperature control measures as well as a No-Action Alternative (NAA). The NAA is intended to reflect the current operations with minimum flow objectives from the 2008 BiOp and maximum flow constraints from both project water control manuals as well as the 2008 BiOp. Additionally, the NAA includes measures at Detroit for temperature spill and at Foster for temperature/fish weir spill, which are detailed below. In HYDSIM, Biop fish minimum flows at projects are used as project minimum flows. These fish flow requirements vary based on deficit years and surplus years. The deficit years were determined based on May 31st storage content

of all projects. If the storage content is less than 1.2 MAF (604.8 ksf) then that year is assumed to be a deficit year and will follow a corresponding flow guideline. Additionally there are minimum flow targets for Albany and Salem for certain months. The Willamette River operation was defined in the model as a list of priorities.

Priorities are in the order of:

1. Project minimum storage or elevation on Dec. 31st
2. Tributary or Project minimum flow
3. Mainstem Flow augmentation at Salem and Albany
4. Interim draft limits on the projects year around

The Action Alternatives contain different combinations of operational and structural measures. Measures are only modeled in ResSim if reservoir elevations, total outflow, or outlet specific flow are affected. For each alternative, the regulated flows, maximum flows, minimum flows, and spill for each project is sent to BPA for power analysis. The new flows, spill, and operational changes such as deeper draft limits are incorporated into a HYDSIM study and ultimately produce the average generation values for projects in the WVS.

EXHIBIT 2. AVERAGE AND CRITICAL WATER GENERATION EFFECTS ON U.S. PROJECTS

This exhibit provides 73 year average (Water Years 1935/36 through 2007/08) and critical water (1937) average generation HYDSIM data by Willamette Valley System project. The tabular generation details supplement the graphs in Section 3.1. HYDSIM uses a 14-period time step with April and August split into two half-month periods because these months tend to have substantial natural flow differences between their first and second halves. Negative numbers indicate an alternative produced less hydropower than the NAA.

73 Year Average Generation (Water Years 1935/36 through 2007/08) Differences: ALT1 vs NAA.

	DET	BCL	COU	GRP	FOS	HCR	LOP	DEX	Combined WVS Projects
OCT	34	1	0	12	1	-1	-7	-2	39
NOV	19	1	2	10	6	3	3	1	45
DEC	-1	0	0	0	0	-1	-2	0	-4
JAN	-1	0	0	0	-2	0	-2	0	-5
FEB	0	0	0	0	-3	0	2	1	-1
MAR	-3	-1	0	-2	-1	0	-2	0	-11
APR1	-5	-2	-4	-2	2	-7	-7	-2	-26
APR2	-3	-1	-5	-3	2	-7	-9	-2	-29
MAY	3	0	-3	0	2	-3	-6	-2	-9
JUN	27	0	0	-2	-2	2	-2	-1	22
JUL	15	-1	4	-2	-4	7	7	2	30
AUG1	14	0	0	-2	-4	4	7	2	21
AUG2	13	0	-1	-2	-6	1	9	2	17
SEP	10	0	1	-12	-11	2	1	0	-9

Critical Water Year (1937) Average Generation Differences: ALT1 vs NAA.

	DET	BCL	COU	GRP	FOS	HCR	LOP	DEX	Combined WVS Projects
OCT	30	1	-2	2	-2	-1	-16	-4	8
NOV	12	0	2	21	7	4	5	1	52
DEC	0	0	0	-1	-3	2	-8	1	-9
JAN	0	0	2	0	-3	2	-7	0	-6
FEB	0	0	0	0	-4	0	-6	0	-10
MAR	-5	-2	0	0	1	0	-1	0	-7
APR1	-5	-2	0	0	5	0	-1	0	-3
APR2	10	2	0	0	3	5	3	1	24
MAY	1	0	0	0	4	0	0	0	5

	DET	BCL	COU	GRP	FOS	HCR	LOP	DEX	Combined WVS Projects
JUN	48	0	0	0	2	0	0	0	50
JUL	20	0	1	-1	-3	1	2	0	20
AUG1	17	0	3	-3	-4	2	2	0	17
AUG2	16	0	-1	-3	-6	-5	7	2	10
SEP	16	0	1	-15	-11	6	-7	-2	-12

73 Year Average Generation (Water Years 1935/36 through 2007/08) Differences: ALT2A vs NAA.

	DET	BCL	COU	GRP	FOS	HCR	LOP	DEX	Combined WVS Projects
OCT	27	-1	2	-13	9	5	8	2	38
NOV	19	1	2	-47	2	3	6	2	-13
DEC	-1	0	-2	-43	-4	-2	-2	0	-53
JAN	-1	0	-1	-19	-5	-1	-3	0	-30
FEB	0	0	0	-4	-4	0	1	1	-7
MAR	-3	-1	0	-3	-1	0	-3	0	-12
APR1	-5	-2	-4	-3	2	-6	-7	-2	-26
APR2	-1	-1	-4	-15	3	-7	-9	-2	-36
MAY	3	0	-2	-17	3	-2	-5	-1	-21
JUN	29	1	2	-12	1	4	2	0	28
JUL	21	1	0	-4	1	0	1	0	20
AUG1	19	2	0	-4	1	0	-2	-1	14
AUG2	18	2	-2	1	-2	-2	-2	0	12
SEP	3	-2	1	11	1	3	-2	-1	15

Critical Water Year (1937) Average Generation Differences: ALT2A vs NAA.

	DET	BCL	COU	GRP	FOS	HCR	LOP	DEX	Combined WVS Projects
OCT	17	-2	2	-15	5	6	3	1	17
NOV	12	0	1	-13	-1	3	4	1	7
DEC	0	0	-5	-17	-5	6	3	2	-16
JAN	0	0	1	-8	-3	2	0	0	-8
FEB	0	0	0	-4	-4	-1	-1	0	-10
MAR	-5	-2	0	-29	-6	0	-1	0	-43
APR1	-5	-2	0	-2	5	-2	0	0	-6
APR2	11	2	0	-20	3	1	1	2	0
MAY	1	0	0	-32	5	0	0	0	-26
JUN	48	0	0	-23	2	0	0	0	27
JUL	25	1	0	-4	2	0	1	0	25
AUG1	23	2	-1	-7	1	-3	-6	-2	7

	DET	BCL	COU	GRP	FOS	HCR	LOP	DEX	Combined WVS Projects
AUG2	22	2	1	-7	-1	-7	-4	-1	5
SEP	6	-2	1	15	4	3	-4	-1	22

73 Year Average Generation (Water Years 1935/36 through 2007/08) Differences: ALT2B vs NAA.

	DET	BCL	COU	GRP	FOS	HCR	LOP	DEX	Combined WVS Projects
OCT	27	-1	-14	-13	9	0	3	1	13
NOV	19	1	-18	-47	2	0	1	1	-41
DEC	-1	0	-16	-43	-4	-1	-2	0	-67
JAN	-1	0	-8	-19	-5	-1	-2	0	-36
FEB	0	0	2	-4	-4	-1	1	0	-6
MAR	-4	-1	-10	-3	-1	0	-2	0	-22
APR1	-5	-2	-17	-3	3	-7	-7	-2	-39
APR2	-1	-1	-19	-15	3	-7	-9	-2	-50
MAY	3	0	-20	-17	3	-1	-4	-1	-39
JUN	29	1	-18	-12	1	4	2	0	8
JUL	21	1	-14	-4	1	2	2	1	9
AUG1	19	2	-15	-4	1	2	1	0	6
AUG2	18	2	-16	1	-2	0	1	0	3
SEP	3	-2	-10	11	1	3	1	0	6

Critical Water Year (1937) Average Generation Differences: ALT2B vs NAA.

	DET	BCL	COU	GRP	FOS	HCR	LOP	DEX	Combined WVS Projects
OCT	17	-2	-14	-15	5	4	-1	0	-6
NOV	12	0	-20	-13	-1	-3	-5	0	-30
DEC	0	0	-9	-17	-5	9	5	3	-14
JAN	0	0	-5	-8	-3	2	0	0	-14
FEB	0	0	-7	-4	-4	-1	-1	0	-17
MAR	-5	-2	-10	-29	-6	-1	-1	0	-54
APR1	-5	-2	-19	-2	5	-2	0	0	-25
APR2	11	2	-23	-20	3	-9	-7	0	-43
MAY	1	0	-24	-32	5	0	0	0	-50
JUN	48	0	-19	-23	2	0	0	0	8
JUL	25	1	-13	-4	2	0	1	0	12
AUG1	23	2	-8	-7	1	0	-2	-1	8
AUG2	22	2	-7	-7	-1	-5	-1	0	3
SEP	6	-2	0	15	4	3	-2	0	24

73 Year Average Generation (Water Years 1935/36 through 2007/08) Differences: ALT3A vs NAA.

	DET	BCL	COU	GRP	FOS	HCR	LOP	DEX	Combined WVS Projects
OCT	-20	-6	-10	-13	8	-11	-31	0	-83
NOV	-53	-4	-13	-47	-1	-15	-49	-2	-182
DEC	-47	-2	-8	-43	-4	-8	-34	-2	-148
JAN	-17	-2	0	-19	-3	-2	-16	-2	-60
FEB	11	4	6	-4	-1	-2	0	3	17
MAR	-28	8	-4	-3	-1	2	-10	8	-28
APR1	-42	5	-10	-3	0	-6	-28	4	-80
APR2	-43	5	-12	-15	0	-14	-34	3	-111
MAY	-60	-13	-14	-17	0	-12	-50	-12	-177
JUN	-24	-11	-12	-12	1	-6	-45	-10	-119
JUL	-15	-2	-9	-4	4	-1	-25	-1	-53
AUG1	-13	-1	-12	-4	3	0	-26	-3	-55
AUG2	-13	-1	-13	1	3	-2	-23	-3	-52
SEP	-30	-5	-8	11	6	-4	-24	-4	-59

Critical Water Year (1937) Average Generation Differences: ALT3A vs NAA.

	DET	BCL	COU	GRP	FOS	HCR	LOP	DEX	Combined WVS Projects
OCT	-15	-7	-8	-15	6	-8	-35	-1	-83
NOV	-35	-10	-18	-13	-1	-19	-40	-8	-144
DEC	-21	-2	-4	-17	-3	-1	-10	0	-58
JAN	-13	1	2	-8	-2	2	-8	0	-26
FEB	-19	0	7	-4	0	0	-13	0	-29
MAR	-28	8	-2	-29	-4	0	-18	8	-65
APR1	-36	5	-11	-2	0	2	-28	7	-63
APR2	-40	5	-15	-20	0	-6	-15	2	-89
MAY	-101	-18	-16	-32	0	-14	-92	-16	-289
JUN	-34	-17	-10	-23	0	-14	-83	-16	-197
JUL	-6	-1	-8	-4	5	-5	-11	-1	-31
AUG1	-4	1	-6	-7	3	-12	-18	-3	-46
AUG2	-7	0	-6	-7	4	-19	-20	-3	-58
SEP	-25	-4	-2	15	8	7	-25	-4	-30

73 Year Average Generation (Water Years 1935/36 through 2007/08) Differences: ALT3B vs NAA.

	DET	BCL	COU	GRP	FOS	HCR	LOP	DEX	Combined WVS Projects
OCT	-3	3	-14	-19	-4	-11	-30	2	-77
NOV	-52	-1	-18	-47	-2	-15	-50	-2	-187
DEC	-47	-2	-16	-41	-3	-7	-39	-3	-159
JAN	-17	-2	-8	-17	-3	-1	-18	-2	-68
FEB	-4	0	2	20	6	8	6	1	38
MAR	-7	-2	-10	-5	9	-6	7	1	-11
APR1	-9	-2	-17	-28	6	-14	4	1	-59
APR2	-22	-1	-19	-25	4	-15	-22	0	-100
MAY	-32	-13	-20	-29	0	-17	-31	-12	-154
JUN	-1	-11	-18	-22	-3	-13	-27	-10	-106
JUL	3	2	-14	-13	0	-10	-14	1	-44
AUG1	6	2	-15	-15	-1	-13	-17	0	-54
AUG2	18	2	-16	-15	-3	-15	-13	0	-43
SEP	17	2	-10	-28	-9	-10	-3	1	-39

Critical Water Year (1937) Average Generation Differences: ALT3B vs NAA.

	DET	BCL	COU	GRP	FOS	HCR	LOP	DEX	Combined WVS Projects
OCT	-2	5	-14	-19	-7	-8	-30	1	-74
NOV	-35	-5	-20	-13	-2	-19	-40	-8	-142
DEC	-21	-2	-9	-17	-4	0	-10	0	-63
JAN	-13	0	-5	-8	0	2	-8	0	-32
FEB	-19	0	-7	-2	0	4	-13	0	-37
MAR	-18	-2	-10	-22	5	1	-6	0	-52
APR1	-12	-3	-19	-62	3	-1	10	2	-82
APR2	-35	-5	-23	-38	8	-9	-25	3	-124
MAY	-60	-18	-24	-56	-1	-23	-53	-16	-251
JUN	0	-17	-19	-42	-7	-23	-56	-16	-180
JUL	6	3	-13	-1	2	-7	-14	1	-23
AUG1	5	2	-8	-4	0	-11	-22	-1	-39
AUG2	21	2	-7	-6	0	-17	-25	-1	-33
SEP	26	3	0	-25	-6	-1	-2	2	-3

73 Year Average Generation (Water Years 1935/36 through 2007/08) Differences: ALT4 vs NAA.

	DET	BCL	COU	GRP	FOS	HCR	LOP	DEX	Combined WVS Projects
OCT	27	-1	2	-14	-3	5	8	2	26
NOV	19	1	2	-13	1	3	6	2	20
DEC	-1	0	-1	-1	0	-2	-3	0	-8
JAN	-1	0	-1	0	-2	-1	-3	0	-7
FEB	0	0	0	0	-3	0	2	1	0
MAR	-3	-1	0	-2	-1	0	-2	0	-11
APR1	-5	-2	-4	-3	3	-6	-7	-2	-25
APR2	-1	-1	-4	-16	3	-6	-9	-2	-37
MAY	3	0	-2	-17	2	-2	-5	-1	-22
JUN	29	1	2	-12	1	5	2	0	27
JUL	21	1	0	-4	1	0	1	0	19
AUG1	19	2	0	-3	1	0	-2	-1	14
AUG2	18	2	-2	1	-2	-2	-2	0	13
SEP	3	-2	1	-9	-7	3	-2	-1	-14

Critical Water Year (1937) Average Generation Differences: ALT4 vs NAA.

	DET	BCL	COU	GRP	FOS	HCR	LOP	DEX	Combined WVS Projects
OCT	17	-2	1	-13	-3	7	2	1	10
NOV	12	0	1	-4	1	3	4	1	18
DEC	0	0	-5	-13	-6	5	-4	2	-21
JAN	0	0	1	-6	-3	2	-5	0	-11
FEB	0	0	0	0	-4	0	-4	0	-8
MAR	-5	-2	0	1	1	0	-1	0	-6
APR1	-5	-2	0	-7	5	-2	-1	0	-12
APR2	11	2	0	-27	3	5	4	2	0
MAY	1	0	0	-36	4	0	0	0	-31
JUN	48	0	0	-29	2	0	0	0	21
JUL	25	1	0	-5	1	0	1	0	23
AUG1	23	2	-2	-7	1	-2	-6	-1	8
AUG2	22	2	1	-7	-1	-9	-5	-1	2
SEP	6	-2	1	-12	-7	3	-6	-1	-18

73 Year Average Generation (Water Years 1935/36 through 2007/08) Differences: NEAR-TERM OPERATIONS MEASURE vs NAA.

	DET	BCL	COU	GRP	FOS	HCR	LOP	DEX	Combined WVS Projects
OCT	26	-1	0	-7	0	7	-32	3	-5
NOV	-19	1	-9	-46	-3	7	-49	1	-119
DEC	-29	0	-8	-43	-4	1	-39	-2	-124
JAN	-28	0	-7	-18	-3	-3	-15	-2	-76
FEB	-16	0	-2	3	-5	0	-1	0	-20
MAR	-7	-1	-3	-16	-5	5	-12	-4	-43
APR1	-14	-2	-9	-18	-3	-7	-34	-9	-95
APR2	-22	-1	-10	-14	-3	-10	-40	-10	-110
MAY	-32	0	-11	3	-3	-7	-33	-6	-88
JUN	-1	1	-7	2	-3	1	-2	0	-9
JUL	1	1	2	8	0	1	-9	1	5
AUG1	3	2	-2	5	-1	0	-23	-1	-16
AUG2	7	2	-4	5	-3	0	-23	-1	-17
SEP	-3	-2	7	8	-5	0	-25	0	-19

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	DET	BCL	COU	GRP	FOS	HCR	LOP	DEX	Combined WVS Projects
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NOV	-15	0	-15	-13	-2	6	-40	-3	-82
DEC	-13	0	-9	-17	-4	7	-10	1	-45
JAN	-8	0	-3	-8	-2	2	-8	0	-27
FEB	-12	0	-3	-3	-4	-5	-13	0	-40
MAR	-12	-2	-2	-17	-8	7	-6	-3	-43
APR1	-5	-2	-10	-44	-8	9	-16	-6	-82
APR2	-24	2	-13	-20	-4	-9	-61	-11	-140
MAY	-57	0	-4	0	-5	-11	-60	-8	-145
JUN	0	0	0	0	-5	-1	-8	0	-14
JUL	2	1	8	12	0	1	-5	1	20
AUG1	3	2	11	9	-1	-5	-25	-2	-8
AUG2	2	2	7	8	-3	-9	-27	-2	-22
SEP	1	-2	14	17	-4	7	-30	1	4

From: Baskerville,Sonya L (BPA) - AIN-WASH
Sent: Wednesday, January 4, 2023 2:05 PM
To: Marker,Douglas R (BPA) - AIR-7; Kintz,Jesse H (BPA) - PG-5
Subject: RE: Willamette and WRDA 2022 - Summary of key points discussed on Dec 16 2022

I believe Bill clarified what he said in an email. He describes his point very well. He is not saying he doesn't want deauthorization and wants to keep the power. You could just use Bill's words, or as Doug points out, let the Congress speak for itself. Thanks.

Sonya Baskerville
BPA National Relations
(b)(6) m

On Jan 4, 2023 4:59 PM, "Kintz,Jesse H (BPA) - PG-5" <jhkintz@bpa.gov> wrote:

Thanks for the follow up clarifications.

My main concern is that I've recently heard Joel (and occasionally Bill) say some version of, that we don't want to deauthorize and we want to keep the power in the Willamette via updated cost allocations. I'm trying to get us/BPA aligned around acknowledging that while we may end up there eventually for some projects, in the short term we need to prioritize the disposition studies, with deauthorization still on the table (and that our customers want that too). I don't want us to say (or imply) to the Corps that cost allocation is the solution before the disposition studies even really get going.

-Jesse

From: Marker,Douglas R (BPA) - AIR-7 <drmarker@bpa.gov>
Sent: Wednesday, January 4, 2023 1:40 PM
To: Baskerville,Sonya L (BPA) - AIN-WASH <slbaskerville@bpa.gov>; Kintz,Jesse H (BPA) - PG-5 <jhkintz@bpa.gov>
Subject: RE: Willamette and WRDA 2022 - Summary of key points discussed on Dec 16 2022

Let me just add that any discussion with the Corps tomorrow of cost allocation vs. dauthorization will be confusing. Congress just directed the disposition studies to be of the effects of "deauthorizing hydropower".

Let the language speak for itself.

From: Baskerville,Sonya L (BPA) - AIN-WASH <slbaskerville@bpa.gov>
Sent: Wednesday, January 4, 2023 12:43 PM
To: Kintz,Jesse H (BPA) - PG-5 <jhkintz@bpa.gov>
Cc: Marker,Douglas R (BPA) - AIR-7 <drmarker@bpa.gov>
Subject: RE: Willamette and WRDA 2022 - Summary of key points discussed on Dec 16 2022

There is no reason to say, "and needs its power to be cost effective." That is not the objective. The disposition studies ultimately will confirm whether or not the power is cost effective. Thanks.

Sonya Baskerville
BPA National Relations
(b)(6) m

On Jan 4, 2023 3:23 PM, "Kintz,Jesse H (BPA) - PG-5" <jhkintz@bpa.gov> wrote:
(Removed everyone but Sonya and Doug)

Thanks. I suppose I had assumed that as our implied starting point given how hard we've been pushing the overall issue of uneconomical power but it is probably better to balance this wording to explicitly clarify. I made tweaks in green - This better?

-Jesse

I would suggest that BPA's message to the Corps be focused on overall, **BPA continues to be concerned about the injunction + EIS resulting in uneconomical power in the Willamette and needs its power to be cost effective.** We support prioritizing the WRDA system-wide disposition study (in 18 months, primarily focused on hydropower) to help us collectively determine if any cost effective power can be found, or remove power if power can't be cost effective. We also would like to clarify BPA's role in the disposition economic analysis component and believe that we should have a leading voice in our areas of expertise – aka the economics related to power values.

From: Baskerville,Sonya L (BPA) - AIN-WASH <slbaskerville@bpa.gov>

Sent: Wednesday, January 4, 2023 11:59 AM

To: Cooper,Suzanne B (BPA) - P-6 <sbcooper@bpa.gov>; Leady Jr,William J (BPA) - PG-5 <wjleady@bpa.gov>; Marker,Douglas R (BPA) - AIR-7 <drmarker@bpa.gov>; Cook,Joel D (BPA) - K-7 <jdcook@bpa.gov>; Kintz,Jesse H (BPA) - PG-5 <jhkintz@bpa.gov>; Harris,Marcus A (BPA) - F-2 <maharris@bpa.gov>

Cc: Mai,Amy E (BPA) - EC-4 <aemai@bpa.gov>; Todd,Wayne A (BPA) - PGA-6 <watodd@bpa.gov>; Welch,Julee A (BPA) - LP-7 <jawelch@bpa.gov>; Hardy,Kyle R (BPA) - FAC-2 <krhardy@bpa.gov>; Spear,Daniel J (BPA) - PGB-5 <djspear@bpa.gov>; Sullivan,Leah S (BPA) - PGB-5 <ssullivan@bpa.gov>; Senters,Anne E (BPA) - LN-7 <aesenters@bpa.gov>; Smith,Glen A (BPA) - PG-5 <gasmith@bpa.gov>; Maslow,Jeffrey J (BPA) - EC-4 <jjmaslow@bpa.gov>

Subject: RE: Willamette and WRDA 2022 - Summary of key points discussed on Dec 16 2022

I don't think we are saying 2b at all in that manner. Again, that messaging implies that we believe somehow the Willamette projects can be cost effective. We do not need to say that for this purpose. The discussion should start with prioritizing the disposition studies. Thanks.

Sonya Baskerville
BPA National Relations

(b)(6) m

On Jan 4, 2023 2:46 PM, "Kintz,Jesse H (BPA) - PG-5" <jhkintz@bpa.gov> wrote:

Hello all,

Heading into our check in with Corps NWD leadership tomorrow, I wanted to follow up with one tweak and one point of clarification on Bill's key point #1 below related to BPA's Willamette strategy that we discussed before the holidays.

I would remove the word "reliable" from this characterization. We are continuing to build knowledge and awareness around the fact that the power from the Willamette has limited to no capacity value in contrast to the Columbia/Snake power (BPA is generally told how much we get and in what windows). The power is also less reliable in the sense that fish needs and water conditions have a significant impact on the mw generated.

BPA's position: BPA desires to retain the Willamette Valley System's carbon-free, reliable hydropower within the FCRPS if cost allocations can be adjusted to make power economically feasible. Only when power will not be economically feasible or when operational changes (e.g. deep drawdowns) make hydropower infeasible should deauthorization be the course of action.

While the above position represents a practical approach, BPA needs to be cautious with how we characterize the interplay between cost allocation and deauthorization with the Corps.

The wording's characterization could be misinterpreted to infer deauthorization is plan B. While this is true in a practical and long-term sense, BPA should bear in mind that in the near-term, the 2022 WRDA (with significant input/backing from some of BPA's stakeholders/customers) directing a disposition study on power de-authorization just passed and has real traction, whereas the cost allocation path forward is currently less defined. Therefore, even though cost allocation makes sense as an outcome for any projects with remaining economic power, BPA needs to avoid sending a signal that we are de-prioritizing the disposition study / deauthorization path and related WRDA 2022 language.

I would suggest that BPA's message to the Corps be focused on overall, **BPA continues to be concerned about the injunction + EIS resulting in uneconomical power in the Willamette**. We support prioritizing the WRDA system-wide disposition study to help us collectively determine **if any cost effective power can be found**, or remove power if power can't be cost effective. Third, we would like to clarify BPA's role in the disposition economic analysis component and believe that we should have a leading voice in our areas of expertise – aka the economics related to power values.

-Jesse

Jesse Kintz

Power Generation – Senior Policy and Projects Lead | [PG-2]

BONNEVILLE POWER ADMINISTRATION

bpa.gov | P 503-230-3340 | C (b)(6)

From: Cook,Joel D (BPA) - K-7 <jdcook@bpa.gov>

Sent: Monday, December 19, 2022 12:06 PM

To: Leady Jr,William J (BPA) - PG-5 <wjleady@bpa.gov>; Kintz,Jesse H (BPA) - PG-5 <jhkintz@bpa.gov>; Baskerville,Sonya L (BPA) - AIN-WASH <slbaskerville@bpa.gov>; Marker,Douglas R (BPA) - AIR-7 <drmarker@bpa.gov>; Harris,Marcus A (BPA) - F-2 <maharris@bpa.gov>; Cooper,Suzanne B (BPA) - P-6 <sbcooper@bpa.gov>

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Subject: RE: Willamette and WRDA 2022 - Summary of key points discussed on Dec 16 2022

Thanks Bill

Looks good to me

Joel D. Cook

Chief Operating Officer, K-7

BONNEVILLE POWER ADMINISTRATION

C: (b)(6) P: 503-230-7640 | jdcook@bpa.gov

From: Leady Jr,William J (BPA) - PG-5 <wjleady@bpa.gov>

Sent: Friday, December 16, 2022 4:21 PM

To: Cook,Joel D (BPA) - K-7 <jdcook@bpa.gov>; Kintz,Jesse H (BPA) - PG-5 <jhkintz@bpa.gov>; Baskerville,Sonya L (BPA) - AIN-WASH <slbaskerville@bpa.gov>; Marker,Douglas R (BPA) - AIR-7 <drmarker@bpa.gov>; Harris,Marcus A (BPA) - F-2

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Subject: Willamette and WRDA 2022 - Summary of key points discussed on Dec 16 2022

Joel, Suzanne, Marcus, Jesse, Doug, Sonya, *et all*

Summary of key points discussed on Dec 16 2022

BPA's position: BPA desires to retain the Willamette Valley System's carbon-free, reliable hydropower within the FCRPS if cost allocations can be adjusted to make power economically feasible. Only when power will not be economically feasible or when operational changes (e.g. deep drawdowns) make hydropower infeasible should deauthorization be the course of action.

BPA's position: BPA believes the disposition study required by WRDA 2022 must be completed on scheduled (in 18 month). To accomplish this the scope needs to both limited and focused primarily on hydropower.

NOTE: We need to be aware the act states:

"In carrying out the disposition study under paragraph (1) the Secretary shall review the effects of deauthorizing hydropower on –

(A) Willamette Valley hydropower operations;

(B) other authorized purposes of such project;

(C) cost appointments;

(D) dam safety;

(E) compliance with the requirements of the Endangered Species Act;

(F) the operations of the remaining dams within the Willamette Valley hydropower project."

BPA's position: BPA should be an active partner with the Corps in hydropower's economic analysis as the Corps moves forward in the disposition studies and potential cost allocation updates.

Action: We need the legal and financial definition and clarity on the term *"new construction"* as intended in WRDA 2022.

Bill,

Bill Leady P.E.

Vice President, Generation Asset Management | PG

BONNEVILLE POWER ADMINISTRATION

bpa.gov | Office 503-230-4270 | Cell (b)(6)

From: Marker,Douglas R (BPA) - AIR-7
Sent: Wednesday, January 4, 2023 2:14 PM
To: Kintz,Jesse H (BPA) - PG-5; Baskerville,Sonya L (BPA) - AIN-WASH
Subject: RE: Willamette and WRDA 2022 - Summary of key points discussed on Dec 16 2022

All we need to do is hold to the Congressional direction.

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Sent: Wednesday, January 4, 2023 1:59 PM
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BPA's position: BPA desires to retain the Willamette Valley System's carbon-free, reliable hydropower within the FCRPS if cost allocations can be adjusted to make power economically feasible. Only when power will not be economically feasible or when operational changes (e.g. deep drawdowns) make hydropower infeasible should deauthorization be the course of action.

While the above position represents a practical approach, BPA needs to be cautious with how we characterize the interplay between cost allocation and deauthorization with the Corps.

The wording's characterization could be misinterpreted to infer deauthorization is plan B. While this is true in a practical and long-term sense, BPA should bear in mind that in the near-term, the 2022 WRDA (with significant input/backing from some of BPA's stakeholders/customers) directing a disposition study on power de-authorization just passed and has real traction, whereas the cost allocation path forward is currently less defined. Therefore, even though cost allocation makes sense as an outcome for any projects with remaining economic power, BPA needs to avoid sending a signal that we are de-prioritizing the disposition study / deauthorization path and related WRDA 2022 language.

I would suggest that BPA's message to the Corps be focused on overall, **BPA continues to be concerned about the injunction + EIS resulting in uneconomical power in the Willamette**. We support prioritizing the WRDA system-wide disposition study to help us collectively determine **if any cost effective power can be found**, or remove power if power can't be cost effective. Third, we would like to clarify BPA's role in the disposition economic analysis component and believe that we should have a leading voice in our areas of expertise – aka the economics related to power values.

-Jesse

Jesse Kintz

Power Generation – Senior Policy and Projects Lead | [PG-2]

BONNEVILLE POWER ADMINISTRATION

bpa.gov | P 503-230-3340 | C (b)(6)

From: Cook,Joel D (BPA) - K-7 <jdcook@bpa.gov>

Sent: Monday, December 19, 2022 12:06 PM

To: Leady Jr,William J (BPA) - PG-5 <wjleady@bpa.gov>; Kintz,Jesse H (BPA) - PG-5 <jhkintz@bpa.gov>; Baskerville,Sonya L (BPA) - AIN-WASH <slbaskerville@bpa.gov>; Marker,Douglas R (BPA) - AIR-7 <drmarker@bpa.gov>; Harris,Marcus A (BPA) - F-2 <maharris@bpa.gov>; Cooper,Suzanne B (BPA) - P-6 <sbcooper@bpa.gov>

Cc: Hardy,Kyle R (BPA) - FAC-2 <krhardy@bpa.gov>; Spear,Daniel J (BPA) - PGB-5 <djspear@bpa.gov>; Mai,Amy E (BPA) - EC-4 <aemai@bpa.gov>; Maslow,Jeffrey J (BPA) - EC-4 <jjmaslow@bpa.gov>; Sullivan,Leah S (BPA) - PGB-5 <lsullivan@bpa.gov>; Todd,Wayne A (BPA) - PGA-6 <watodd@bpa.gov>; Welch,Julee A (BPA) - LP-7 <jawelch@bpa.gov>; Senters,Anne E (BPA) - LN-7 <aesenters@bpa.gov>; Smith,Glen A (BPA) - PG-5 <gasmith@bpa.gov>

Subject: RE: Willamette and WRDA 2022 - Summary of key points discussed on Dec 16 2022

Thanks Bill

Looks good to me

Joel D. Cook

Chief Operating Officer, K-7

BONNEVILLE POWER ADMINISTRATION

C: (b)(6) P: 503-230-7640 | jdcook@bpa.gov

From: Leady Jr,William J (BPA) - PG-5 <wjleady@bpa.gov>

Sent: Friday, December 16, 2022 4:21 PM

To: Cook,Joel D (BPA) - K-7 <jdcook@bpa.gov>; Kintz,Jesse H (BPA) - PG-5 <jhkintz@bpa.gov>; Baskerville,Sonya L (BPA) - AIN-WASH <slbaskerville@bpa.gov>; Marker,Douglas R (BPA) - AIR-7 <drmarker@bpa.gov>; Harris,Marcus A (BPA) - F-2

<maharris@bpa.gov>; Cooper,Suzanne B (BPA) - P-6 <sbcooper@bpa.gov>
Cc: Hardy,Kyle R (BPA) - FAC-2 <krhardy@bpa.gov>; Spear,Daniel J (BPA) - PGB-5 <djspear@bpa.gov>; Mai,Amy E (BPA) - EC-4 <aemai@bpa.gov>; Maslow,Jeffrey J (BPA) - EC-4 <jjmaslow@bpa.gov>; Sullivan,Leah S (BPA) - PGB-5 <ssullivan@bpa.gov>; Todd,Wayne A (BPA) - PGA-6 <watodd@bpa.gov>; Welch,Julee A (BPA) - LP-7 <jawelch@bpa.gov>; Senters,Anne E (BPA) - LN-7 <aesenters@bpa.gov>; Smith,Glen A (BPA) - PG-5 <gasmith@bpa.gov>
Subject: Willamette and WRDA 2022 - Summary of key points discussed on Dec 16 2022

Joel, Suzanne, Marcus, Jesse, Doug, Sonya, *et all*

Summary of key points discussed on Dec 16 2022

BPA's position: BPA desires to retain the Willamette Valley System's carbon-free, reliable hydropower within the FCRPS if cost allocations can be adjusted to make power economically feasible. Only when power will not be economically feasible or when operational changes (e.g. deep drawdowns) make hydropower infeasible should deauthorization be the course of action.

BPA's position: BPA believes the disposition study required by WRDA 2022 must be completed on schedule (in 18 months). To accomplish this the scope needs to be both limited and focused primarily on hydropower.

NOTE: We need to be aware the act states:

"In carrying out the disposition study under paragraph (1) the Secretary shall review the effects of deauthorizing hydropower on –

(A) Willamette Valley hydropower operations;

(B) other authorized purposes of such project;

(C) cost apportionments;

(D) dam safety;

(E) compliance with the requirements of the Endangered Species Act;

(F) the operations of the remaining dams within the Willamette Valley hydropower project."

BPA's position: BPA should be an active partner with the Corps in hydropower's economic analysis as the Corps moves forward in the disposition studies and potential cost allocation updates.

Action: We need the legal and financial definition and clarity on the term "new construction" as intended in WRDA 2022.

Bill,

Bill Leady P.E.

Vice President, Generation Asset Management | PG

BONNEVILLE POWER ADMINISTRATION

bpa.gov | Office 503-230-4270 | Cell (b)(6)

From: Kintz,Jesse H (BPA) - PG-5
Sent: Monday, March 6, 2023 12:58 PM
To: Ledy Jr,William J (BPA) - PG-5; Marker,Doug R (BPA) - AIR-7; Todd,Wayne A (BPA) - PGA-6; Welch,Julee A (BPA) - LP-7; Smith,Glen A (BPA) - PG-5; Baskerville,Sonya L (BPA) - AIN-WASH
Subject: Seeking input on Thursday Willamette exec strategy topics
Attachments: INFORM: Willamette and Deauthorization/Cost Allocation Status Updates

We have a 30 minute check in with the exec sponsors – Marcus, Joel (Suzanne won't be there) and you, Bill - on the calendar for this Thursday, our first meeting in a couple months. Below are the topics I'm thinking would be good to cover (Attaching the previous status update for reference). Please let me know your thoughts, thanks. I plan to send out the materials tomorrow afternoon or Wednesday morning.

Thanks,
-Jesse

1. Brief status updates – include mentions of disposition study progress, Keys letter, WRDA Army implementation input, budget update if available – 3 min
2. Decide: Confirm cost allocation schedule / themes - Expect this to be very brief – 2 min
3. Inform/discuss: Approach to Willamette BPA internal analysis - Share summary of approach – 5-10 min
4. Discuss: BPA's view of federal interest - Use team suggests as starting point. Consider what would constitute remaining federal interest (power value) from BPA's perspective, and the likely Corps perspective (likely to want a broader analysis) – 10-15 min

Subject: Short check in with Wayne on Willamette scoping
Location: Skype

Start: Thu 3/2/2023 2:00 PM
End: Thu 3/2/2023 2:30 PM
Show Time As: Tentative

Recurrence: (none)

Meeting Status: Not yet responded

Organizer: Kintz,Jesse H (BPA) - PG-5
Required Attendees: Todd,Wayne A (BPA) - PGA-6
Optional Attendees: Baskerville,Sonya L (BPA) - AIN-WASH

Wayne, hope this time works for you. I caught up with Doug, Julee and Sonya today.

-Jesse



Willamette Dams
Analysis Scopi...

From: Kintz,Jesse H (BPA) - PG-5
Sent: Tuesday, April 18, 2023 10:25 AM
To: Smith,Glen A (BPA) - PG-5
Subject: Strategy Thoughts / Draft Letter Points
Attachments: Disposition Planning Charrette.docx

From: Kintz,Jesse H (BPA) - PG-5
Sent: Thursday, March 9, 2023 10:36 AM
To: Smith,Glen A (BPA) - PG-5
Subject: Updated docs: Willamette analysis project plan and scoping
Attachments: Willamette Dams Analysis Scoping.xlsx; WVS Long Term Hydro Value Position Paper.docx

Glen: These are the latest versions I've been working on to scope up the Willamette analysis. FYI for now and if you make any adds/changes to these while I'm on leave, please email me updated versions so we keep one set of versions going.

-Jesse

From: Kintz,Jesse H (BPA) - PG-5
Sent: Wednesday, March 22, 2023 4:11 PM
To: Wells, Elizabeth R CIV USARMY CENWP (USA)
Cc: bradley.e.thompson@usace.army.mil; Leady Jr,William J (BPA) - PG-5
Subject: Two FYIs: BPA WRDA 2022 Sec 8220 Army comments and BPA budget cost allocation language
Attachments: Bonneville Power Administration Comment to Army on implementation guidance for WRDA 2022 Sec 8220_03.21.2023.pdf; DOE FY 2024 Budget Request Vol 3 PMAs FCRPS Reallocation.pdf

Liza,

Wanted to make sure you were aware of these two items - you may have already seen one or both of these but sending them over in case they haven't come across your desk yet, as they've both come out in the last week or so.

The first attachment includes Bonneville's comments to Army on WRDA 2022 Sec 8220 implementation – the messaging is consistent with what BPA's perspective has been in EIS and other forums about the importance of the disposition study to us. BPA continues to meet monthly with Brad T. and a small Corps team on disposition study coordination and plans to attend the Corps' charrette meeting on 4/11.

The second attachment is an excerpt from BPA's FY24 budget justification with some language related to cost allocations ("FCRPS Cost Allocations" section). The language mentions a meeting with OMB, and some joint BPA-Corps work leading into the FY25 budget process.

The WRDA comments are really nothing new, but the cost allocation budget language is, so likely more to come between Corps, BPA, and OMB on that soon (just FYI for now).

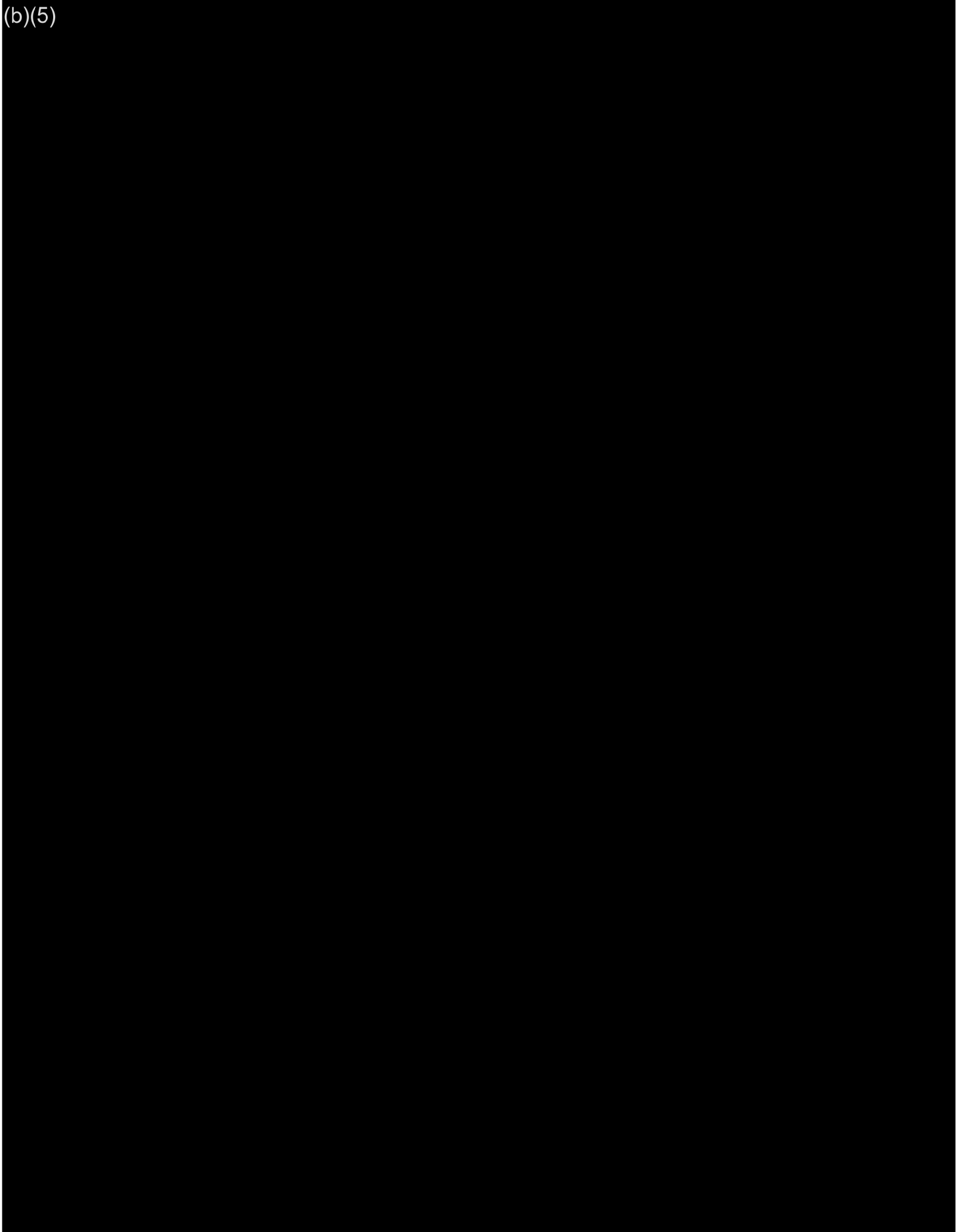
-Jesse

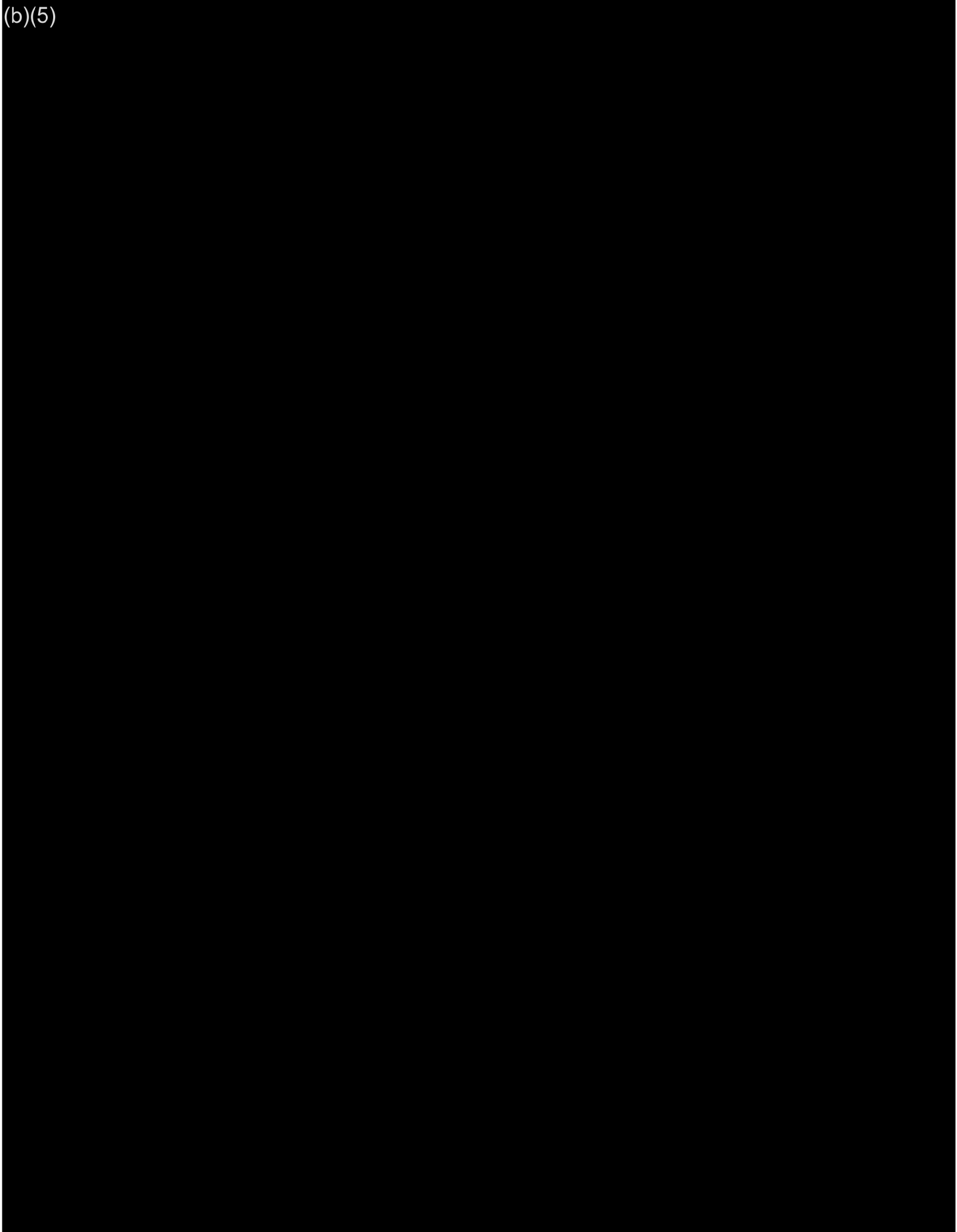
Jesse Kintz

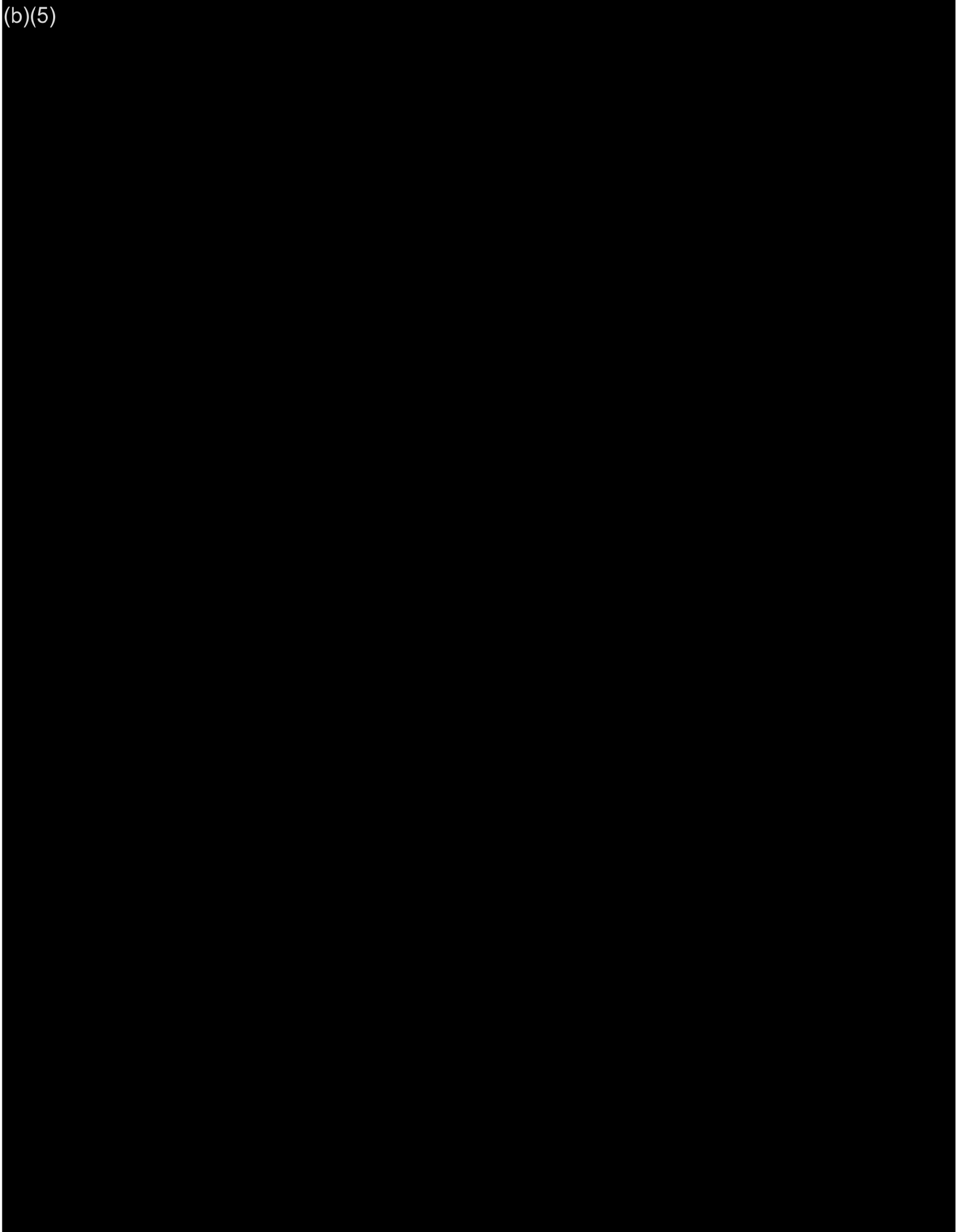
Power Generation – Senior Policy and Project Lead | [PG-2]

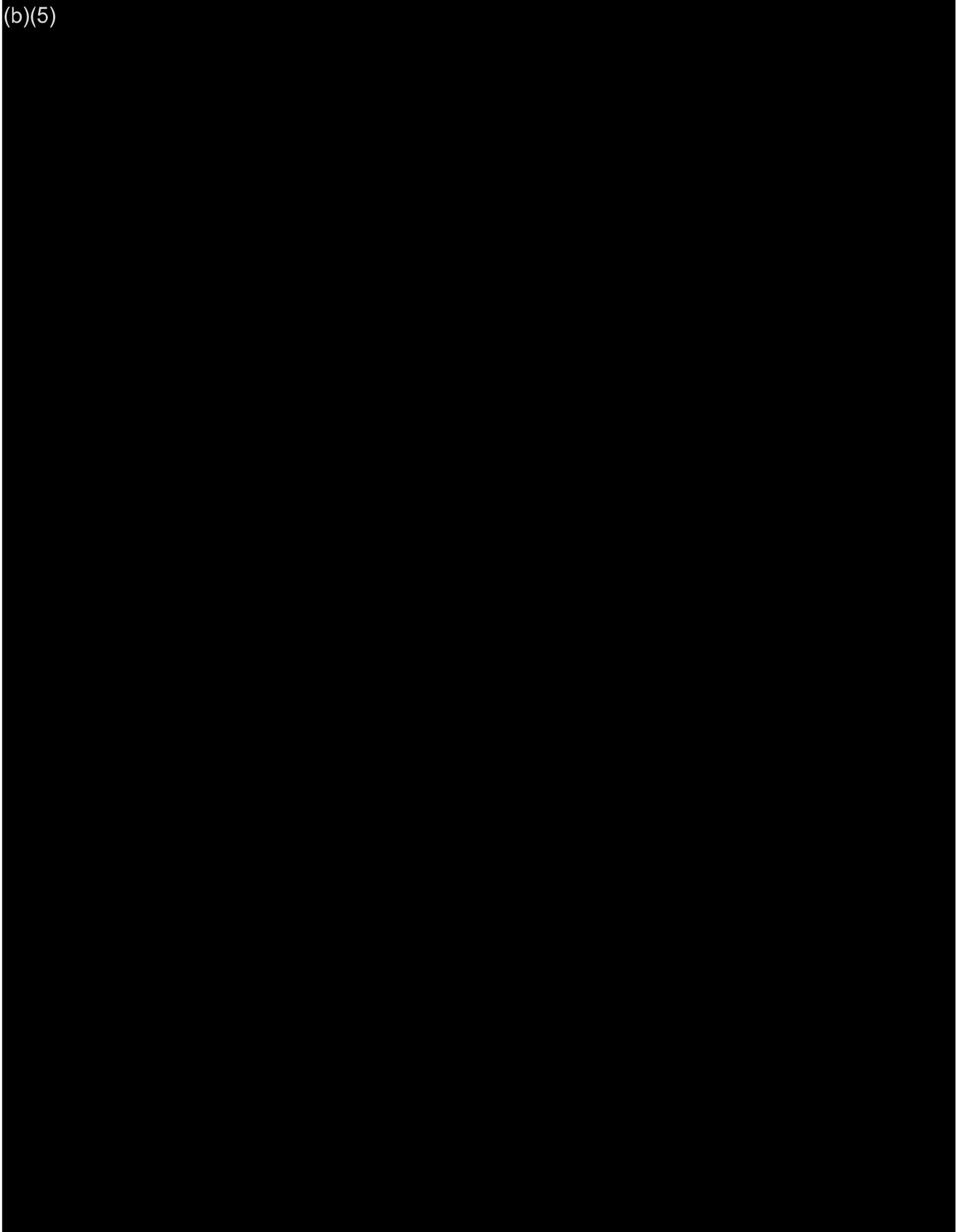
BONNEVILLE POWER ADMINISTRATION

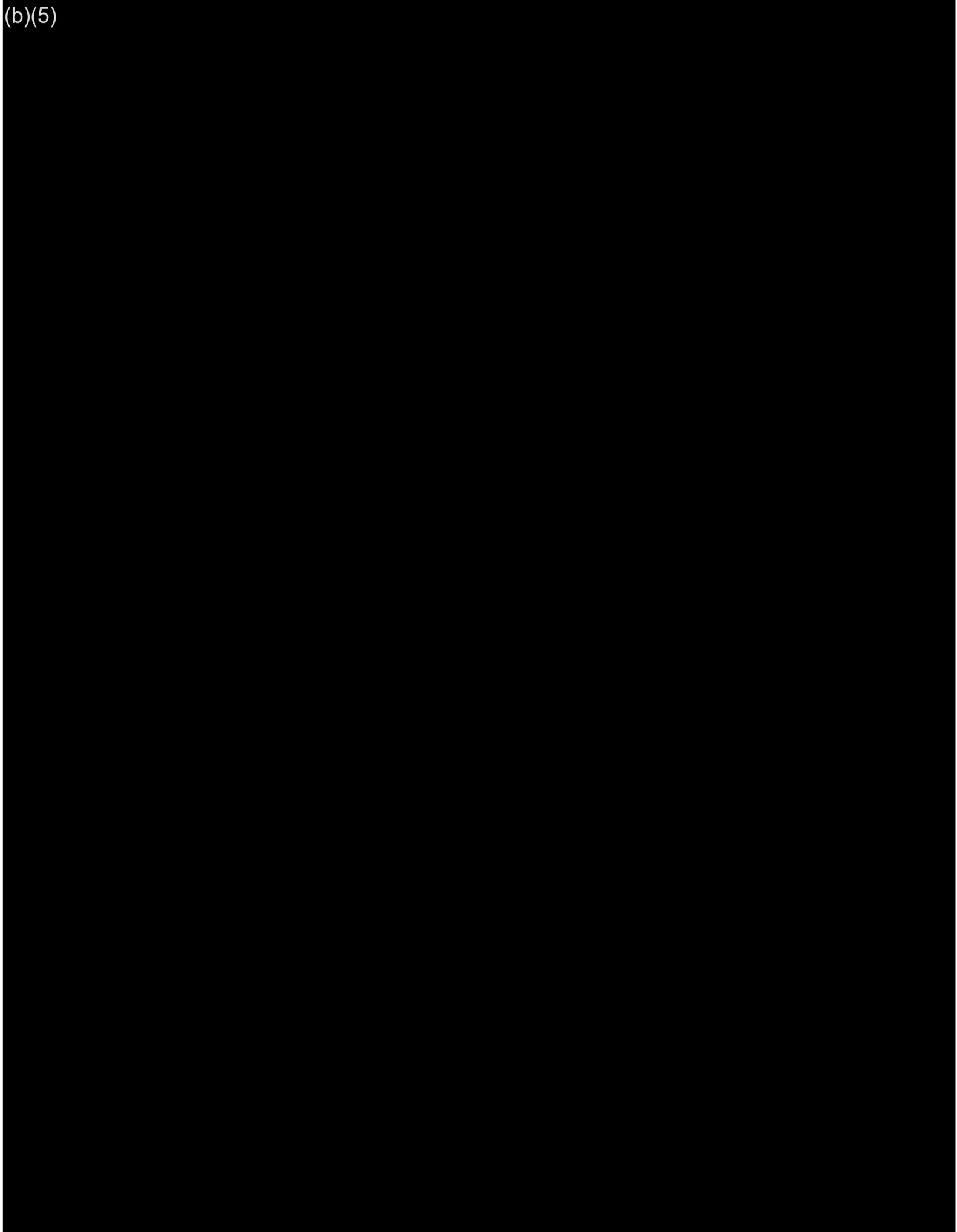
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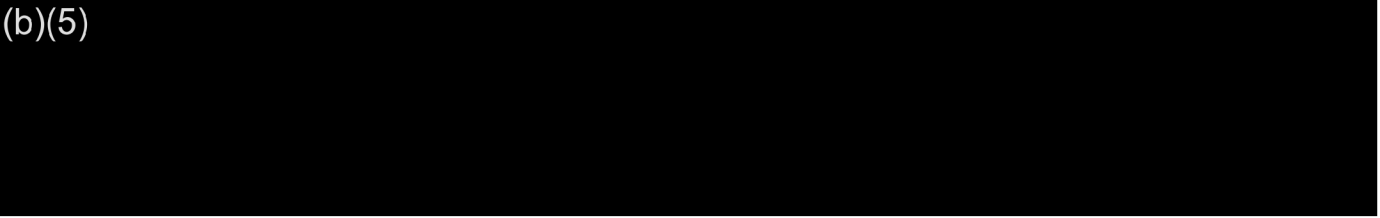
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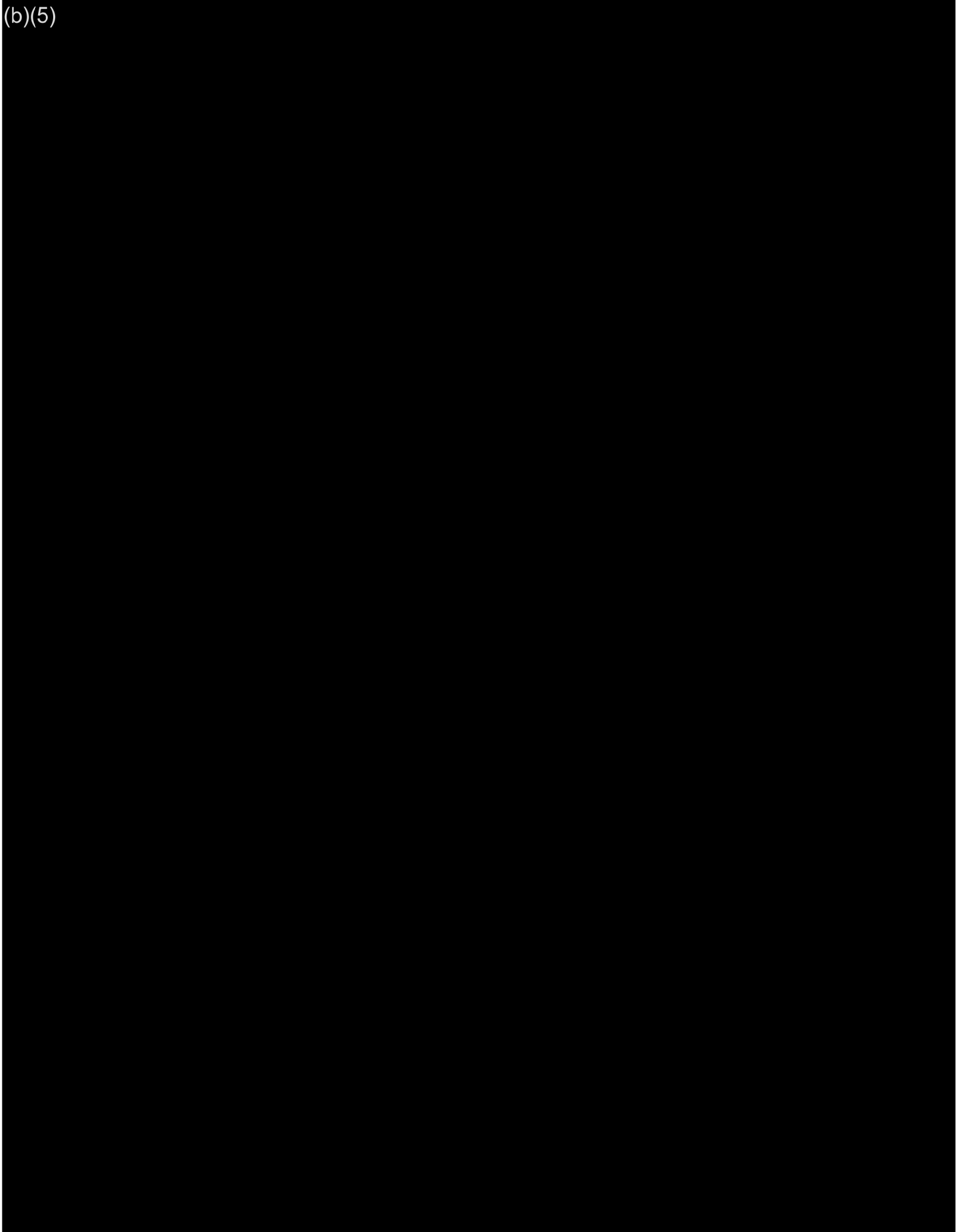
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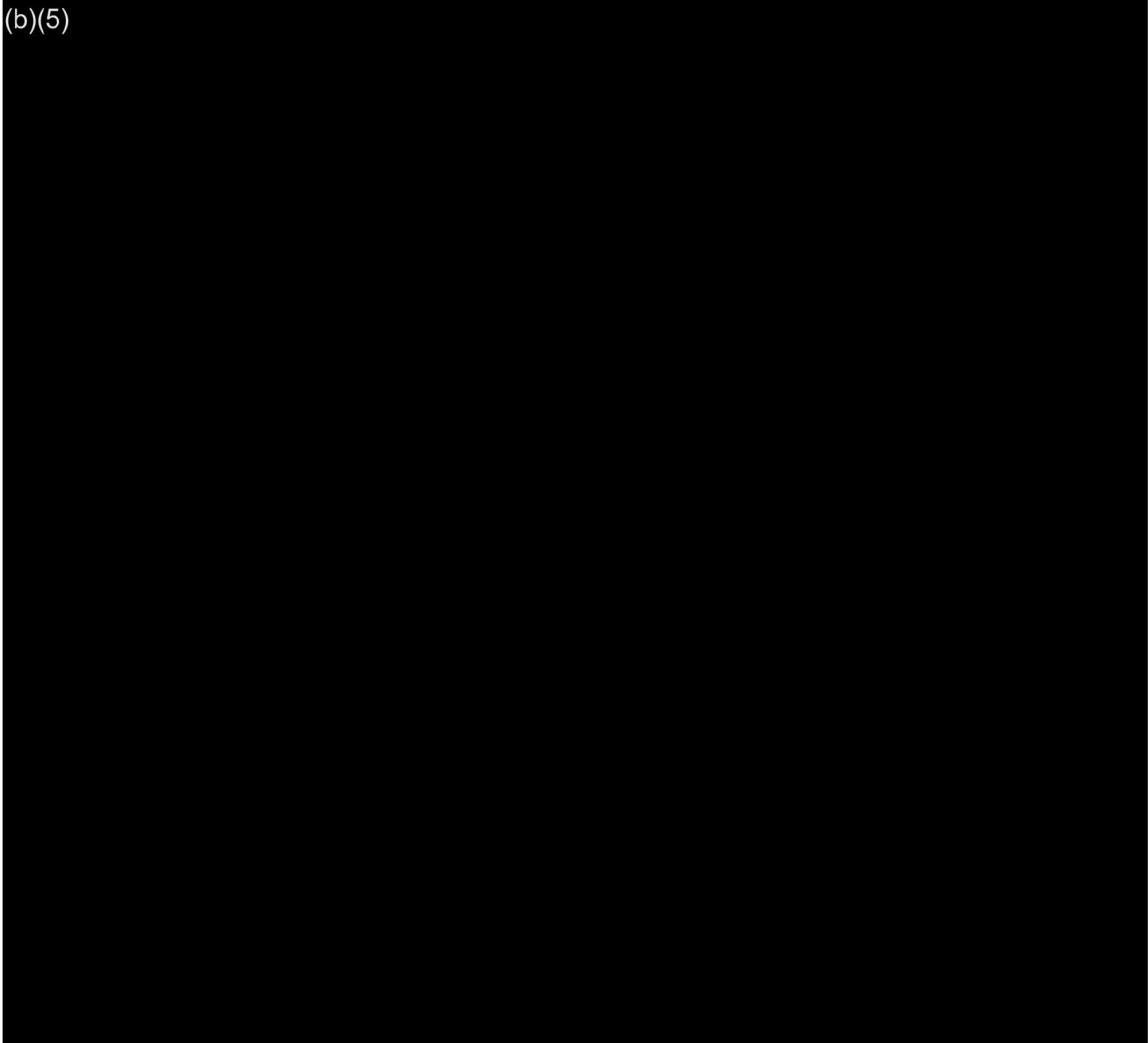
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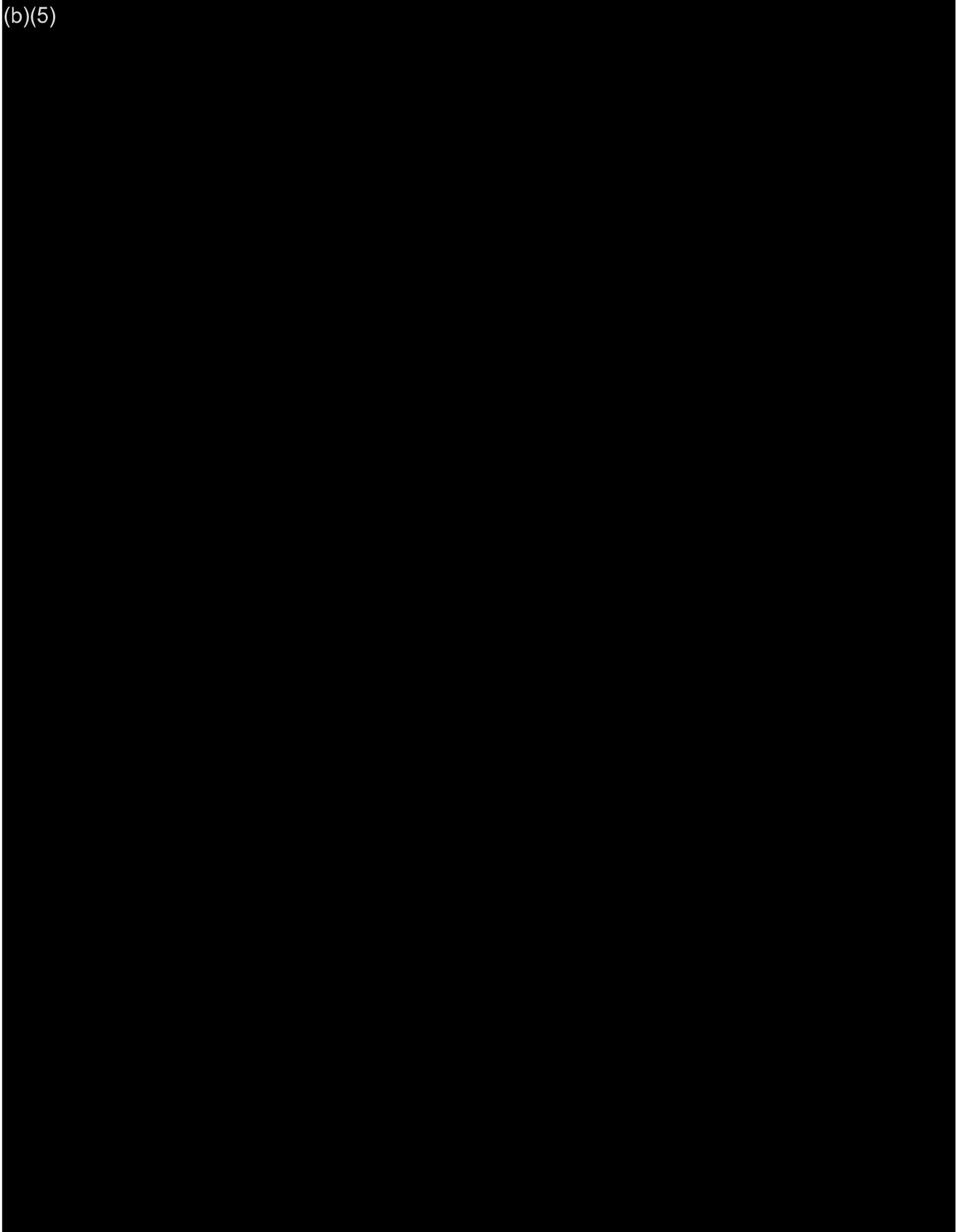
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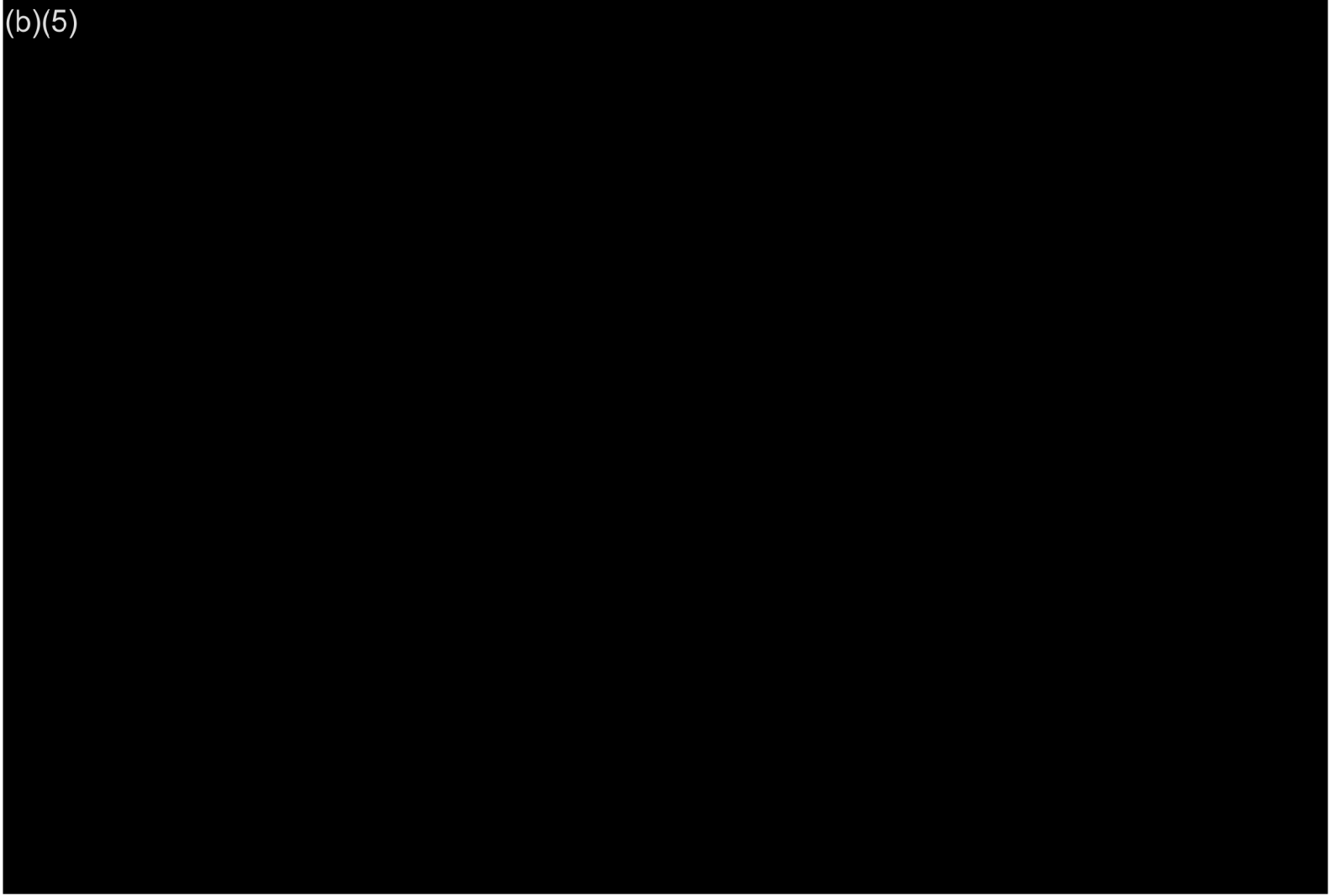




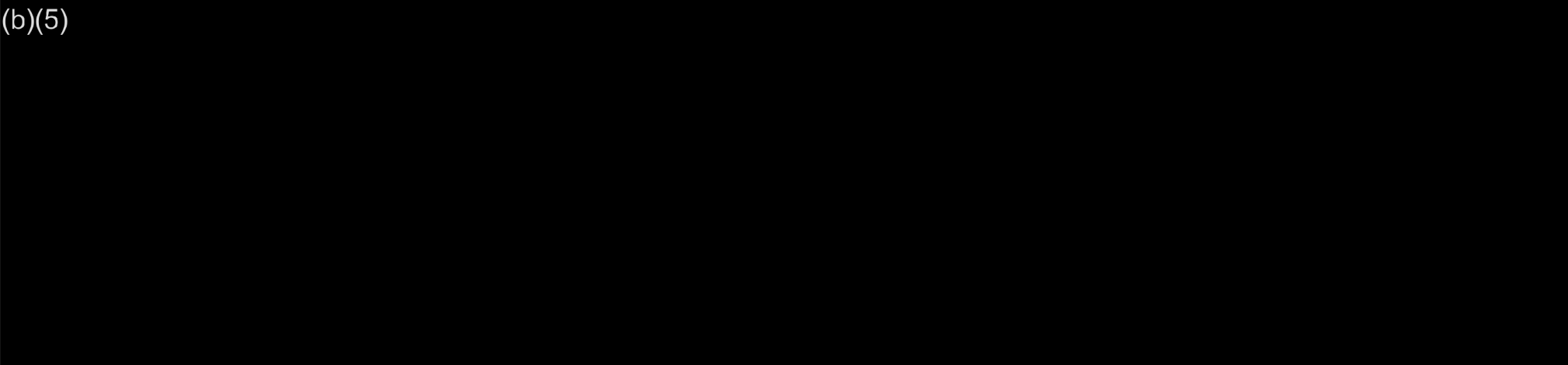


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From: Kintz, Jesse H (BPA) - PG-5

Sent: Fri Feb 17 11:24:48 2023

To: Harris, Marcus A (BPA) - F-2; Cooper, Suzanne B (BPA) - P-6; Cook, Joel D (BPA) - K-7; Leady Jr, William J (BPA) - PG-5

Cc: Baskerville, Sonya L (BPA) - AIN-WASH; Todd, Wayne A (BPA) - PGA-6; Welch, Julee A (BPA) - LP-7; Marker, Doug R (BPA) - AIR-7; Smith, Glen A (BPA) - PG-5; Sinters, Anne E (BPA) - LN-7; Hardy, Kyle R (BPA) - FAC-2; Spear, Daniel J (BPA) - PGB-5; Sullivan, Leah S (BPA) - PGB-5; Maslow, Jeffrey J (BPA) - EC-4

Subject: INFORM: Willamette and Deauthorization/Cost Allocation Status Updates

Importance: Normal

Attachments: WRDA 2022 pdf.pdf; BPA comments on Draft PEIS (3 Feb 2023).pdf

Draft, Pre-Decisional, May Be FOIA Exempt

Joel, Suzanne, Marcus and Bill,

Sending the below summary status update in lieu of our Willamette/FCRPS legislation executive strategy meeting this week. Let me know if any questions.

Our next meeting is scheduled for Thursday, March 9.

-Jesse

- De-authorization:

- o WRDA 2022 language directing Corps to do Willamette system-wide study in 18 months passed on 12/23/22 (attached). Dept. of Army is currently taking input for issuing their implementation guidance. BPA plans to comment by deadline of 3/21.

- o Corps is working on disposition study scoping. BPA has asserted having a significant role with the power economics and suggested a scope focused on disposition of commercial power only (vs removing hydropower entirely). BPA (PG) starting on internal analysis to inform Corps' process and BPA's strategy. Next monthly BPA-Corps meeting scheduled for 2/27.

- Cost allocations:

- o BPA completed the December 2022 quarterly cost allocation update to Energy and Water subcommittee (link [here](#)) which highlighted scope of EIS costs.

- o BPA's federal budget process with OMB continues to consider proposed legislation language for BPA Administrator initiating cost allocation updates.

- NEPA EIS / BPA process

- o EIS public comment period open until 2/23. BPA provided a public comment letter to the Corps earlier this month (attached) which focused on power economics concerns.

- Litigation: no updates

- o Other: BPA working on a Willamette fact sheet. DC transitions happening (New Congressional members getting up to speed, committee members being finalized).

Jesse Kintz

Power Generation – Senior Policy and Project Lead | [PG-2]

Bonneville Power Administration

bpa.gov | P 503-230-3340 | C (b)(6)

Disposition Planning Charrette

Acknowledge nature of systems currently in place and how the operations, utilizing these systems (turbines, turbine outlets etc.), are critical in maintaining current and future operations that have an impact on dam safety, fish survival, water quality, water supply and other purposes such as recreation.

Acknowledge how difficult and interconnected the systems are and that we appreciate how operational changes at one dam can have a wider effect on the rest of the system in the Valley as they are all interconnected.

Acknowledge our support of protecting fish and assisting the Corps where we can with this difficult effort.

Emphasize that our mission is for long term economically viable power for the region and the current and future lower generation and proposed EIS infrastructure are pushing cost of commercial power where it is not economically viable. Without a change in the current authorities commercial power produced at these sites are not economically viable (economically efficient?) for the future.

Suggest that we need to study how to limit generation with existing structures to just station service needs and not produce commercial power.

Study, utilizing side boards of not impacting any of the current water conveyance operation limits (inlet and outlet locations, flow range and control etc.). Thereby, reducing the need for studies of other impacts as the operational characteristics, in theory, will not change (now or under current EIS plans). The only impact on operations is to limit the production of commercial power from these facilities.

Focus on the costs and feasibility of various methods to eliminate commercial power production and maintain other operational capabilities of the dams to include supplying station service power to the dams.

Re-emphasize that transmission issues, replacement power and the carbon impacts of losing power are all BPA's responsibilities. Power reduction in the Valley may not need direct replacement as BPA will assess resource adequacy and whether we can utilize various tools such as market purchases, energy efficiency or other means to make up for the loss of generation, if needed. We also are responsible for the level of reliability and risk of power supply all over the region and will assess what the impacts and levels of risks are for various communities and power supply. We understand markets and the impacts of carbon pricing as we sell power into both the California and market and in Washing State where both states have a carbon cap and trade approach to reducing carbon from the fuel mix of power.

Emphasize benefits to the Corps of focus on commercial power – achievable scope, acknowledges both Corps and BPA important areas, etc.

Consider addressing Corps funding concerns and reassure that BPA will continue its mitigation commitments related to the past and consider offering a ramp out for future

Make a statement about how BPA ratepayers should not be subsidizing benefits that are being realized more broadly especially when commercial power is not economically viable (appropriate that taxpayers pay for these)

Should we acknowledge BPA's change in strategy when we lost the court case? (i.e. once hydropower pool is not protected we had to pivot further into deauthorization consideration)

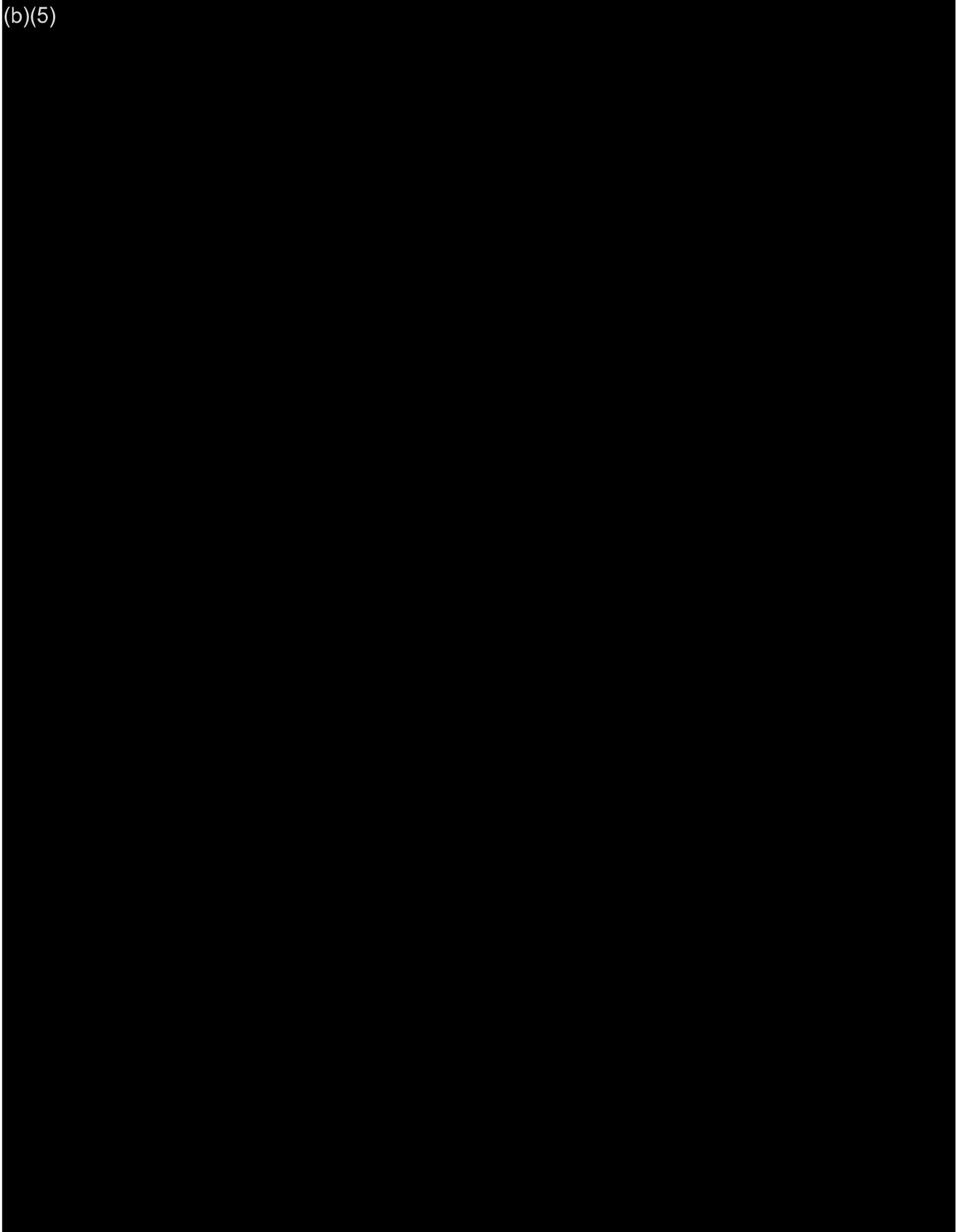
This doesn't have to be precedent setting if Corps doesn't want it to be (BPA's authority is unique)

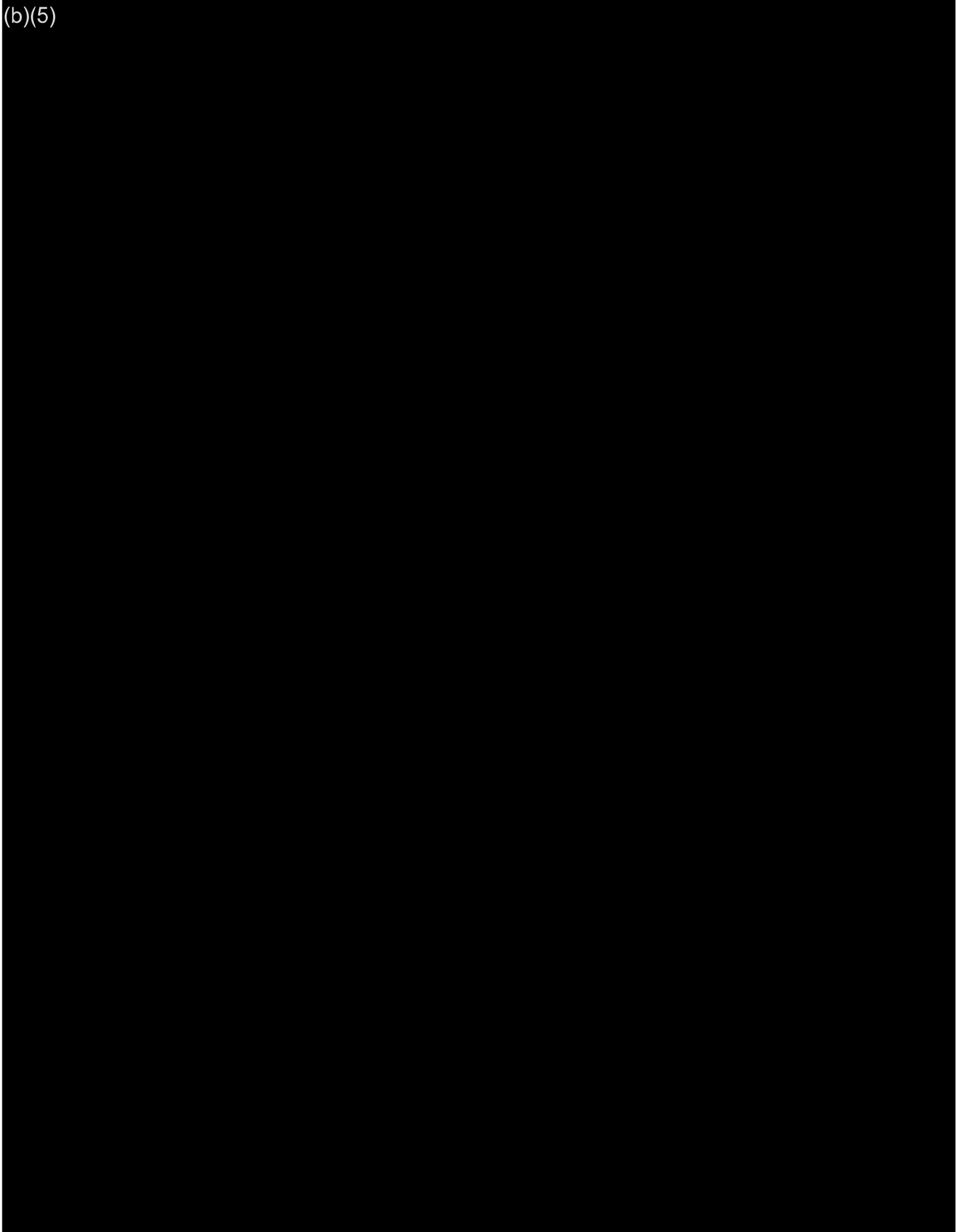
Consider mentioning caretaker/mothballing path. If commercial power is deauthorized, could always be resurrected down the road if markets change.

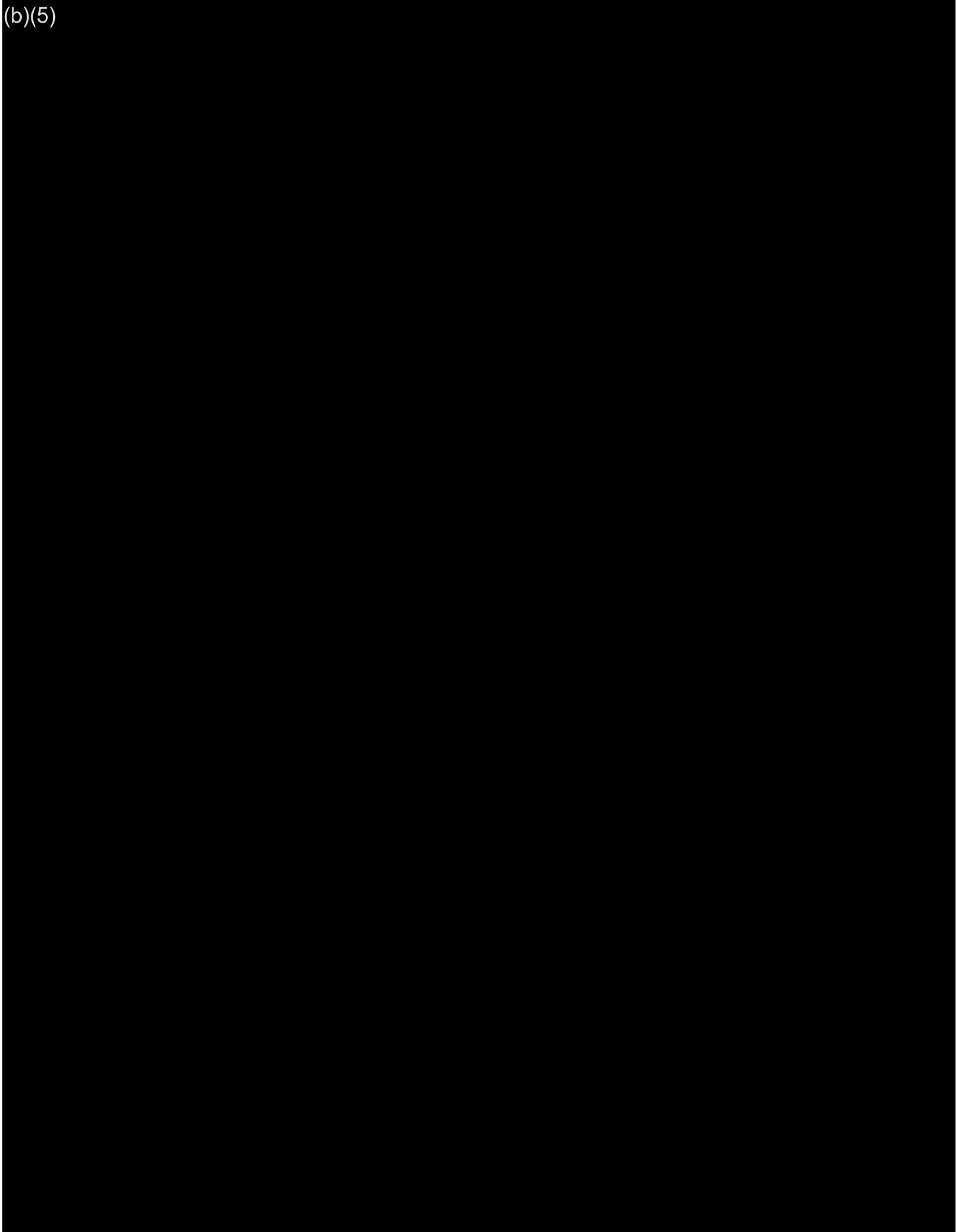
Discussion Qs:

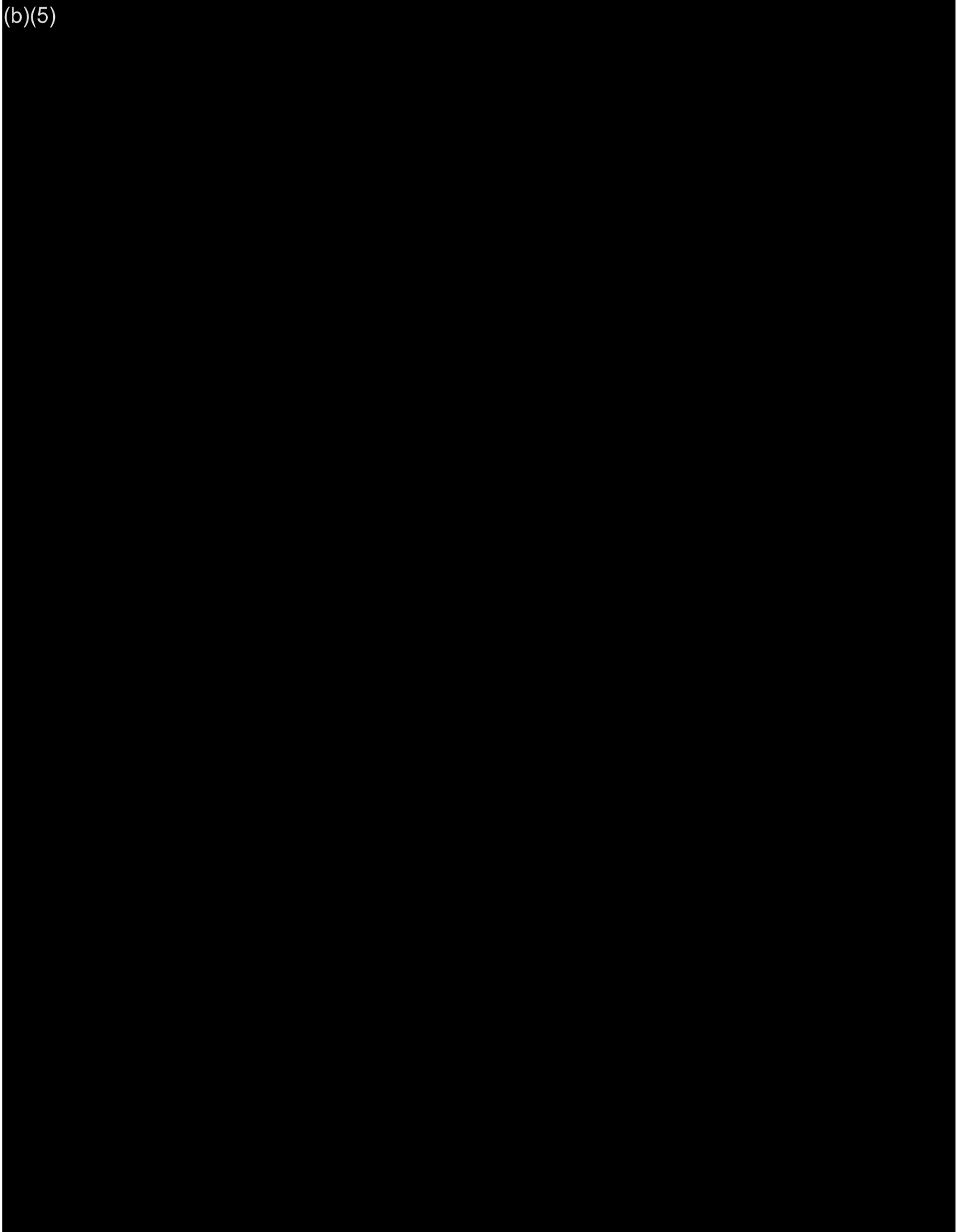
*BPA should consider our openness to a ESA compliance credit concept

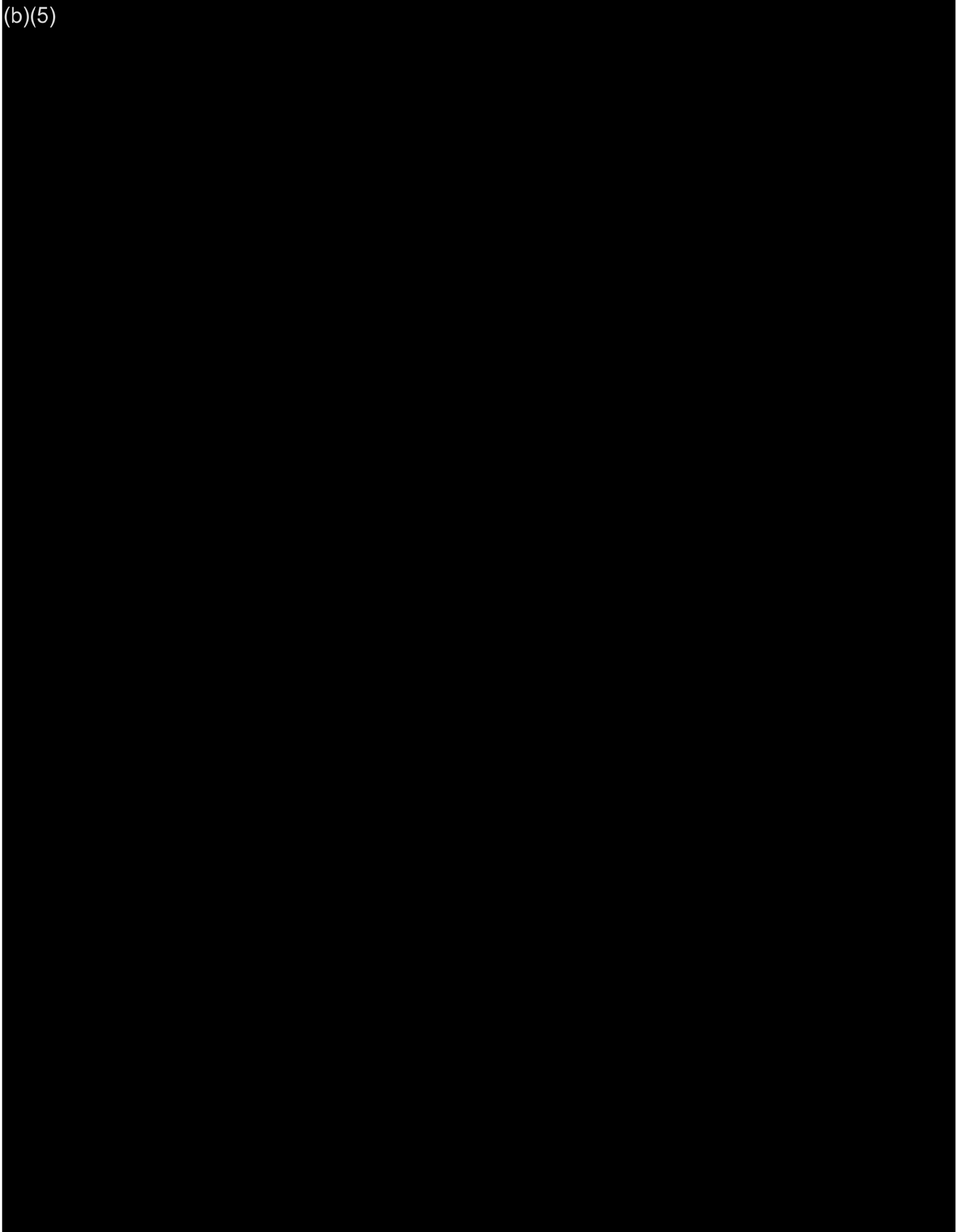
*What is Corps' plan to decouple hydropower from other purposes at Cougar? (given that they are on power deauthorization path there) Lessons learned there for other locations?

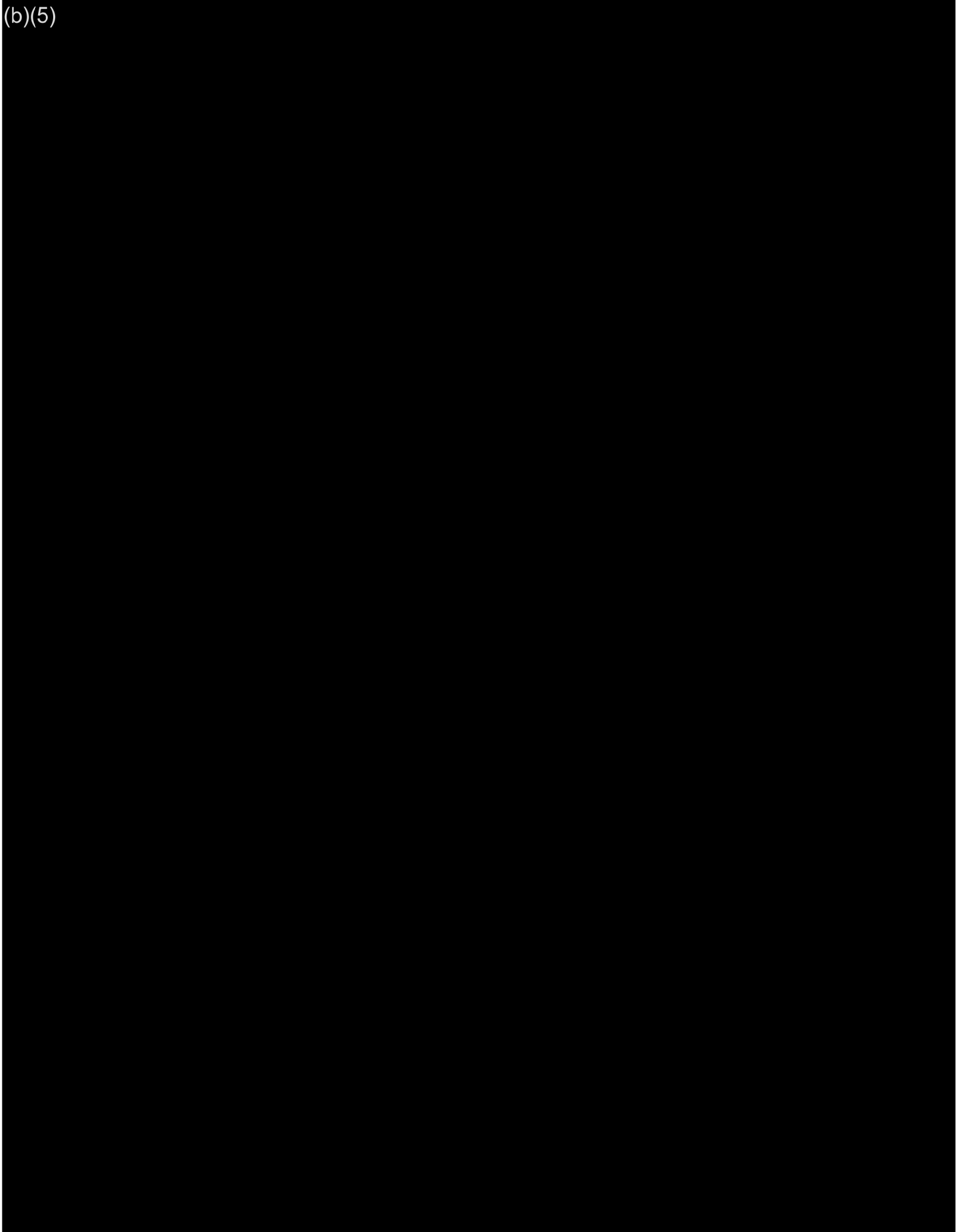












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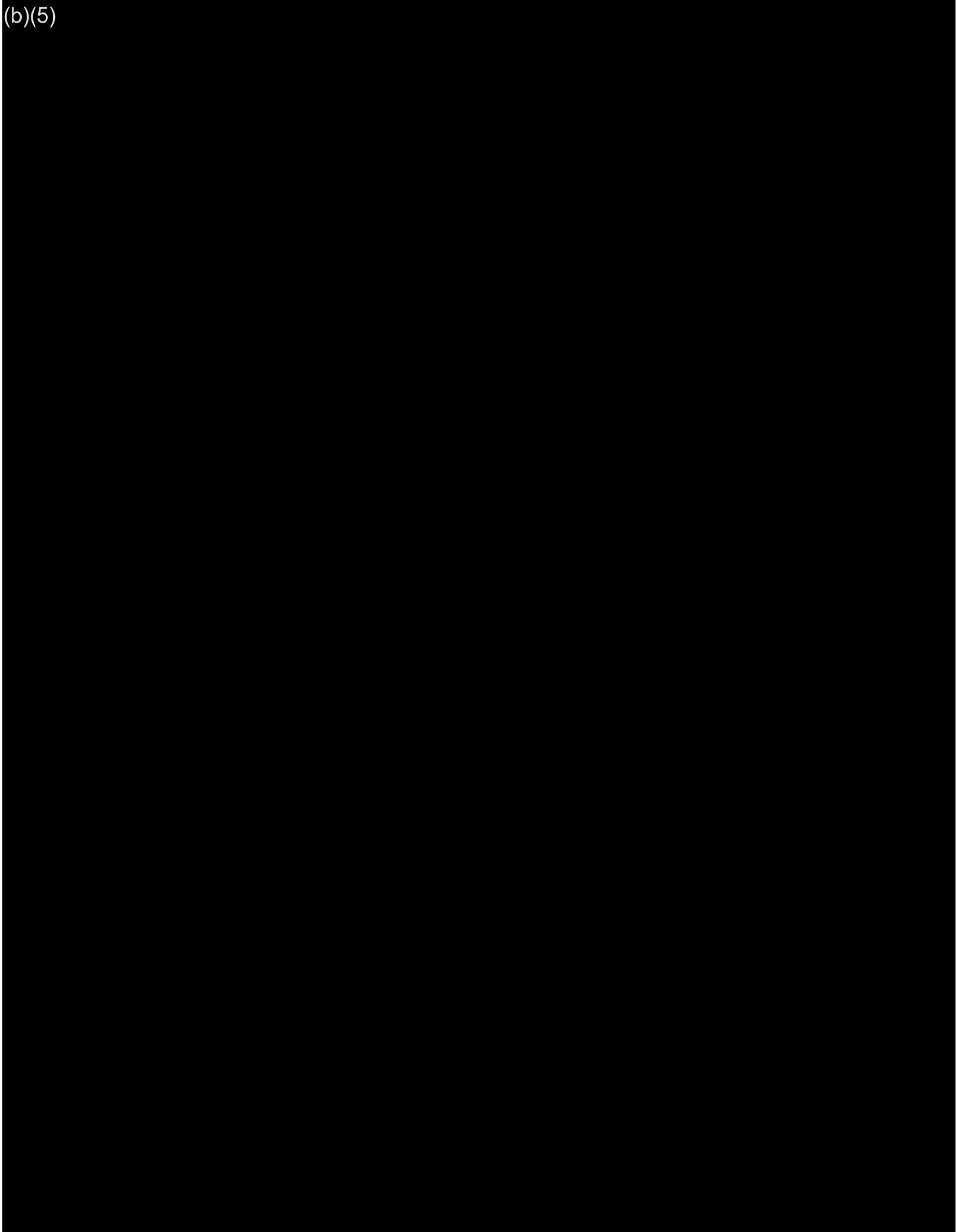
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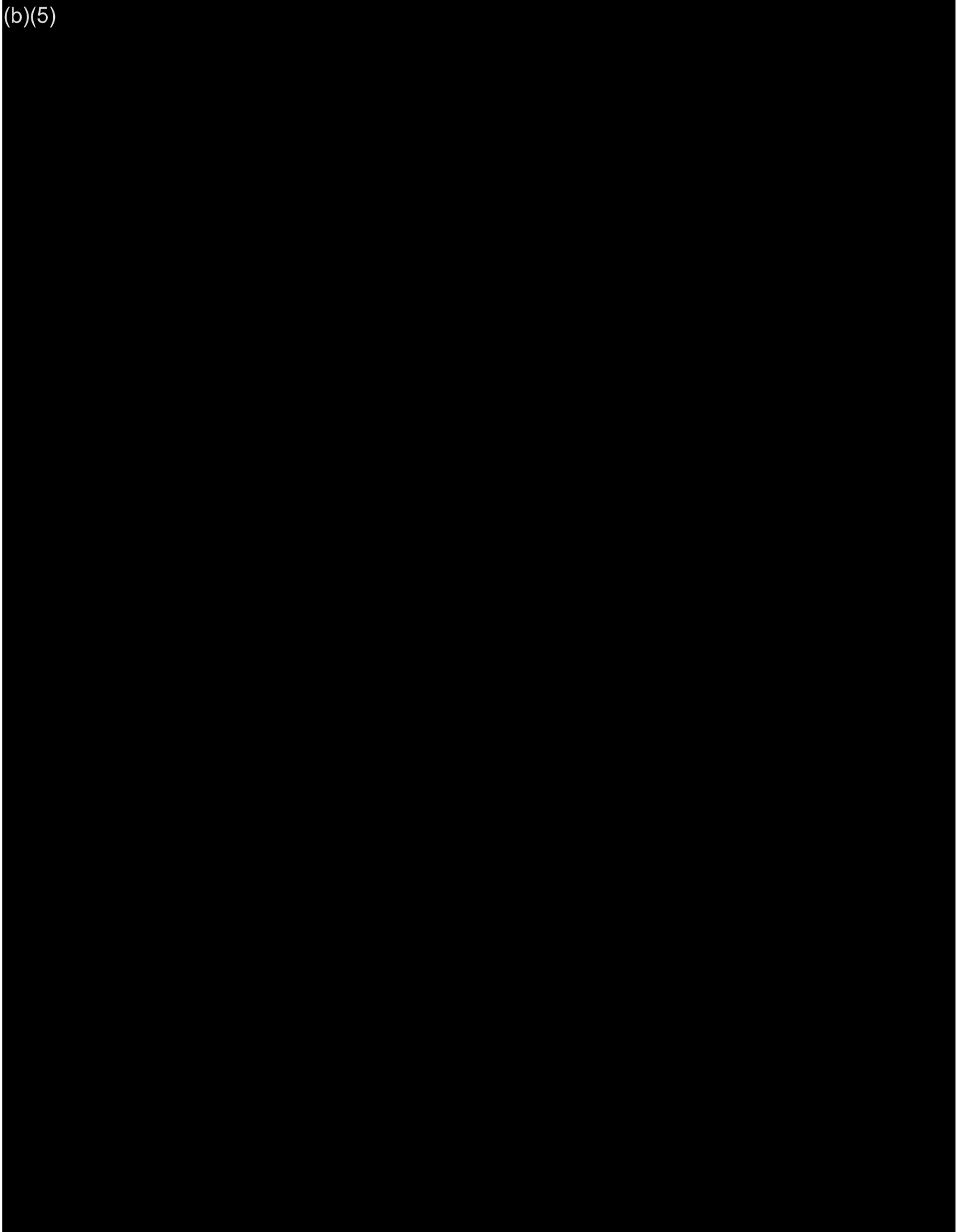
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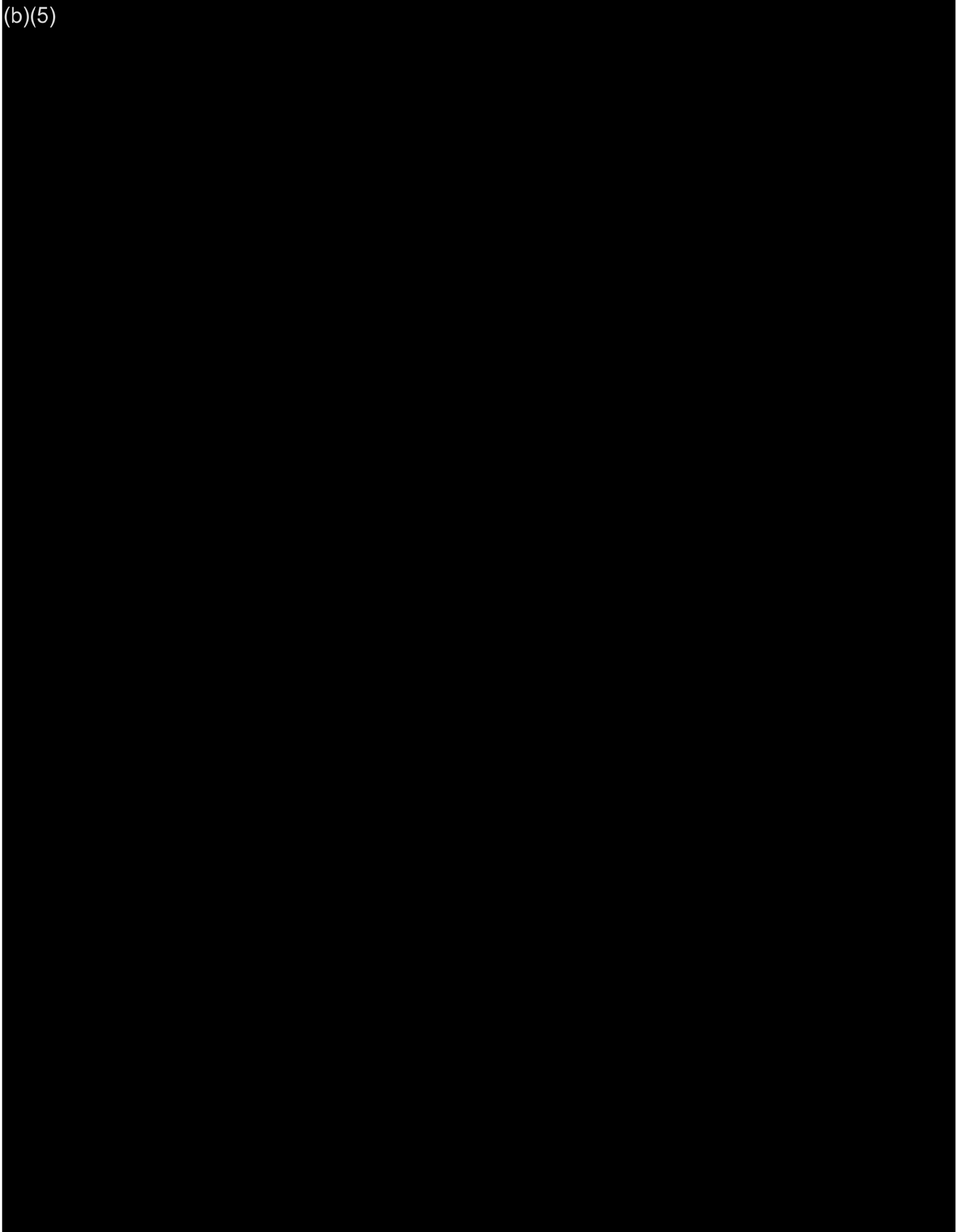
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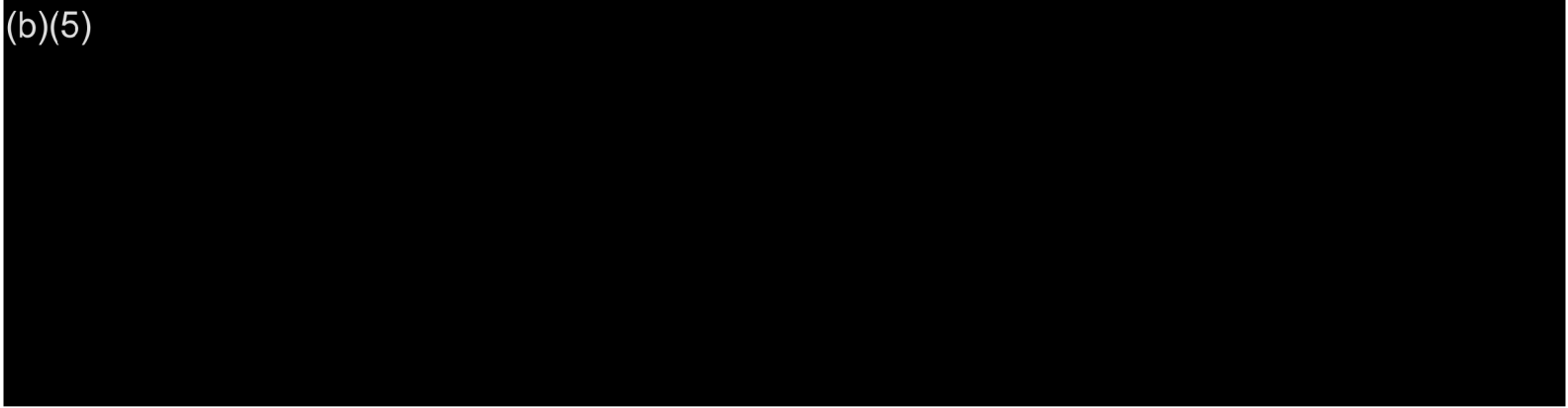
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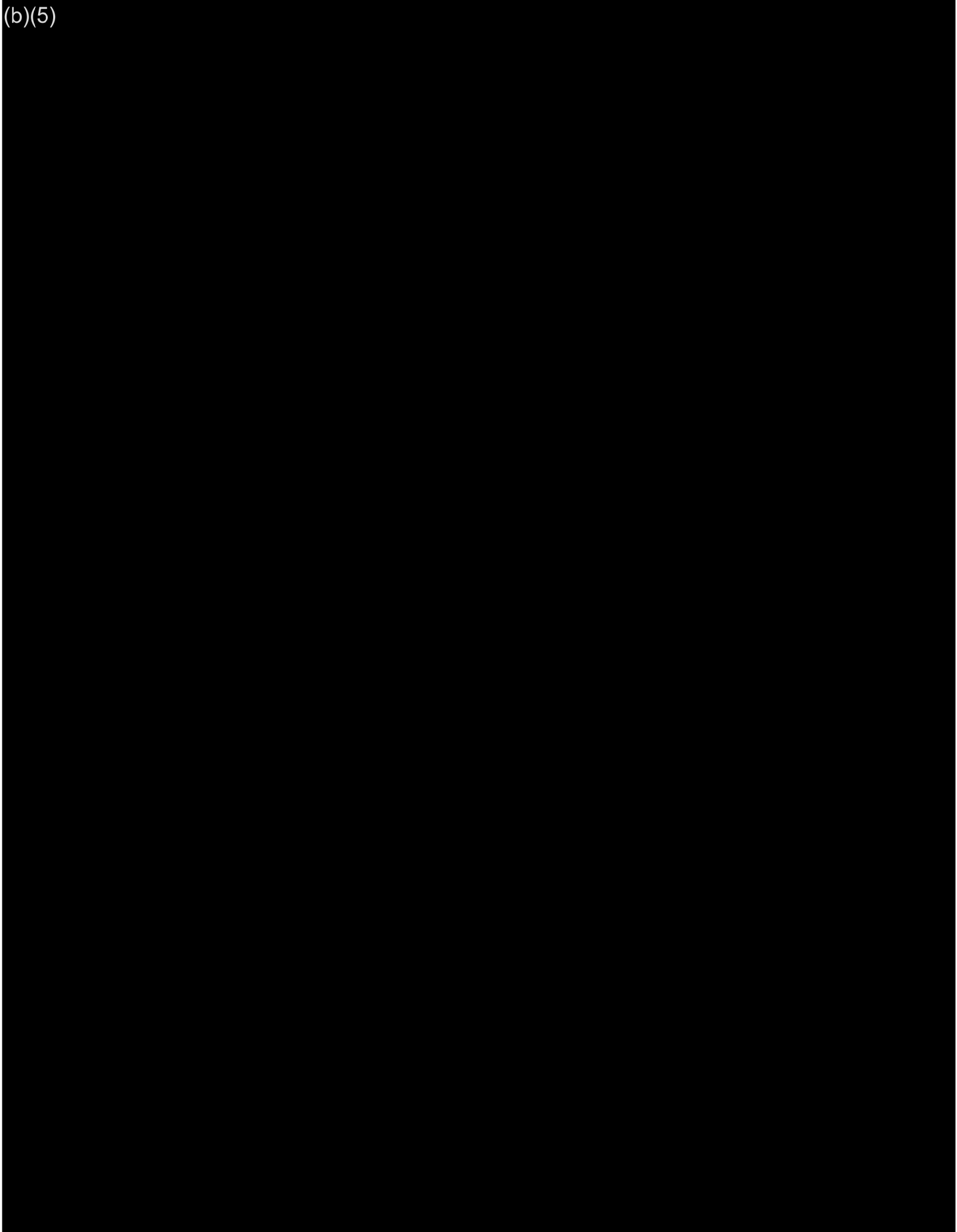
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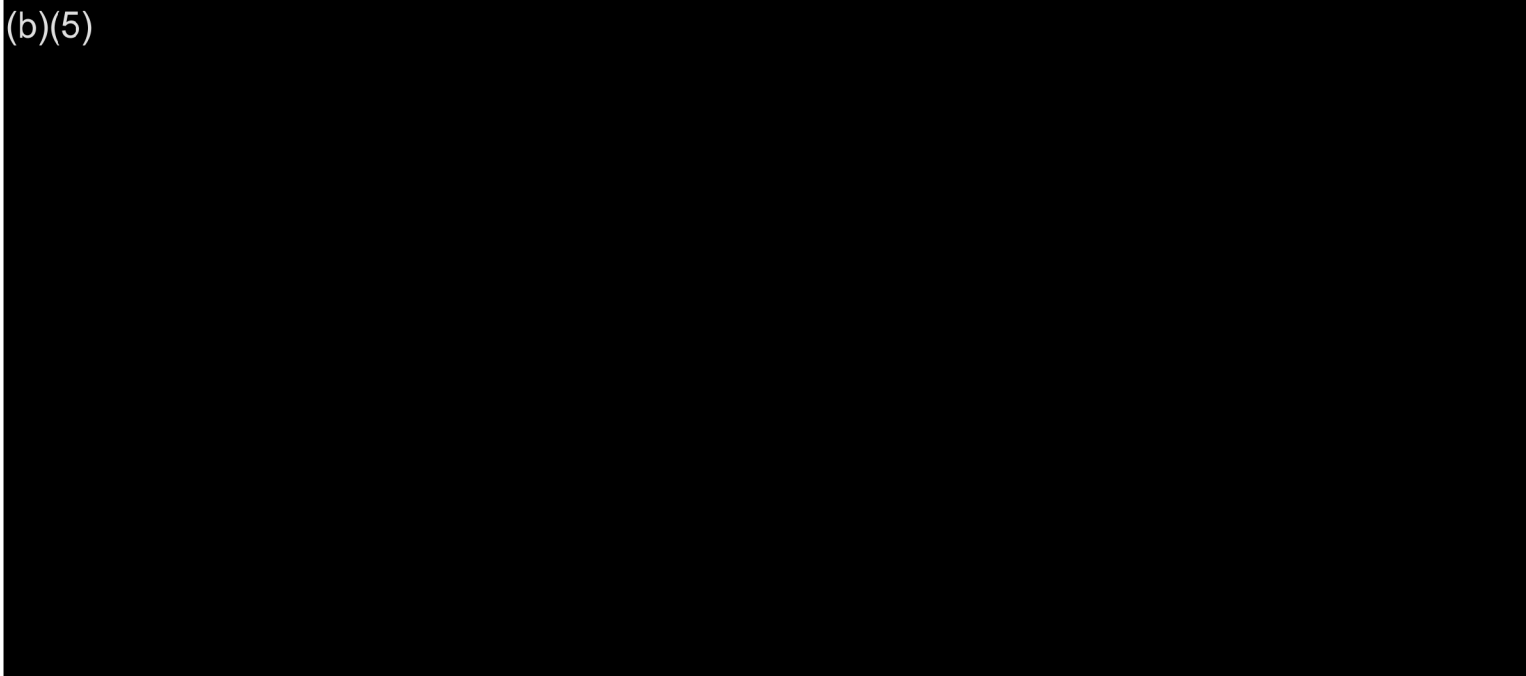


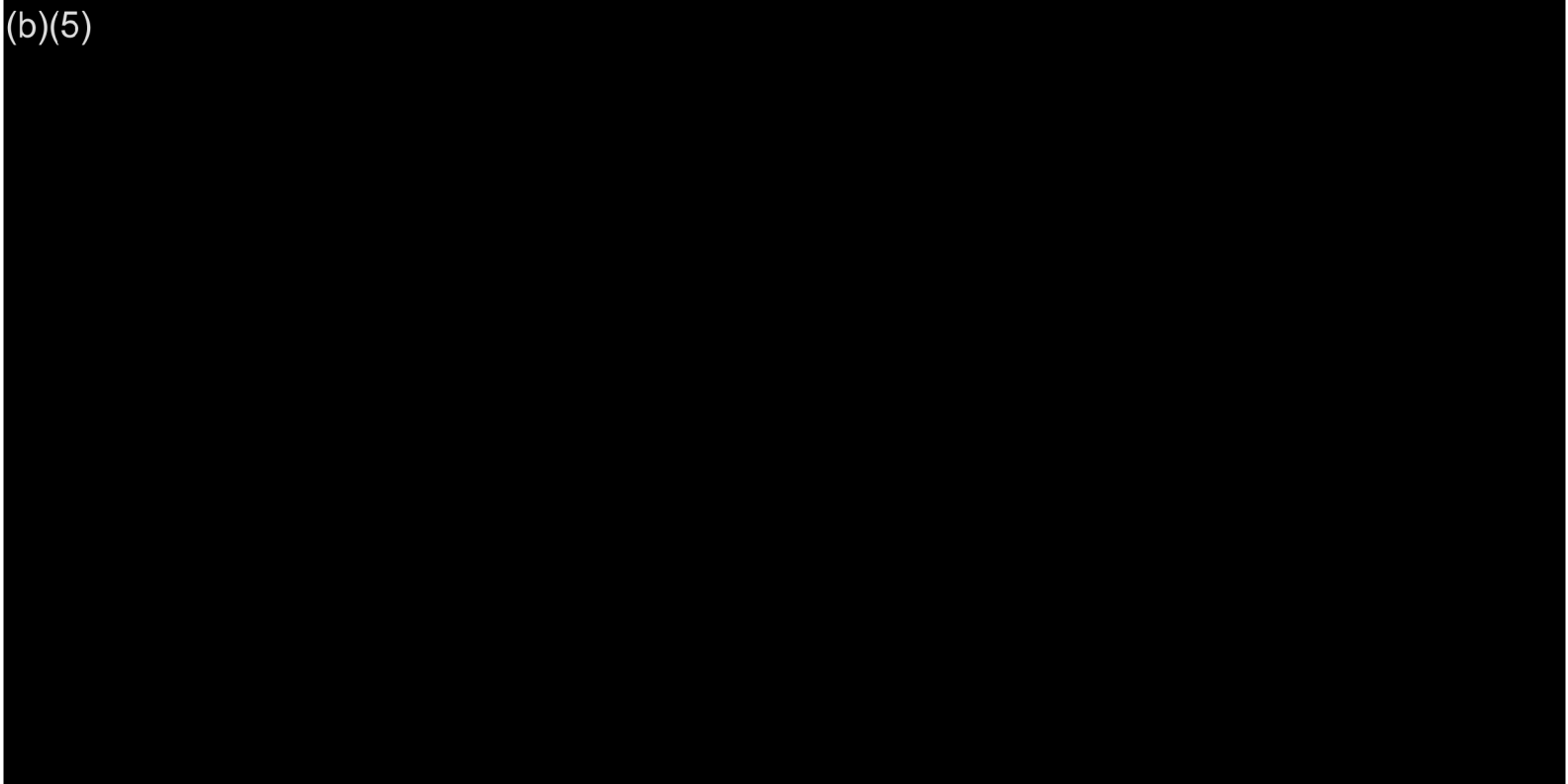


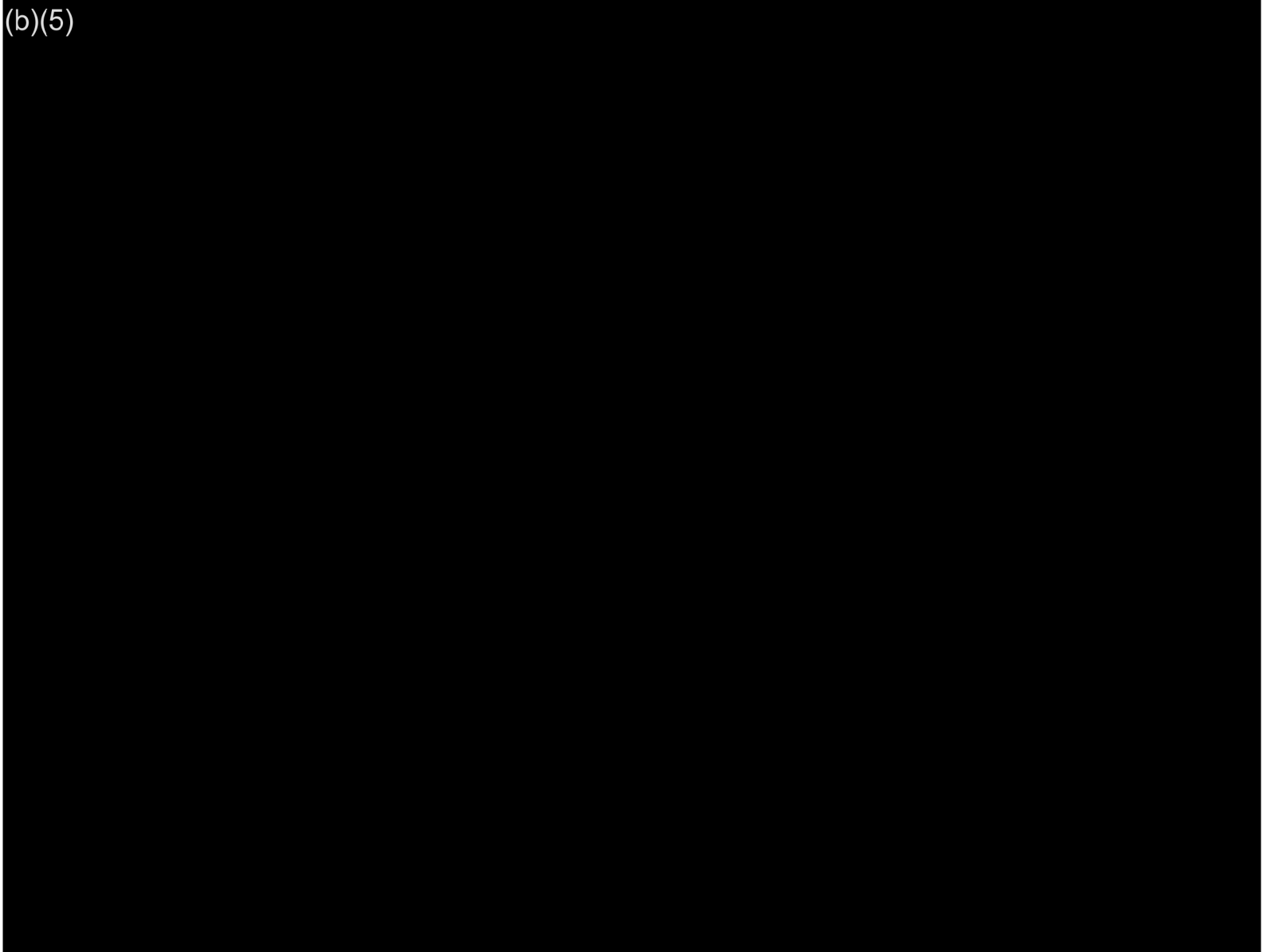


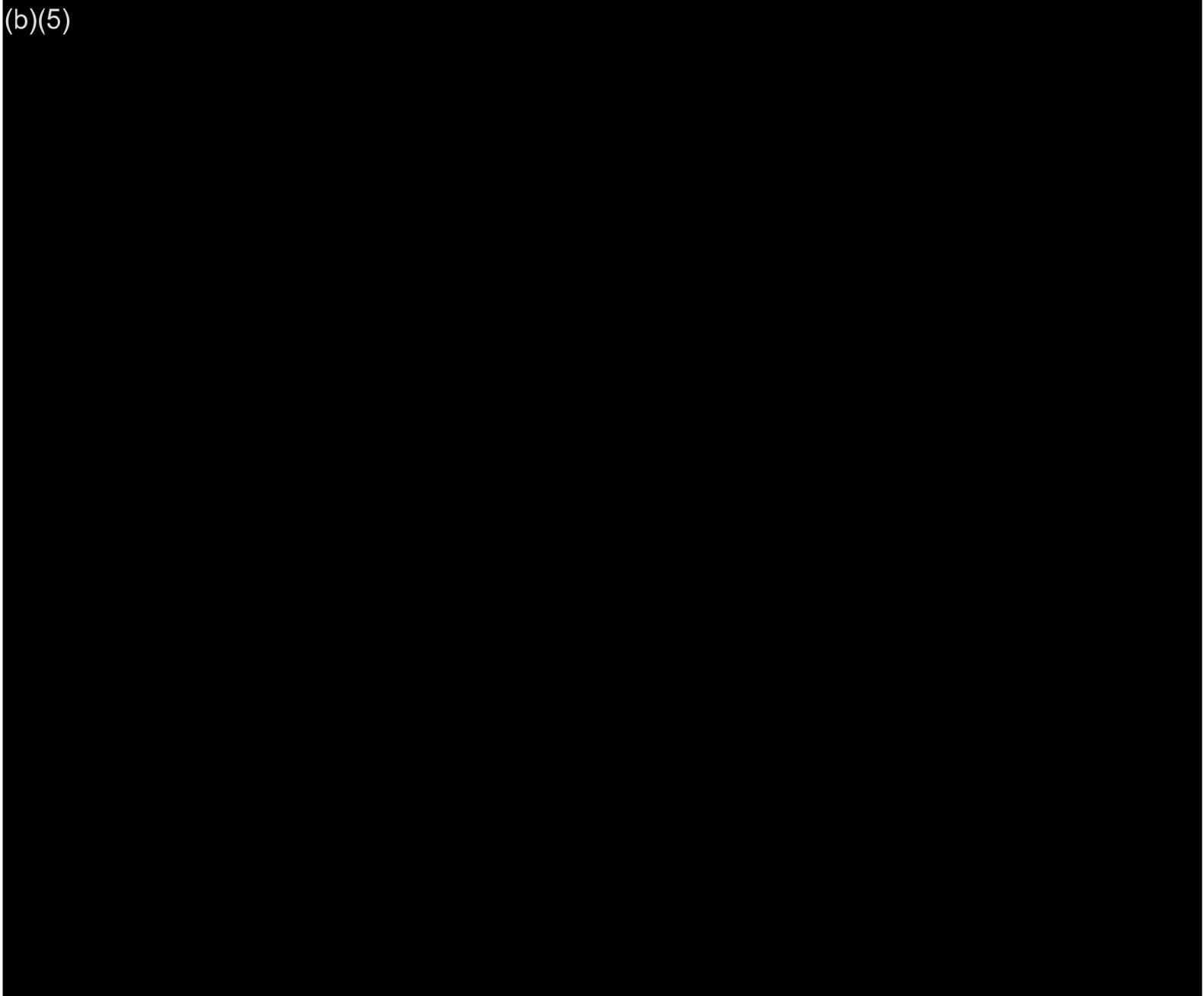




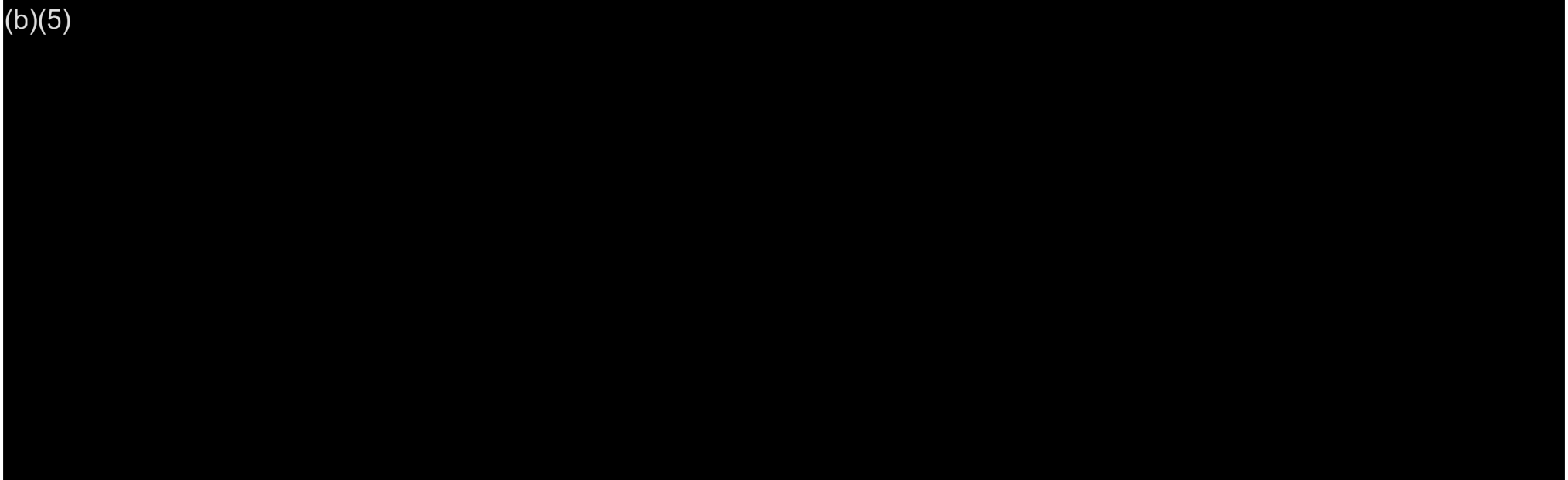


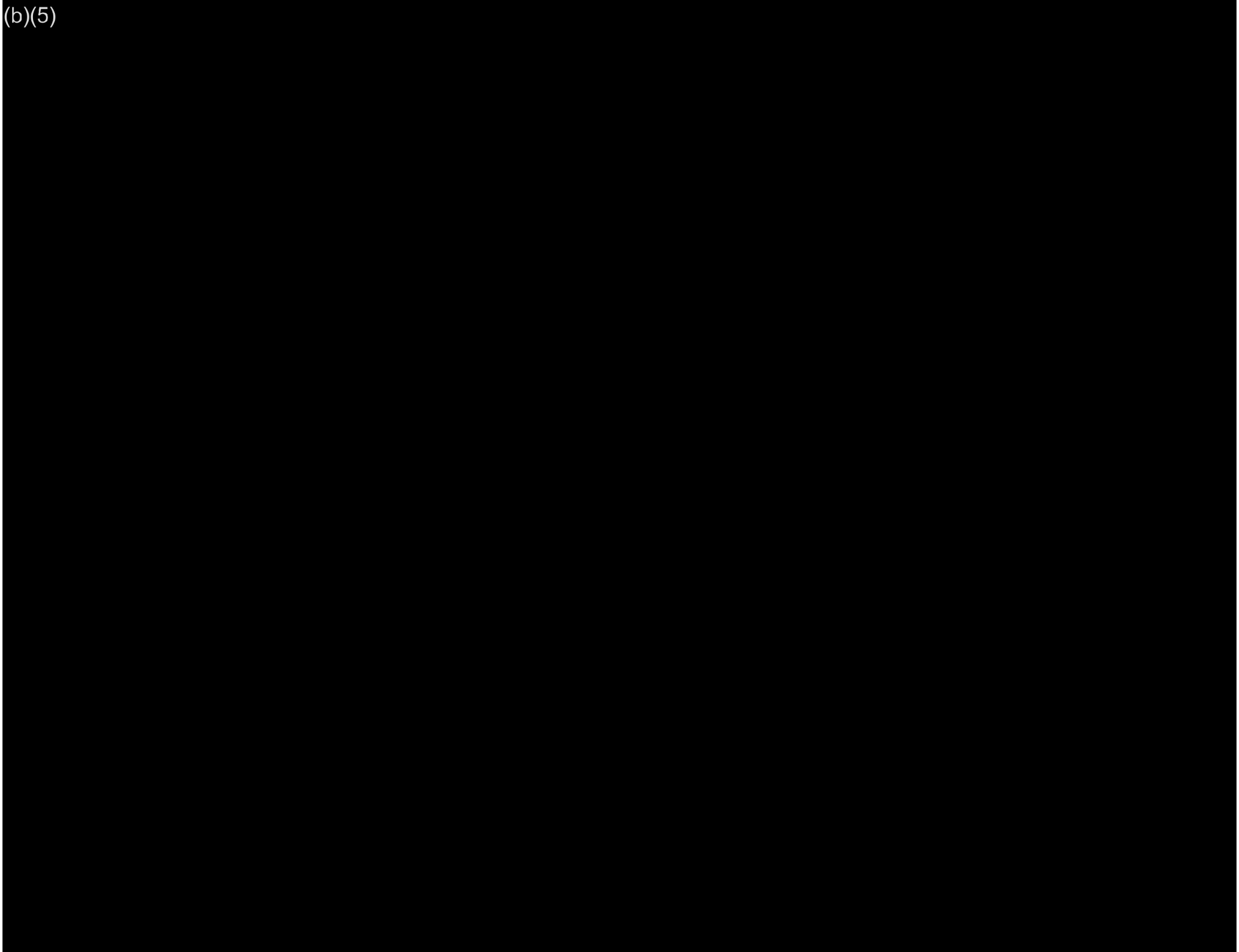


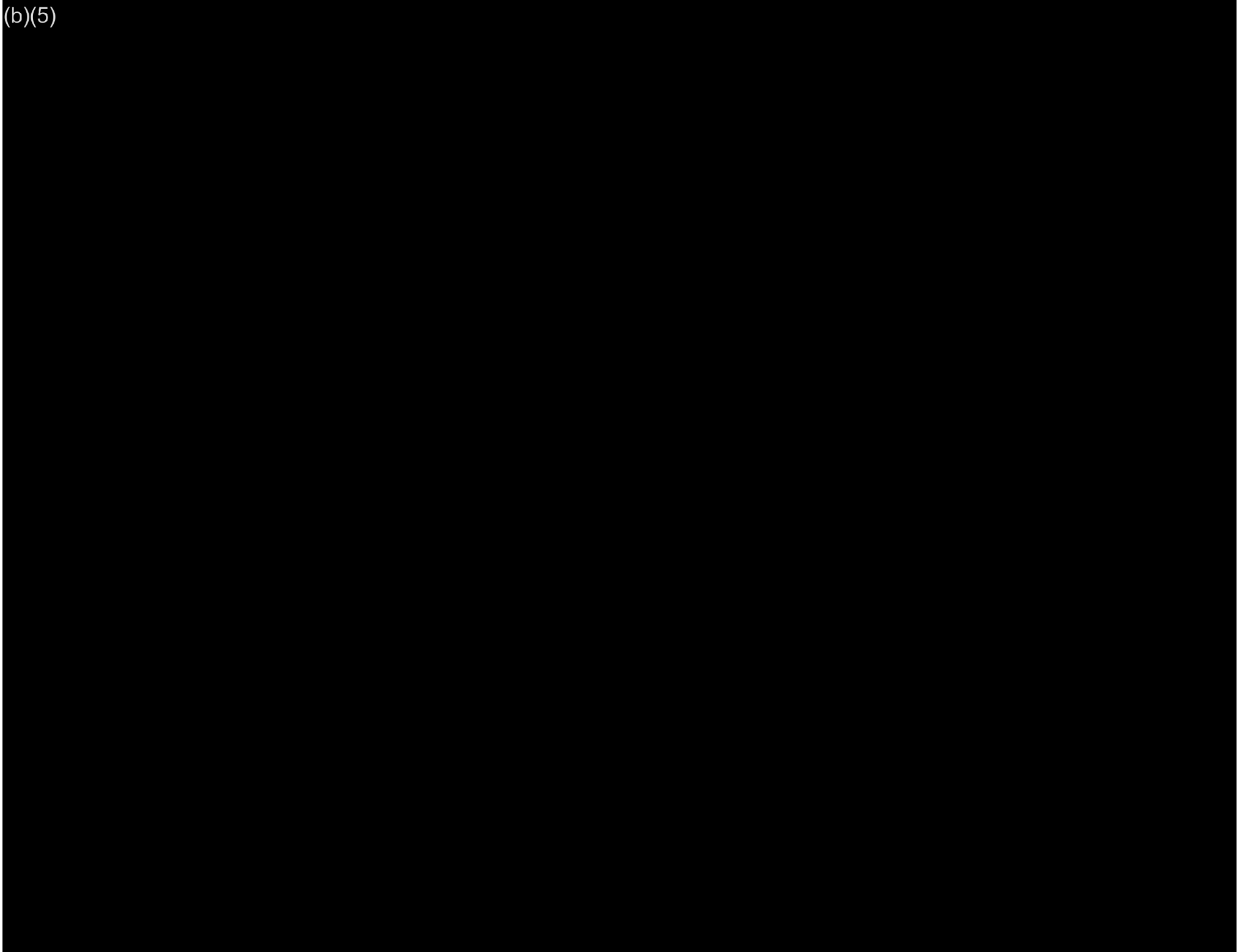


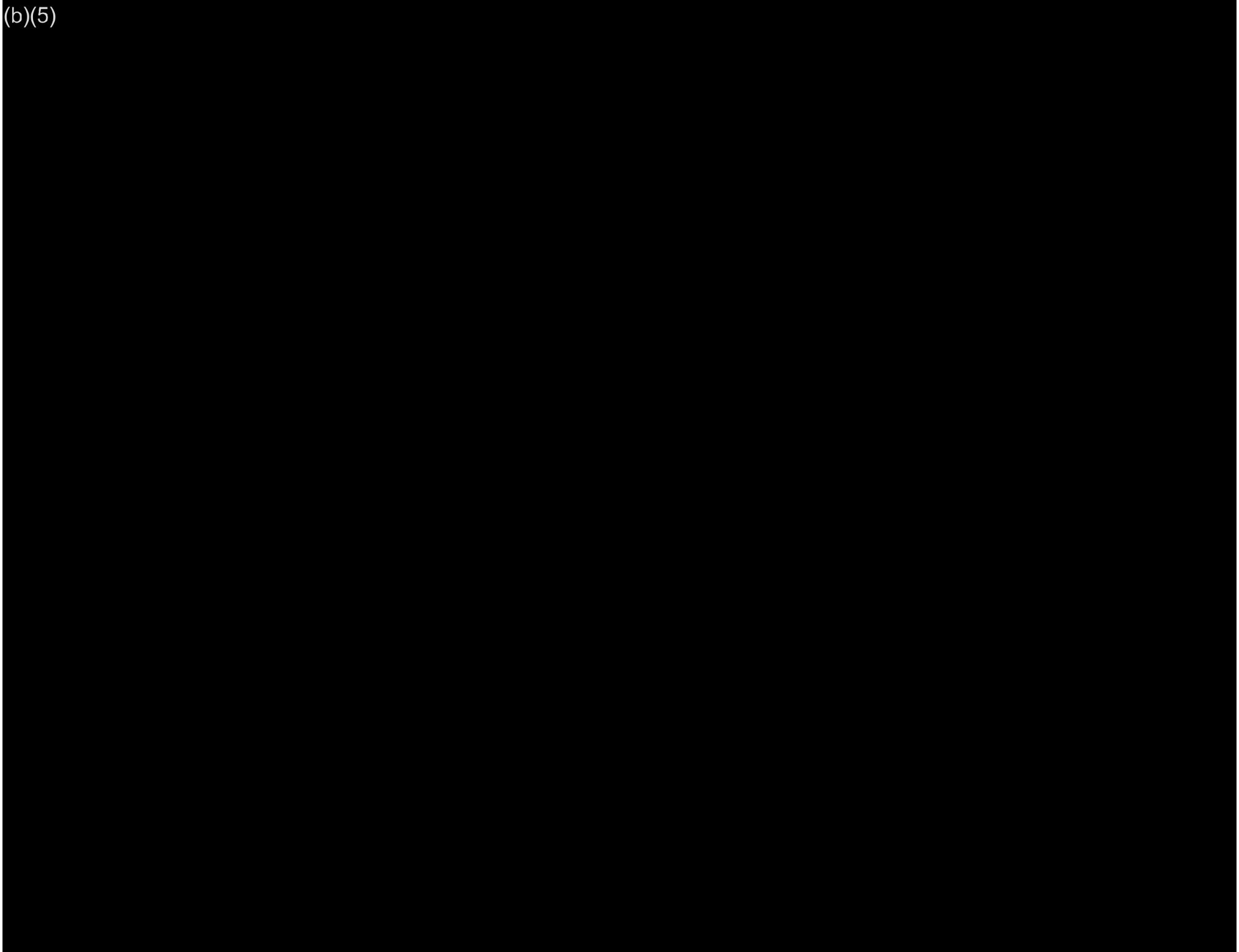


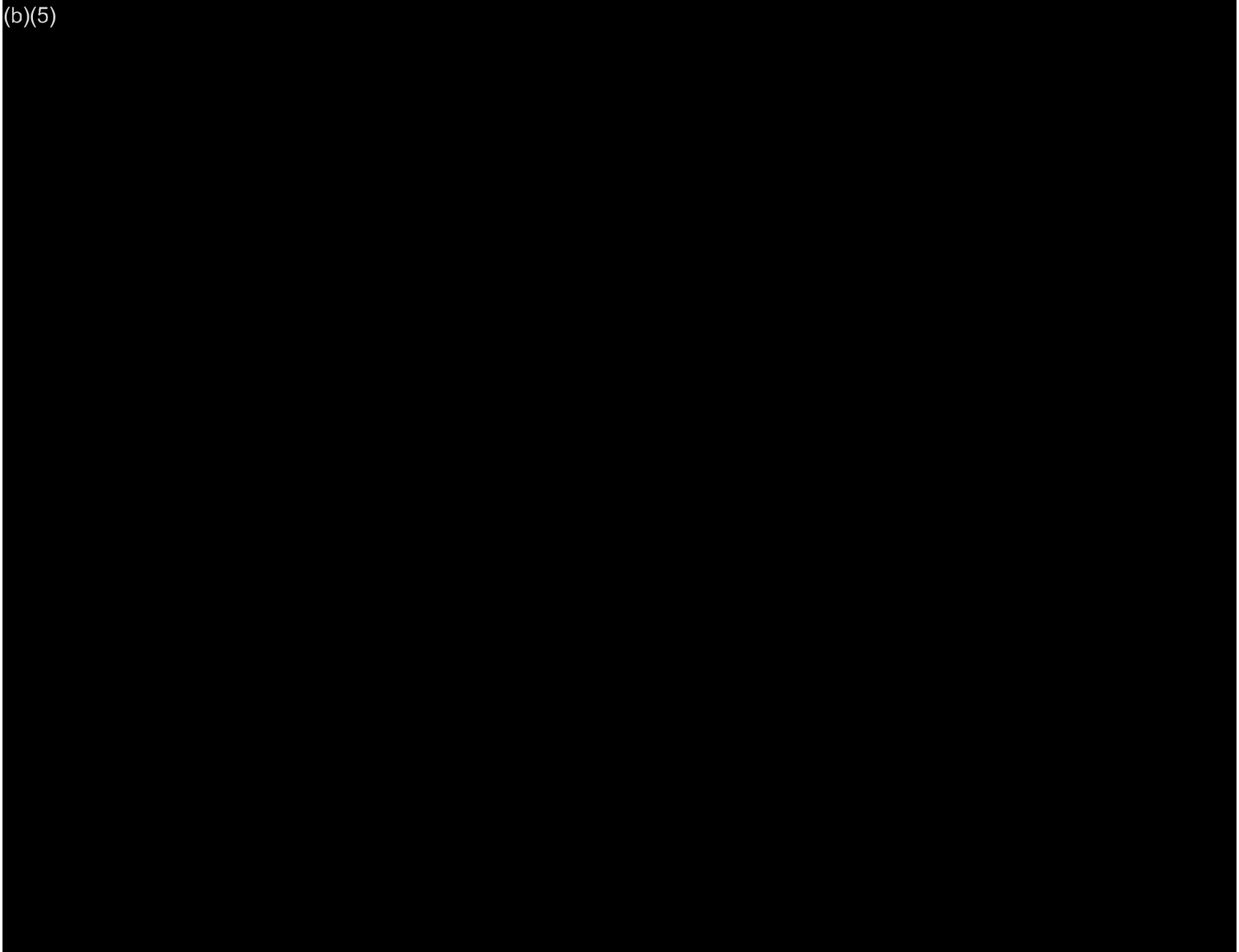
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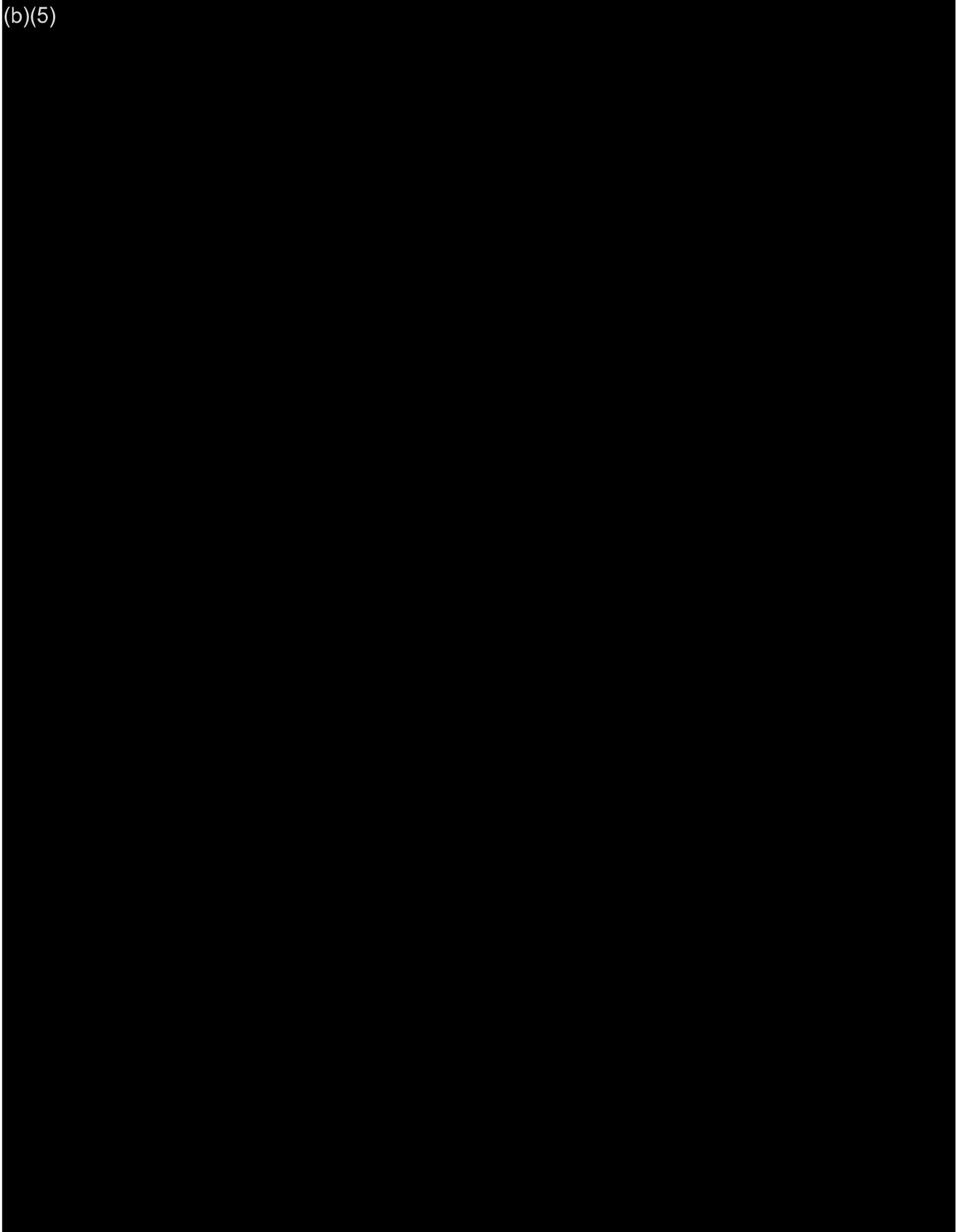














Department of Energy

Bonneville Power Administration
P.O. Box 3621
Portland, Oregon 97208-3621

POWER SERVICES

March 21, 2023

In reply refer to: PG-5

**Comments of the Bonneville Power Administration
Implementation Guidance for Section 8220 of the Water Resources Development Act of 2022
Disposition Study on Hydropower in the Willamette Valley, Oregon**

Docket ID No. COE-2023-2002

Ms. Amy Frantz, CEW-P
U.S. Army Corps of Engineers, 3F91
441 G Street, N.W.
Washington, DC 20314

Dear Ms. Frantz,

The Bonneville Power Administration (Bonneville) appreciates the opportunity to comment on guidance for implementing section 8220 of the Water Resources Development Act of 2022. Section 8220 directs the Secretary to carry out a disposition study to determine the Federal interest in, and identify the effects of, deauthorizing hydropower as an authorized purpose in whole, or in part, of the Willamette Valley Project.

Bonneville is the Federal power marketing administration with the statutory authority and sole obligation to market hydroelectric power from the Willamette Valley project. Bonneville implements this authority to ensure an adequate, economic, and reliable power supply for regional power customers in the Pacific Northwest.

Implementation guidance should guide the Corps to scope the project to be deliverable within 18 months by focusing on the power purpose of the WVS dams and not introduce other, more broad analysis that Section 8220 does not address. The analysis should focus primarily on answering whether there is a federal interest in commercial production of hydropower in the future. The implementation guidance should encourage the Corps to incorporate Bonneville's determination of the value of the commercial generation that may remain available with the limits on operations proposed by the draft PEIS.

Bonneville shares the interest of the U.S. Army Corps of Engineers (Corps), for timely and sufficient completion of the final Programmatic Environmental Impact Statement (PEIS) for the Willamette Valley System (WVS), which is evaluating dam passage and water quality designs for anadromous fish restoration above the WVS dams as well as reservoir operational changes. Bonneville believes that the disposition studies required by Congress, if efficiently conducted, will inform the completion of the WVS EIS by incorporating analysis of the Federal interest in commercial power generation. That analysis may

inform design options that are the Corps has not considered in order to preserve power generation as a project purpose.

Bonneville also wants to reiterate points it recently provided to the Corps on the draft PEIS:

- An implementation plan for the consideration of deauthorization and cost allocation updates should be included in the final PEIS.
 - The Draft PEIS estimates the annual benefit of flood protection to be at least \$1 billion and power generation to be \$26 million, yet the power purpose's cost allocation averages around 40 percent. This estimate itself highlights the need for updated cost allocations, and should help inform the Corps of its appropriate short and long-term federal funding requests necessary to meet its most valued project purposes.
- The disposition studies should include the full scope of operational limits affecting hydropower generation. The current PEIS analysis does not reflect the significant cost impact from continued operations of the 2021 Oregon District Court injunction until the Corps completes structural measures. These operations stand to reduce the value of hydropower generation by nearly a third. Under the PEIS implementation schedules, these operational limits will be in place well into the 2040s. Having that information incorporated into the disposition studies analysis will help inform both Congress and the Final PEIS.
- Finally, Bonneville continues to urge the Corps to update structural cost estimates, which the Corps states in the Draft PEIS are likely more than double the current estimates. In addition, recent economic events of inflation, constrained supply chains, and escalated interest rates also likely impact the cost estimates.

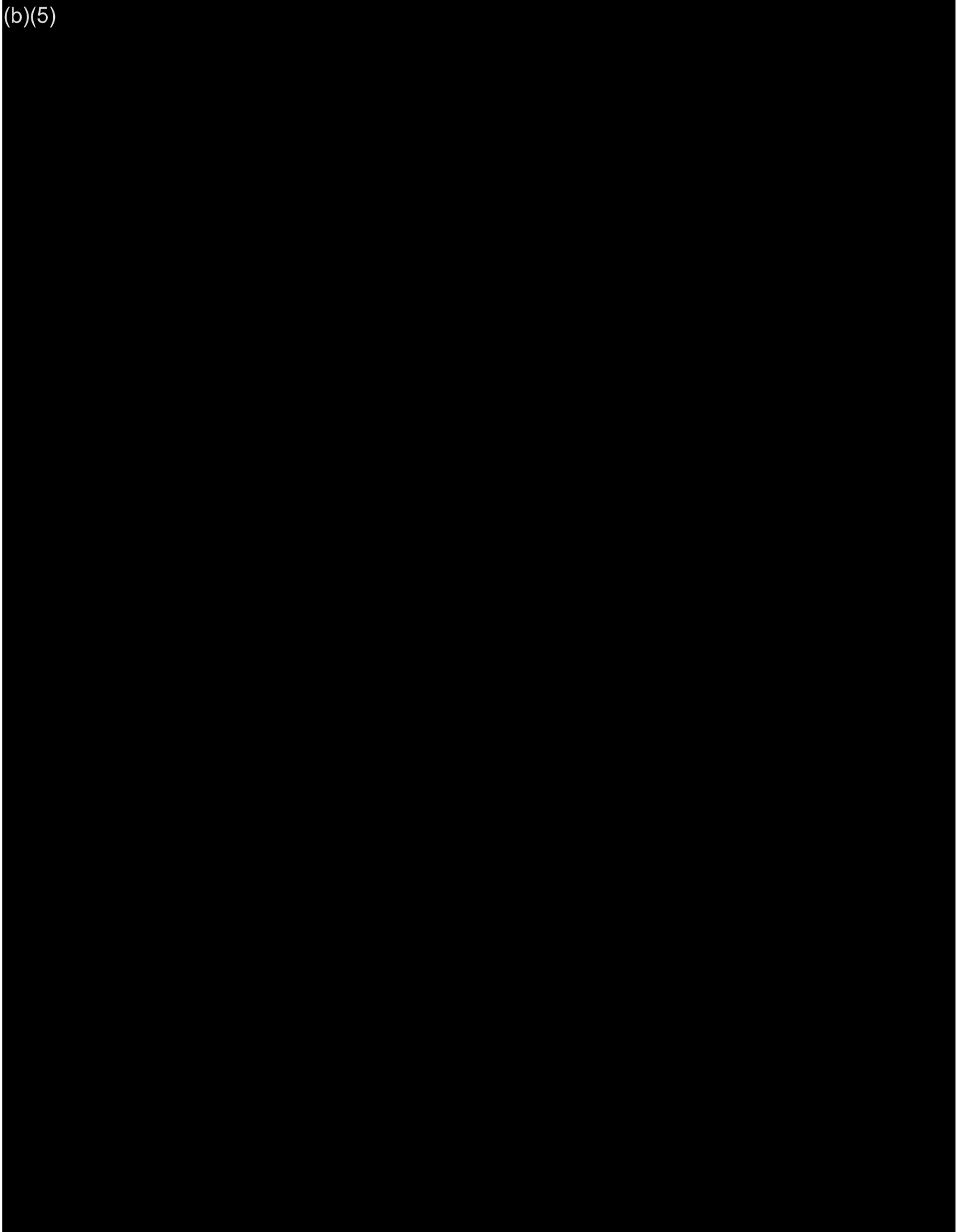
Bonneville has also provided its assessment to the Corps that the other project purposes would not be negatively impacted by deauthorization of the project purpose. Bonneville provided this assessment to the Corps in 2021 and respectfully requests that the Corps consider this analysis in the report to Congress responding to Section 8220.

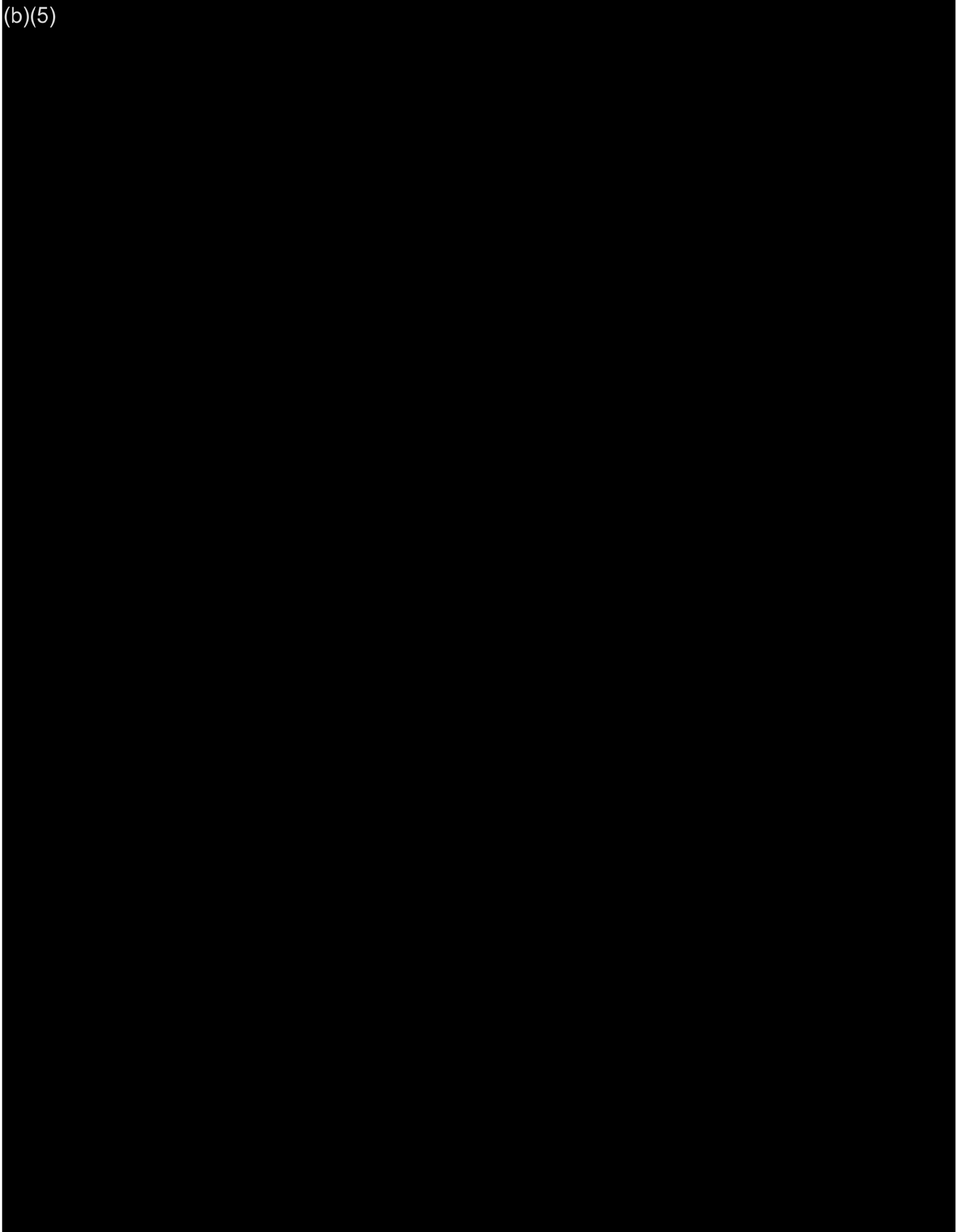
Thank you for your consideration of these comments and please do not hesitate to contact me for any additional information or assistance.

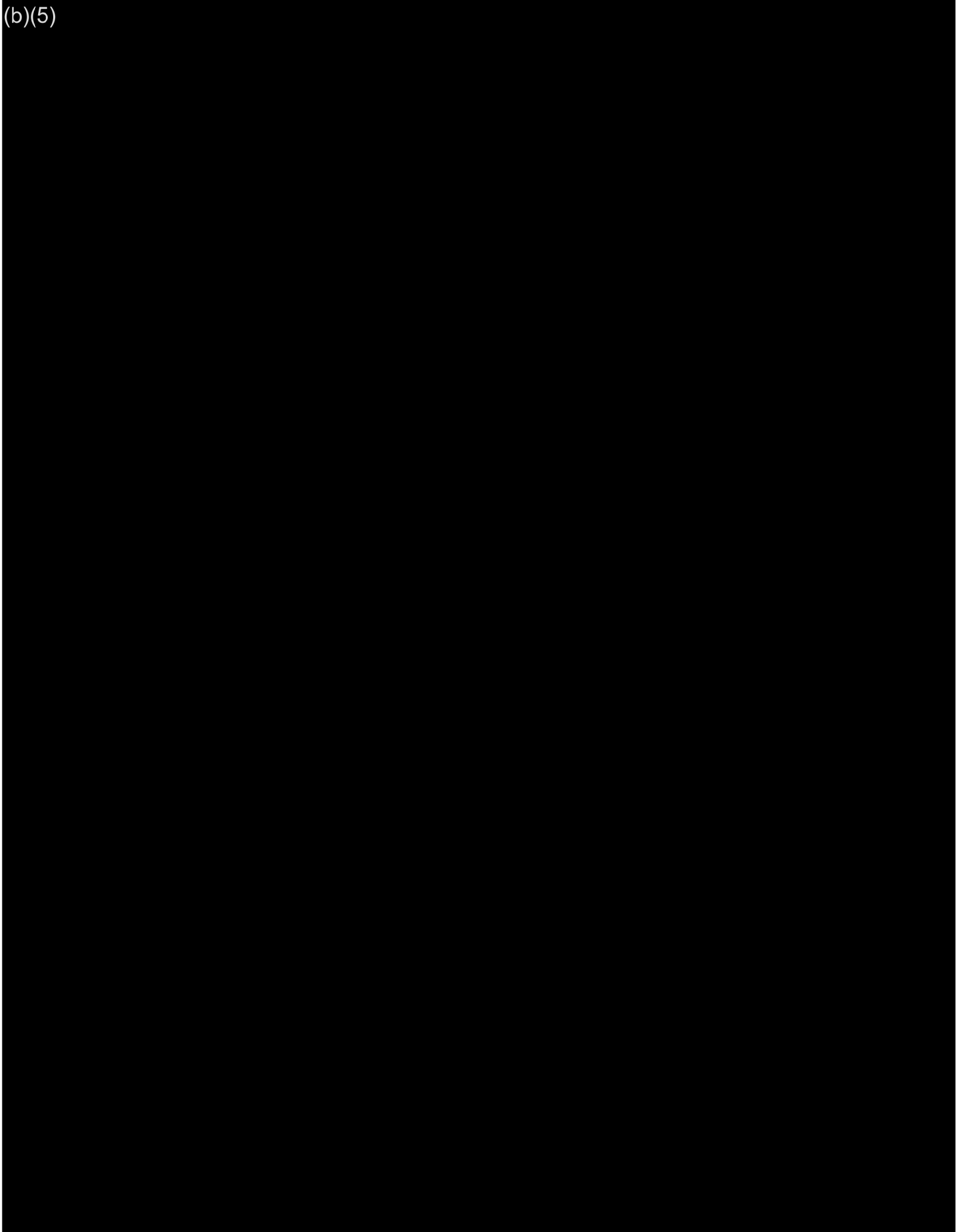
Sincerely,

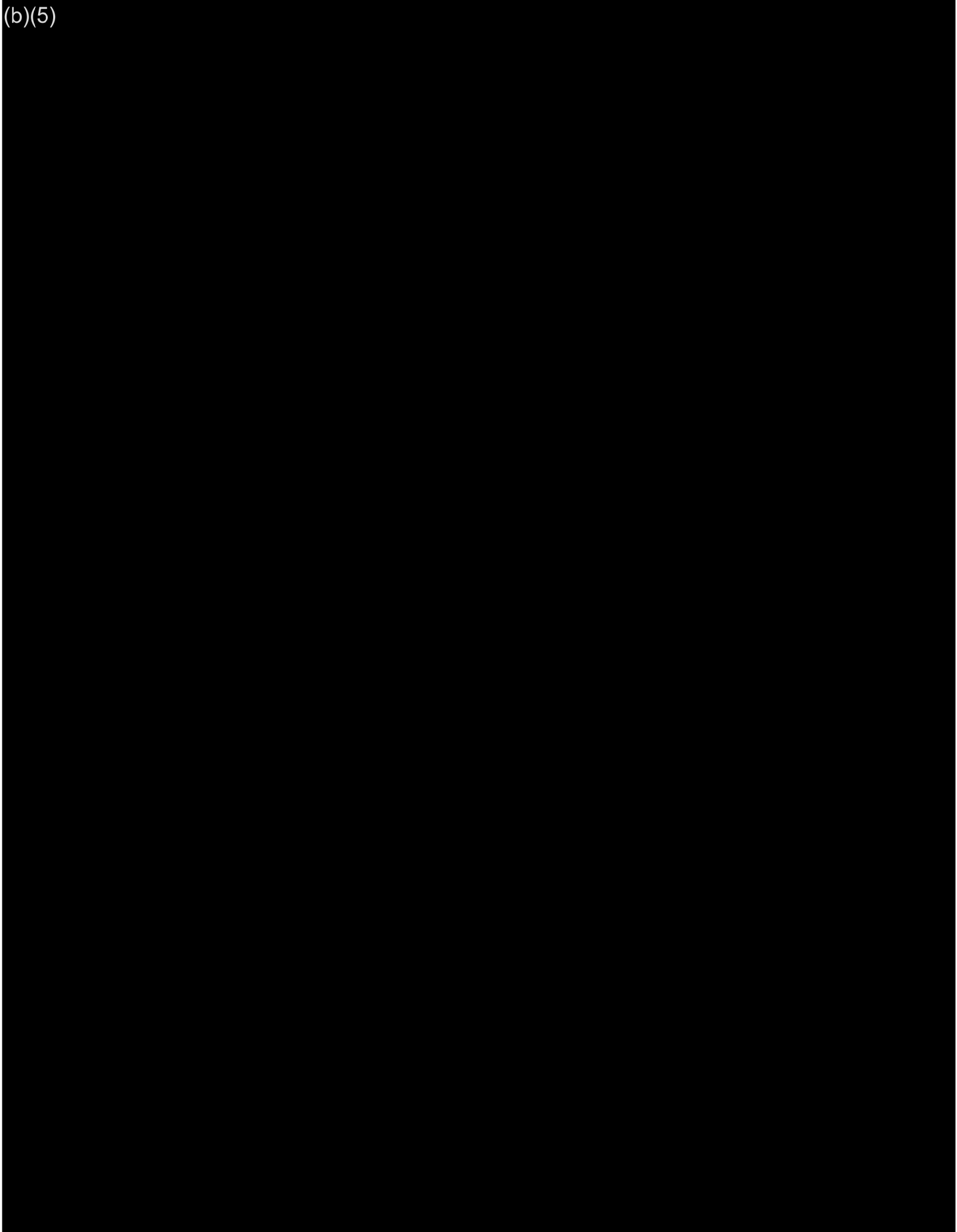
William J. Leady P.E.
Vice President for Generation Asset Management
Bonneville Power Administration

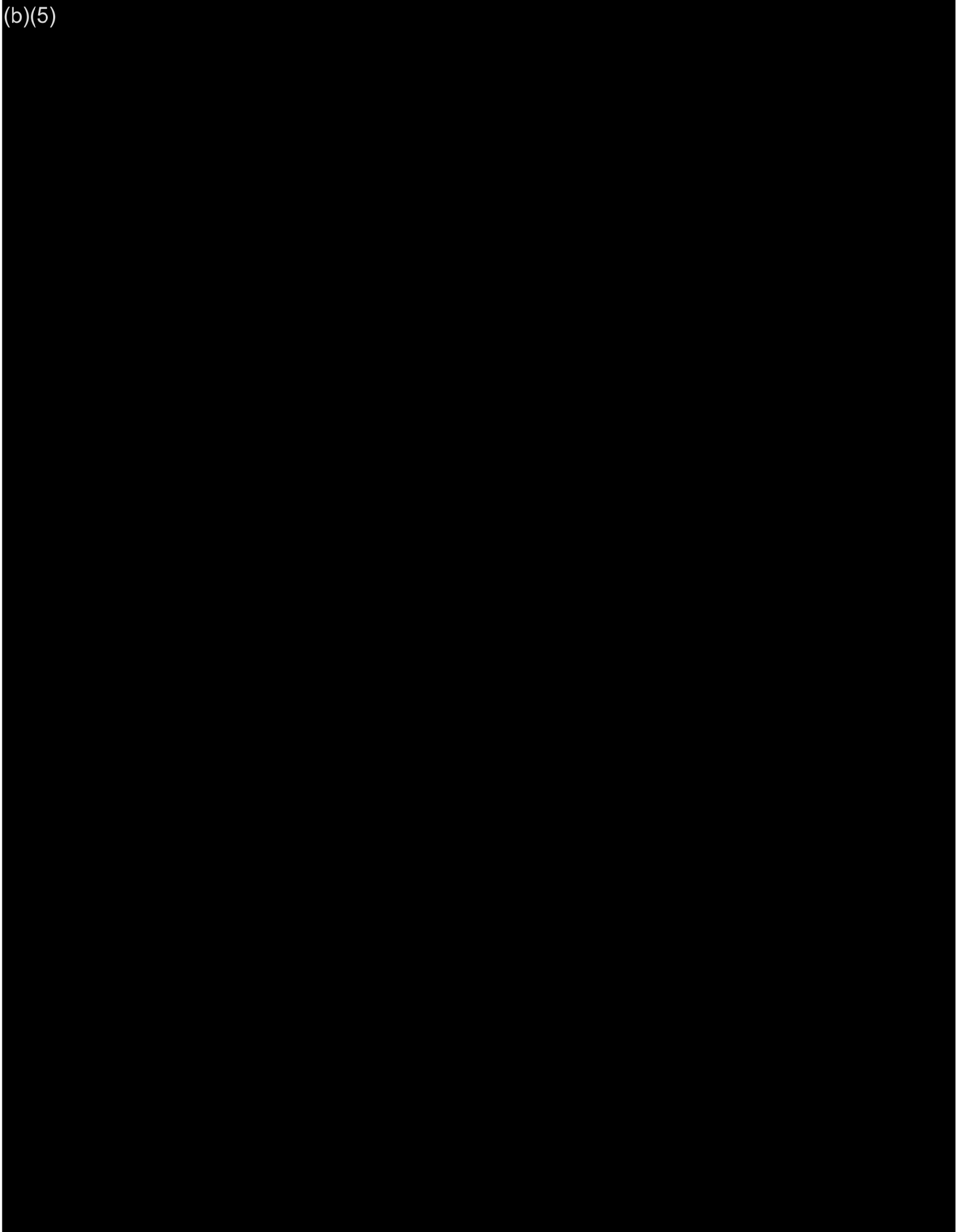
Attachment: Bonneville comments on Draft Programmatic Environmental Impact Statement for Willamette Valley System Operations and Maintenance













Department of Energy

Official File

Bonneville Power Administration
P.O. Box 3621
Portland, Oregon 97208-3621

POWER SERVICES

February 3rd, 2023

In reply refer to: PG-5

Liza Wells
Deputy District Engineer for Programs and Project Management
Portland District, United States Army Corps of Engineers
333 SW First Ave.
Portland, OR 97204

Dear Ms. Wells,

The Bonneville Power Administration (Bonneville) appreciates this opportunity to comment on the Draft Programmatic Environmental Impact Statement (Draft PEIS) for operations and maintenance of the Willamette Valley System.

Bonneville is participating in the development of the Draft PEIS as a cooperating agency, focusing on its expertise on the hydropower purpose of the Willamette Valley System, including hydropower generation and marketing, and electric transmission facilities and operations.

As contemplated by the Cooperating Agency Memorandum of Understanding between Bonneville and the Corps, Bonneville would like to take this opportunity to present its views on the Draft PEIS, particularly where it believes the PEIS would benefit from additional analysis. In addition to the themes discussed in this letter, Bonneville will provide the Corps with specific updates and revisions related to hydropower generation and transmission analysis in the Draft PEIS, as part of Bonneville's ongoing participation in this PEIS process as a cooperating agency. Bonneville continues to acknowledge and thank the Corps staff and leadership for its engagement and collaboration with Bonneville in the preparation of the Draft PEIS.

The Draft PEIS evaluated alternatives to achieve multiple objectives; however, none of the action alternatives to restore naturally spawning salmon and steelhead above Willamette Valley dams would maintain economical hydropower as a residual benefit of the system.

The Corps constructed the Willamette Valley System to primarily provide flood protection for Oregon communities. The system's storage capacity also provides benefits for recreation, water supply, and water quality. As the Draft PEIS notes, hydropower is a residual benefit of the Willamette Valley System, available after the Corps has optimized operations for other project purposes. The current action alternatives in the draft PEIS have outcomes which reduce the availability of hydropower generation while multiplying its costs.

Although the Draft PEIS clarifies some of the challenges of maintaining economical hydropower as a benefit of the Willamette Valley System, Bonneville believes that the Final PEIS would benefit by including specific elements to more completely capture the scope of those challenges, as well as identifying steps towards addressing them. Accordingly, Bonneville has three requests for inclusion in the Final PEIS:

- Bonneville continues to request that the Corps include in the final PEIS its implementation plan for the consideration of de-authorization and cost allocation updates at these projects. Bonneville notes the recent mandate from Congress in the 2022 Water Resources Development Act directing system-wide disposition studies of the power purpose of the Willamette dams by June 2024. Bonneville also offers the following considerations for the disposition studies:
 - Disposition studies will inform potential congressional deauthorization of power at the Willamette dams. If Congress does deauthorize power, the Corps may be able to design less costly and more effective passage routes for juvenile salmon.
 - Disposition study analysis should also inform needed cost allocation updates. Significant operational changes and the shifting economics of managing hydropower and flood control at Willamette Valley projects make cost allocation updates necessary. The Draft PEIS estimates the annual benefit of flood protection to be at least \$1 billion and power generation to be \$26 million, yet power's cost allocation averages around 40 percent. If the disposition studies, as part of assessing whether hydropower is in the federal interest, do find net economic value for remaining hydropower generation at one or more of the Willamette dams, the Corps and Bonneville should use that analysis to implement the needed appropriate cost allocation between flood risk management and power.
 - Meeting Congress' timeline for completing disposition studies by June 2024 should support implementation planning for the Final PEIS and help inform Bonneville's decisions for continued investments in the dams' power facilities. It will be important for the Corps to limit the scope of the disposition studies and focus only on the effects of deauthorizing hydropower.
- The Corps should revise the PEIS analysis to fully include the impact of the continuation of the near-term operations in the planned implementation of the final preferred alternative. The most significant impact on hydropower is the provision to continue the operations of the 2021 Oregon District Court injunction until the Corps completes structural measures, which, for some of the measures, would be well into the 2040s under the Draft PEIS implementation schedule. The current analysis does not reflect these operations which stand to reduce the value of hydropower generation by nearly a third. The Final PEIS should include revised estimates for the remaining value of hydropower generation that incorporates the near-term measures. Because these estimates are also

necessary for the disposition studies directed by Congress, their inclusion will help inform both Congress and the Final PEIS.

- Bonneville continues to urge the Corps to update structural cost estimates. The estimated costs of structures for fish passage and water temperature seem to be quite conservative. The Corps states in the Draft PEIS that it is basing cost estimates on conceptual designs and that actual costs could likely more than double. Additionally, recent economic events of inflation, constrained supply chains, and escalated interest rates make the Draft PEIS estimates likely out of date.

Again, Bonneville appreciates the Corps' collaboration during the preparation of the PEIS. This represents an important milestone for the future management of the Willamette Valley System. The system continues to provide substantial regional value through flood risk management, water supply, and recreation as its operations evolve to benefit fish and wildlife. We submit these comments with the objective of resolving the anticipated major, adverse impacts presented in the PEIS to economic and reliable power generation.

Sincerely,

William J. Leady P.E.
Vice President for Generation Asset Management
Bonneville Power Administration

cc: Beth Coffey
Director of Programs
Northwestern Division, USACE

Brad Thompson
Chief of Planning, Environmental Resources and Fish Policy
Northwestern Division, USACE

Jesse Kintz
Senior Policy and Project Lead, Power Generation, Bonneville

From: Marker,Doug R (BPA) - AIR-7
Sent: Tuesday, May 9, 2023 1:46 PM
To: Kintz,Jesse H (BPA) - PG-5; Smith,Glen A (BPA) - PG-5; Welch,Julee A (BPA) - LP-7
Subject: Willamette discussion in Congressional budget testimony - Quick review this afternoon?

Sonya is asking to get our testimony to DOE next Monday, so I need to start the TAC process this afternoon. This is a recitation of Congressional action concerning the Willamette. It does not include the discussions with Keys because we're not elevating that discussion yet.

If you can look at this this afternoon and let me know of any concerns, I'd appreciate it.

Thanks!

FCRPS Reallocation and Disposition Studies

While the hydroelectric dams of the Columbia and Snake Rivers remain incredibly valuable clean energy assets for the Pacific Northwest, Bonneville is concerned by the sharply declining value of flood control dams in Oregon's Willamette Valley for hydroelectric generation. The Willamette Valley System was authorized by Congress primarily for flood risk management and the 11 dams in the system continue to provide considerable benefits to downstream communities for flood protection as well as for water supply and recreation. Eight of the dams have power generating capability and Bonneville was assigned by Congress to repay approximately 40 percent on average of the joint costs for those dams.

The Willamette dams were built without fish passage facilities and, in response to litigation, the Corps of Engineers is investigating structural and operational measures to provide fish passage at the power producing Willamette dams. Already among the highest cost projects in Bonneville's hydro portfolio, the estimated cost of structural measures will add significant burden to Bonneville's capital obligations. In addition, the Corps has proposed in the recent draft Environmental Impact Statement for the Willamette Valley System to indefinitely extend reservoir operations for fish passage that reduce power generation by about a third of recent annual average production.

In the Fiscal Year 2020 Energy and Water Appropriations Act, the House Committee report directed the Corps, Bureau, and Bonneville to report on methods to modernize allocation of project costs among authorized purposes to reflect current benefits. The Corps and Bonneville focused on the cost allocations for the Willamette dams but could not agree on the need or method for updating cost allocations. For reference, in the Draft Environmental Impact Statement for the Willamette Valley System, the Corps estimates the annual value of flood protection from the dams as over one billion dollars a year, while the value of hydroelectric production averages \$21 million a year.

For Fiscal Year 2021, the House committee report directed the Corps and Bonneville to continue to work to resolve their approaches to cost reallocation and provide quarterly reports on their progress. Bonneville has provided quarterly reports to the Committee that no progress has been made for updating cost allocations.

In the 2020 Water Resources Development Act, Congress directed the Corps to report within two years of passage on the impacts of deauthorizing the power purposes at the Cougar and Detroit/Big Cliff projects of the Willamette Valley System. Bonneville provided its own assessment to the Corps that, because power production is a residual purpose of the Willamette dams and is available only after other project purposes have been optimized, those other project purposes would not be negatively impacted by deauthorization of the power purpose. The Corps has not yet provided its report to Congress.

The 2022 Water Resources Development Act directed the Corps to conduct disposition studies for the power purpose at the eight Willamette dams. The Act directed the Corps to provide the disposition studies with 18 months of enactment. The Corps has had initial meetings to discuss the scope of the disposition studies. Bonneville has urged the Corps to focus the disposition studies on the power purposes of the dams and to take into account the diminished power production proposed in the draft Environmental Impact Statement.

Bonneville continues to estimate that power production from the Willamette Valley System is uneconomical with the diminished operations and additional structural costs proposed in the draft EIS. In addition, deauthorizing power production may allow implementation of more effective and less costly fish passage alternatives. Bonneville is eager to complete the evaluations of the dispositions studies for consideration by Congress.

Doug Marker
Intergovernmental Affairs
Bonneville Power Administration
drmarker@bpa.gov
(b)(6) phone and text

From: Marker,Doug R (BPA) - AIR-7
Sent: Monday, February 6, 2023 11:45 AM
To: Dondy-Kaplan,Hannah A (BPA) - AIR-7; Baskerville,Sonya L (BPA) - AIN-WASH;
Warner,Joshua P (BPA) - AIR-7; Klumpp,Elizabeth C (BPA) - AIR-WSGL; Wilson,Kathryn L
(BPA) - AIR-7
Subject: BPA Comments on draft Willamette EIS
Attachments: BPA comments on Draft PEIS (3 Feb 2023).pdf

FYI – I mentioned these comments on our call just now. Bill Leady has signed and sent these to the Corps and they are meant for distribution and discussions with interested constituents.

From: Baskerville,Sonya L (BPA) - AIN-WASH
Sent: Thursday, February 23, 2023 9:14 AM
To: Marker,Doug R (BPA) - AIR-7; Jones,Sheron M (BPA) - AIN-WASH
Subject: FW: Preparation for BPA Administrator's meetings next week
Attachments: Delegation visits read-aheads February 2023 - Final.pptx; BPA Current Hot Issues 02-2023.docx

Sent.

Sonya Baskerville
BPA National Relations

(b)(6) m

From: Baskerville,Sonya L (BPA) - AIN-WASH
Sent: Thursday, February 23, 2023 11:51 AM
To: Amit Ronen <amit_ronen@cantwell.senate.gov>; Ana Han (Schrier) <ana.han@mail.house.gov>; Anja Brandon <anja_brandon@merkle.senate.gov>; Ashley Stubbs (Newhouse) <ashley.stubbs@mail.house.gov>; Ayla Neumeyer (Risch) <Ayla_Neumeyer@risch.senate.gov>; Ben Schreiber <ben_schreiber@merkle.senate.gov>; Bobby Ahern <Bobby_Ahern@wyden.senate.gov>; Bowen Peard (Kilmer fellow) <Bowen.Peard@mail.house.gov>; Briana.Connolly@mail.house.gov; Charles Adams (Risch) <charles_adams@risch.senate.gov>; Connor Stubbs (Smith) <Connor.Stubbs@mail.house.gov>; Dana Rollison (Kilmer) <dana.rollison@mail.house.gov>; Dylan Laslovich (Tester) <Dylan_Laslovich@tester.senate.gov>; Hazel.Tylinski (DeFazio) <hazel.tylinski@mail.house.gov>; Heather Painter (Kilmer) <heather.painter@mail.house.gov>; Jack Johnstone (Rosendale) <Jack.Johnstone@mail.house.gov>; Jacob Egler <jacob_egler@wyden.senate.gov>; Jami Burgess <Jami_Burgess@cantwell.senate.gov>; Jared Powell (CMR) <jared.powell@mail.house.gov>; Jenna Marinstein (Bonamici) <jenna.marinstein@mail.house.gov>; Jennifer Cash (Schrier) <Jennifer.Cash@mail.house.gov>; Jennifer Chan (Jayapal) <jennifer.chan@mail.house.gov>; Jordan Evich (Herrera Buetler) <Jordan.Evich@mail.house.gov>; Joshua Sizemore (Daines) <Joshua_Sizemore@daines.senate.gov>; Kaila Hood (Blumenauer) <kaila.hood@mail.house.gov>; Kate Walker <Kate_Walker@crapo.senate.gov>; Katie Lample <katie_lample@merkle.senate.gov>; Kris Pratt (DeFazio) <Kris.Pratt@mail.house.gov>; Kristen Siegele (Crapo) <kristen_siegele@crapo.senate.gov>; Lindsay Slater (Simpson) <Lindsay.Slater@mail.house.gov>; Liz Payne (CMR) <Liz.Payne@mail.house.gov>; Makenzie Shellnutt (Rosendale) <makenzie.shellnutt@mail.house.gov>; Malcolm McGeary <malcolm_mcgeary@wyden.senate.gov>; Matthew Keenn (Fulcher) <Matthew.Keenn@mail.house.gov>; Megan Thompson <megan_thompson@cantwell.senate.gov>; Michael Taggart (CMR) <michael.taggart@mail.house.gov>; Morgan McCue (Bonamici) <Morgan.McCue@mail.house.gov>; Nick Strader <Nick.Strader@mail.house.gov>; Olivia Babine (Newhouse) <Olivia.Babine@mail.house.gov>; Olivia Wilhite (DeFazio) <Olivia.Wilhite@mail.house.gov>; Rachel Berkson (Jayapal) <Rachel.Berkson@mail.house.gov>; Rachel Madley (Jayapal) <rachel.madley@mail.house.gov>; Regina Logan <Regina_Logan@merkle.senate.gov>; Rishi Sahgal <Rishi_Sahgal@murray.senate.gov>; Sana Rollinson (Kilmer) <sana.rollinson@mail.house.gov>; Sarah Cannon (Simpson) <sarah.cannon@mail.house.gov>; Sean Garcia (Larsen) <sean.garcia@mail.house.gov>; Shanta Katipamula (DelBene) <shanta.katipamula@mail.house.gov>; Shantanu Tata (DelBene) <shantanu.tata@mail.house.gov>; Stephanie McBath (Newhouse) <stephanie.mcbath@mail.house.gov>; Steve Ackerma (Fulcher) <Steve.Ackerma@mail.house.gov>; Thomas Culver <Thomas_Culver@tester.senate.gov>; Travis Martinez (Newhouse) <travis.martinez@mail.house.gov>
Subject: Preparation for BPA Administrator's meetings next week

Hello, all. In preparation for the Administrator's meetings with you and your bosses next week, I have attached the slides John will be talking from along with an updated hot issues paper. Of course, please feel free to call or email me if you have questions. Thanks.

Sonya Baskerville
BPA National Relations
(b)(6) m

BPA Current Hot Issues *February 2023*

BPA Strategic Plan for 2018-2023

In 2018, BPA developed a strategic plan after listening to customers and constituents express their interests in BPA's commercial viability and ability to meet its statutory obligations. BPA was then midway through 20-year power sale contracts with its preference power customers. BPA customers were looking to understand how BPA would be positioned to meet their needs beyond the terms of their current contracts.

BPA adopted the following strategic goals:

1. Strengthen financial health
2. Modernize assets and system operations
3. Provide competitive power products and services
4. Meet transmission customer needs efficiently and responsively

The Administrator believes that acting on these goals has put BPA on a path to become more competitive and responsive to customer needs, modernize our assets and operations to leverage and enable industry change, and deliver on our public responsibilities through a commercially successful business. <http://www.bpa.gov/StrategicPlan>

BPA has started scoping work for the next strategic plan.

BPA Financial Plan

BPA first issued a 2018 Financial Plan as a companion to the current strategic plan. BPA has since issued an update in the summer of 2022 as the 2022 Financial Plan. The 2022 Financial Plan provides a framework for decision-making by defining the financial constraints within which BPA operates and establishing objectives to continue BPA's strong financial health. The three financial health objectives outlined in the financial plan are: achieve a 60-percent debt to asset ratio by 2040; guidance for use of debt and revenues for capital investments; and establish a framework for capital investments. BPA worked collaboratively with its customers and stakeholders through public processes to determine the best courses of action. The 2022 Financial Plan also met the requirement of refreshing the 2018 plan which was included in the IJA.

BPA's finance actions recently were recognized by Moody's as key drivers for BPA's continued financial strength, with Moody's sustaining BPA's Aa2 rating and raising the outlook to positive. Other rating agencies have provided similar positive ratings.

[Research: Rating Action: Moody's affirms Bonneville Power Administration's \(OR\) Aa2 issuer rating; outlook is revised to positive from stable - Moody's \(moody's.com\).](#)

Current BPA Rates

BPA current rates are effective for the FY 2022-2023 rate period. FERC approved these rates on an interim basis in September 2021. The average firm preference rate is \$34.87/MWh, which was a decrease from the average \$35.6/MWh in the last rate period.

FERC granted final approval of the rates on March 24, 2022. These rates expire on September 30, 2023.

BPA had a very strong financial outcome in the first year of this rate period. As a result, BPA's dividend distribution built (the "RDC") into BPA's rate design triggered. The Administrator determined that the over-collection could be distributed in part back to ratepayers, in part to reserves, and in part to fish and wildlife projects that have needed specific funding. A final decision on the RDC distribution was made December 2022.

Integrated Program Review and Rate Case, BP-24

BPA conducted the Integrated Program Review (IPR) in summer 2022. The IPR process is where BPA discusses with customers and other constituents the costs that determine BPA's revenue requirements for the rates. BPA hosted a briefing for Congressional staff at the start of the IPR process to describe BPA's initial analysis of its projected costs for the BP-24 rate period.

As a result of the IPR and BPA's strong financial year and generally stable operating conditions, BPA and its customers agreed to advance a settlement of the BP-24 and TC-24 in the formal rate proceeding which initiated with the Initial Proposal for rates in November 2022. The FRN publishing the Initial Proposal, a summary of the Initial Proposal, and a schedule of the rate case proceedings were provided to Congressional staff. The rate case is expected to conclude by end of July, for rates filing with FERC by August 1, 2023.

Transmission and Market Operations

PacifiCorp, Idaho Power, Powerex, PSE, SCL, NorthWestern Energy, and PGE in the Northwest are participants in the California Independent System Operator's (CAISO) Energy Imbalance Market (EIM or "Western EIM"). BPA announced at the end of September 2021 that it will join the CAISO EIM. BPA's overall business objective is to best preserve the value of Northwest hydro and transmission operations for the Pacific Northwest and BPA customers and to obtain higher financial returns for surplus hydro generation. On March 30, 2022, BPA provided its readiness attestation to CAISO. BPA's go-live market entry was on May 3, 2022.

BPA is making certain information technology investments that would help modernize BPA's operational systems regardless of BPA operating within the WEIM. BPA discussed those investments and costs in meetings with customers. BPA continues to study and have discussions with CAISO, Southwest Power Pool (SPP), and other regional market participants about the evolving western wholesale electricity market to understand where BPA's services may complement those operations and yield greater value to BPA customers within the Pacific Northwest.

BPA Open Access Transmission

BPA continues to operate and maintain a highly reliable and resilient transmission system to meet the needs of transmission requests. BPA is working with transmission customers to make decisions responding to BPA's 2022 Cluster Study, which studied 144 individual transmission service requests comprised of 11,118 MW. The outcome of the cluster study resulted in potential transmission projects or reinforcements representing about 7,000 megawatts of service requests. BPA has worked with many of those transmission requesters to provide requested transmission service without construction. We also continue to work with transmission requesters to reach next step agreements on potential transmission projects or reinforcements.

A major role for BPA as a transmission provider is transmission planning. Transmission planning takes into account future transmission demand and challenges by using a variety of forecasted scenarios that include existing system obligations, projected load growth, integration of new generating resources, and new large loads. Policy developments in the region, including electrification, decarbonization, intermittent generating resources, new generation technologies and storage, also influence transmission requests and transmission planning. This planning work allows BPA to continue to provide reliable and resilient transmission service at the best value and while meeting future needs.

The electricity industry, and particularly transmission providers, have recognized that FERC's interconnection queue process has not worked well to facilitate timely construction of interconnection facilities. BPA will complete by August 31, 2023, a series of public meetings on BPA's Generator Interconnection processes, including the potential for a first ready, first served approach, in order to complete a tariff proceeding in 2024. While FERC also has opened a docket related to generator interconnection reform, BPA is not subject to FERC jurisdiction on these issues, thus BPA is moving forward with its own potential reform process.

Hydropower Modernization

Bonneville utilizes an asset management strategy to apply best-practice industry standards to manage the lifecycle costs of Federal assets. This is central to maintaining the long-term value and reliability of the power and transmission systems. Achieving these objectives for power requires collaborative, long-term planning with Bonneville's Federal partners, the Corps and Reclamation.

Through our "Asset Investment Excellence Initiative," the three agencies are establishing a long-term asset investment plan, applying prioritization tools to inform investment decisions to ensure the long-term affordability and reliability of the hydropower assets. Bonneville is working collaboratively with the other Federal Power Marketing Administrations, the Tennessee Valley Authority, the Corps, and Reclamation to evaluate opportunities to improve the cost competitiveness of Federal hydropower including a focus on improving acquisition practices and operations and maintenance efficiencies.

We also are reviewing how joint project costs are allocated among project purposes, and how current costs and value for hydropower generation are reflected in those allocations.

In the FY 2020 Further Consolidated Appropriations House Report, the Committee directed BPA, Corps, and Reclamation to jointly develop an outline for conducting cost allocation studies and described what such outline shall include. The agencies provided that outline to the Committee staff. The HEWD conference report to FY 2021 Omnibus and COVID Relief and Response Act requested that the agencies continue this effort and report updates to Committee not less than quarterly.

Nevertheless, BPA is concerned that the Corps continues to resist the need to undergo this cost allocation review, and there is no consensus on the type of analysis necessary to review the reallocation of costs among project purposes. BPA is discussing this concern with DOE, OMB, and Corps (Northwestern Division and Army), and will continue to discuss this matter with the relevant Congressional committees and NW Congressional staff.

In 2021, Reclamation did indicate that it would begin working with BPA on reallocation of costs for the John P. Keys III Pumping Station. BPA is continuing to discuss this work with Reclamation.

A related, but different issue is an effort to potentially deauthorize the power purpose of the Willamette Valley projects, with particular urgency related to the Cougar and Detroit projects. The Willamette Valley projects are multipurpose projects developed primarily for flood control and water supply. The projects provide a small amount of power, yet power is allocated 22-percent of the project costs. The projects are among the highest cost for power, and costs are expected to increase significantly given rulings from environmental litigation which may result in significant capital fish mitigation projects. Consequently, the cost benefit of those projects does not exist.

In addition, because the power purpose currently exists, the Corps currently believes that it must take power into account when reviewing mitigation measures that could benefit fish. This belief is hindering the Corps's ability to consider a wide array of mitigation options in the Willamette Valley Project environmental impact statement (EIS) review that is underway. The Corps recently publicly released the Draft Programmatic Environmental Impact Statement (DPEIS), and held two virtual public meetings, December 6 and December 8.

The sufficiency of the final EIS could be negatively impacted if a wide array of measures is not considered. The belief that the Corps may not consider measures it does not have authority to undertake is curious given that the Corps has analyzed unauthorized proposals before, most recently in the CRSO EIS when it studied dam breaching. And even in the current DPEIS, the Corps is studying a complete draw down at Cougar which would effectively eliminate the power purpose.

The WRDA 2020 act called for the Corps to undertake a preliminary review of deauthorizing the power purpose of Cougar and Detroit Dams, which could benefit

ratepayers and fish mitigation. WRDA 2022 builds on proposed deauthorization by calling for the Corps to conduct disposition studies on deauthorizing power from the Willamette Dams complex. BPA, its customers, and environmental advocates are aligned on the need to deauthorize the power purpose of the Willamette projects. BPA will continue to discuss progress on this matter with OMB, House Transportation and Infrastructure staff, and others.

In addition, related to preserving the value of the federal hydropower system, Bonneville has been reviewing various decarbonization studies which have provided valuable insight into the major value maintaining and increasing hydropower will play in larger decarbonization scenarios. Three recent studies in particular are worth noting.

PGP, an organization of Northwest public power generating utilities, recently procured a study, conducted by E3, to evaluate the adequacy of the electricity system in the Northwest given various decarbonization scenarios. The findings in these studies may help inform more understanding of what could occur in the Northwest.

<http://www.publicgeneratingpool.com/e3-carbon-study/>

Energy Futures Initiative (EFI) recently released a study on California decarbonization. “EFI conducts objective, fact-based and rigorous technical, economic, financial and policy analyses supported by a multidisciplinary network of experts. We focus on solutions that are effective, pragmatic and acceptable to the broadest possible set of stakeholders.” EFI’s lead principal is Ernest Moniz, former Secretary of Energy.

<https://energyfuturesinitiative.org/efi-reports>

Finally, the Proceedings of the National Academy of Sciences (PNAS) in December 2019 found that, among the largest electric regions in the United States, BPA’s hydropower generation based balancing authority resulted in the Northwest producing and using the cleanest energy in the nation. <https://www.pnas.org/content/116/51/25497>

Resource Adequacy

By the mid-2020s, the region may face a capacity deficit of thousands of megawatts, which may result in both price volatility and unacceptable loss-of-load. This deficit is largely due to an estimated 10 gigawatts of coal retirements by 2030 replaced by various resources intended to meet clean energy goals. An effort started with the Northwest Power Pool (their name recently changed to “Western Power Pool”), the Western Resource Adequacy Program (WRAP), hopes to address this looming issue by ensuring the region has enough resources within its footprint to maintain reliability; enable members to take advantage of the benefits associated with diversity in demand and supply across the footprint and better utilization of transmission infrastructure; development of a centralized resource adequacy platform for visibility and coordination; and rules, procedures, and business practices that are fair and unbiased to all members.

Twenty (20) utility members participated in the design work. Eleven (11) members began participating in the binding program in December 2022. BPA entered as a non-binding participant with the plan to participate in the binding program in a couple of years. For

more information on BPA's participation in WRAP: <https://www.bpa.gov/learn-and-participate/projects/western-resource-adequacy-program> For general information on WRAP: <https://www.westernpowerpool.org/about/programs/western-resource-adequacy-program>

FERC held a technical conference on June 23 and 24, 2021, to hear from electricity market participants in the west about the challenges and need for resource adequacy efforts in the west. An archive of the FERC technical conference can be found on FERC's website.

Cyber and Physical Security

Bonneville takes cyber security threats to grid reliability very seriously. Bonneville has significantly increased its staff in the cyber security area and established a 24/7 Cyber Security Operations and Analysis Center last year. BPA continues to add more systems for cyber security monitoring, and our staff are becoming increasingly proficient at monitoring, preventing, and detecting cyber vulnerabilities and threats. BPA currently is working towards applying the Federal Information Security Management Act of 2002 with the recently passed updates, including the Federal Information Security Modernization Act of 2014. Bonneville complies with mandatory Critical Infrastructure Protection (CIP) standards established by the North American Electric Reliability Corporation (NERC). BPA is working to comply with NERC CIP version 5 requirements by the deadline.

Bonneville also is committed to the physical protection of critical infrastructure that is under Bonneville's control, such as control centers and substations supporting high-voltage transmission. Bonneville has implemented a long-term Security Asset Management Strategy and a Critical Asset Security Plan to ensure installation of enhanced security infrastructure at our most critical substations. The strategy follows the DOE Graded Security Protection guidelines and is a risk-based approach to protecting critical assets. This strategy meets or exceeds NERC CIP requirements.

BPA had been participating in the Department of Energy efforts to define critical energy infrastructure information (CEII) protection protocols per the FAST Act enacted at the end of 2015. DOE promulgated regulations (finalized in March 2020), and is beginning to implement those regulations.

BPA participates in the Electric Sector Coordinating Council (ESCC) meetings, the joint federal agencies (DOE and DHS) – ESCC meetings, and the related monthly senior executive working group meetings and activities. Finally, BPA participates in a number of industry and regional exercises from time to time that simulate cyber and physical emergencies. Recent discussions have regarded potential cyber security concerns related to the Russian invasion of Ukraine.

The ESCC and western utilities also are jointly engaging on wildfire management given the growing intensity of western wildfires. The dry conditions are affecting the west

differently. From a hydroelectric perspective, while reservoirs in parts of California and the Southwest are low, the Columbia Basin is still around 90 percent of average. So in the Pacific Northwest, supply is not our issue. What the PNW shares with the Southwest is the interconnected bulk electric transmission system, which allows the west to share resources when we have them to share. In that regard, managing the risk to the transmission grid on an ongoing basis (e.g. vegetation management) is an imperative. BPA and utilities need greater cooperation with the federal land management agencies on vegetation management. We also need to take actions such as public safety shutoffs when necessary as a last resort to protect people and facilities. The BPA Administrator participated in the White House western wildfire discussion in 2021.

Columbia River Treaty

The U.S. Government reached consensus on a high level position for negotiations of the Columbia River Treaty in June 2015, based on the final regional recommendation delivered to State by BPA and the Corps (together the “U.S. Entity”). The Circular 175 process (which authorizes formal U.S. negotiations) was concluded in early October 2016. Global Affairs Canada notified State Department on December 8, 2017, that it had received its mandate to negotiate with the U.S. Government.

State Department’s lead negotiator is Jill Smail. The U.S. Entity and State Department, among a federal agency team including Reclamation and NOAA, make-up the U.S. negotiating team. The governments began formal negotiation in May 2018 and had continued negotiation sessions generally every other month until the Covid-19 pandemic. The last (fourteenth (15th)) round of negotiations took place January 25-26, 2023. The next round of negotiations is scheduled for March 22-23, 2023. BPA continues to be concerned about the USG strategy to get to a conclusion prior to September 2024.

Biological Opinion Litigation

The 2014 supplemental biological opinion was filed with the U.S. District Court for Oregon (District Court) in January 2014. The District Court ruled on the complaint on May 4, 2016.

The District Court ruled that the 2014 Biological Opinion (BiOp) for operations of the Federal Columbia River Power System (FCRPS) was based on an improper jeopardy standard under the Endangered Species Act (ESA), failed properly to consider impacts to species recovery from climate change, and relied on actions that were not reasonably certain to occur. The ruling also found that the federal agencies did not comply with requirements of the National Environmental Policy Act (NEPA) in adopting the BiOp.

The ruling ordered NOAA to produce a new BiOp in 2018, and that the Army Corps of Engineers (Corps) and the Bureau of Reclamation produce an environmental impact statement (EIS) that complies with NEPA. The District Court ordered the agencies to file a brief setting the timetable for a reasonable NEPA process in 14 days. The District Court also ordered that the Federal government continue to fund and implement the 2014 BiOp until the 2018 BiOp is prepared and filed.

BPA, the Corps, and the Bureau of Reclamation (Bureau) developed the new EIS (the “CRSO”). This EIS analyzed the effects of the configuration and coordinated operations of 14 federal dams on the Columbia River System. The EIS development process began in fall 2016 with the publication of a Notice of Intent to prepare an EIS in the Federal Register on September 30, 2016, and public scoping sessions were held in locations around the Pacific Northwest in the winter. Stakeholder outreach continued throughout the agencies analysis process. Completion of the CRSO EIM with comment periods was expected to take five years.

In October 2018, an executive order was issued requiring, among other things, that the action agencies and NOAA complete the CRSO EIS and related record of decision and biological opinion by September 2020. As a result, the original schedule, which made assumptions regarding final draft public comment period based on past EIS schedules, was shortened to the legally required time for comment. Release of the Draft CRSO EIS was moved up by one month. The Draft CRSO EIS was released to the public in February 2020 for comment through April 13, 2020. A final record of decision on the CRSO EIS was issued September 2020. This approach adhered to the objectives of the executive order while also meeting NEPA requirements.

Related to the biological opinion, in a November 2017 hearing, plaintiffs informally requested to the District Court to extend the deadline for the next biological opinion beyond December 31, 2018. In April 2018, the District Court issued an order extending the deadline for the next biological opinion from on or before December 31, 2018, to on or before March 26, 2021. The District Court went on to note that NOAA Fisheries was under no court-ordered obligation to produce a biological opinion before the NEPA process is complete. NOAA issued a biological opinion for the Columbia River System on March 29, 2019, after having consulted with the action agencies on the flexible spill proposed action. NOAA released a new biological opinion at the conclusion of the CRSO EIS.

Litigation processes continued. On January 9, 2017, the State of Oregon and the environmental plaintiffs (National Wildlife Federation, et. al.) filed motions for preliminary injunction. The Nez Perce Tribe also filed a motion in support of Oregon’s filing. The State of Oregon was seeking additional spill operations, and National Wildlife Federation, et. al., was seeking to prohibit capital spending on Lower Snake dam projects. Pleadings in opposition to those motions were filed on February 9, 2017, by the federal defendants, States of Idaho and Montana, State of Washington, Lower River Tribes, Kootenai Tribe of Idaho and Confederated Salish and Kootenai Tribes, Northwest RiverPartners, Inland Ports and Navigation, Columbia Snake River Irrigators Association.

On March 27, 2017, the District Court ordered NOAA Fisheries and the FCRPS Action Agencies to develop appropriate protocols for increased spill operations in 2018. In its April 3, 2017, Amended Opinion and Order, the District Court stated that it “will not enjoin projects at the dams required for the safe operations of any dam,” given the

statutory obligation to operate the dams, and that it is “not inclined to enjoin projects that provide substantial immediate survival improvement” to ESA-listed salmonids.

On May 16, 2017, the federal agencies, after conferring with plaintiffs, filed a proposal for a notification process with the District Court, identifying the process, timing, and information to be provided to NWF through the end of the CRSO EIS process.

Between May and November 2017, the Regional Implementation Oversight Group (RIOG) was enlisted to evaluate and recommend a spill operation for 2018. The RIOG spill operations recommendation was proposed by the plaintiffs (on behalf of both plaintiffs and defendants) to the District Court. Federal defendants filed a separate cover notice objecting to entry of any order governing 2018 spring fish passage spill operations or March 1 PIT monitoring that in any way adjusted or modified the terms and requested to be heard if the Court considered modifications. The District Court adopted, with few exceptions, that proposal as the District Court’s filed injunction on January 8, 2018.

On October 26, 2017, the United States filed an opening appeal in the United States Court of Appeals for the 9th Circuit (9th Circuit) of the District Court’s April 2017 order. Several letters in support of the appeal and reply briefs were filed.

The United States appealed the District Court’s March 2017 order, and the Ninth Circuit Court of Appeals scheduled expedited oral argument for March 20, 2018.

The United States also appealed the District Court’s January 2018 order adopting the increased spring fish passage spill proposal. After a ruling affirming the District Court’s spill order, the spill operation went into effect in April 2018. BPA initiated a Spill Surcharge process, established in the BP-18 rates, to determine the final additional spill cost to be recovered from ratepayers. Prior to the final spill cost estimate being determined, BPA preliminarily estimated additional spill cost of \$40 million. The final cost estimate was \$38.6 million. Please see the final Record of Decision (ROD) for detailed information about the additional spill cost, particularly section 4.1. <https://www.bpa.gov/Finance/RateCases/surcharge18/Pages/default.aspx>

BPA decided to use a combination of surcharge mechanism and cost cuts to implement the cost recovery, instead of a full surcharge approach. The final surcharge component was \$10.2 million and the cost reductions were \$23.1 million.

For FY2019, BPA did not trigger a surcharge and instead covered the cost of the additional spill through cuts to the fish and wildlife program.

Late in 2018, BPA, USACE, and Reclamation with representatives of Oregon and Washington states and the Nez Perce Tribe reached agreement on a flexible spill operation for 2019 and also 2020-2021. The agreement called for allowance of spring spill up to 120-percent Total Dissolved Gas (TDG) in 2019 or spring spill up to 125-percent in 2020-2021 under “3 principles:” salmon benefits, power generation and marketing benefits, and operational feasibility. The agreement was subject to additional

conditions, including Washington and Oregon states' regulatory processes, and monitoring, and the higher spill levels only are within the context of this flexible spill operation. The parties agreed to not engage in any litigation activities while an updated environmental review of Columbia River System Operations was underway. For more information about the agreement, please see <https://www.bpa.gov/efw/FishWildlife/SpillOperationAgreement/Pages/default.aspx>.

At the end of March 2019, Washington State Department of Ecology (Washington Ecology) issued its temporary modification to adjust the TDG criteria to permit 120% TDG.

The flexible spill arrangement did operate during the spring 2019 spill season, ending on June 10, 2019, at four lower Columbia River dams and June 21, 2019, at the four lower Snake River dams. An after action analysis of the operation and the results are being evaluated. Whether or not the operation benefited the fish may not be known for another three years or so when the fish begin to return from the ocean.

In late December 2019, Washington-state adopted amendments to its regulations raising its TDG level to 125-percent in certain instances. Washington Ecology initiated that rulemaking in May 2019.

A flexible spill operation was included as part of the decision resulting from the CRSO EIS. Nevertheless, the plaintiffs to the litigation filed a preliminary injunction motion regarding 2022 operations which would substantially degrade hydropower operations, raising both loss of carbon free energy and reliability concerns. In fall 2021, the U.S. and parties to the litigation agreed to a short-term settlement on 2022 operations and a stay of litigation until July 31, 2022. The settlement agreement and stay were filed with the District Court on October 21, 2021. The stay was granted, providing operational certainty for 2022 operations and avoiding extremely costly mitigation measures that had been proposed. The stay was subsequently extended through August 2023.

In addition, during the litigation stay and stay extension, Department of Justice has convened a "408 table" for potential settlement negotiations. Along with settlement negotiations, the Council on Environmental Quality (CEQ) has convened a process to explore any short- and long-term solutions for fish mitigation and potentially ending litigation. CEQ recently has held listening sessions with various stakeholder interests and tribal governments, and has hired FMCS to mediate discussions. While BPA is not a party to the litigation, BPA actively participates in negotiations and CEQ's process to educate and help protect BPA mission, ratepayer, and operational interests. The Department of Energy also has been very helpful ensuring an understanding that carbon-free hydropower is a priority for the nation's clean energy goals.

Salmon passage at Columbia River dams is among the best in the nation, with continuing juvenile fish dam passage survival performance standards of 93 to 96 percent.

Covid-19 Pandemic Highlights Workforce Needs

BPA managed its corporate business and operations very well during the pandemic. BPA had an emergency continuing operations plan in place and a majority of employees already had telework agreements in place. That facilitated a rather smooth start of stay home directives as stay home directives began. BPA essentially ended its pandemic posture early in 2022.

As is common for many workplaces, BPA is experiencing employee exits due to current lack of flexibilities on remote work, pay, and other benefits. BPA is considering taking actions to use existing workforce flexibilities and consider legislative changes to bolster the Administrator's authority for workforce in the Bonneville Project Act.

“Provider of Choice” (BPA Long-Term Contracts Post 2028)

Bonneville launched the Provider of Choice effort in 2016 to design and offer replacement power sales agreements with customers, ahead of when the current Regional Dialogue contracts end in 2028. Preference customers and regional constituencies are invited to participate in public workshops as BPA works to develop a Provider of Choice policy to guide development of the long-term contracts. For more information on the Provider of Choice process: <https://www.bpa.gov/energy-and-services/power/provider-of-choice>

Parallel to the Provider of Choice discussions, BPA is having discussions regarding the Residential Exchange Program (REP) post 2028. The Northwest Power Act enacted the Residential Exchange Program to provide residential and farm customers of Pacific Northwest investor-owned utilities a form of access to low-cost federal power. Bonneville implements the REP under provisions of the 2012 REP Settlement (REP-12) and contracts that also expire in 2028. For more information on REP Post 2028: <https://www.bpa.gov/energy-and-services/power/residential-exchange-program/post-2028-rep>

From: Baskerville,Sonya L (BPA) - AIN-WASH
Sent: Thursday, February 23, 2023 2:22 PM
To: Marker,Doug R (BPA) - AIR-7
Subject: Fwd: RE: Corps WRDA 2022 implementation comments
Attachments: BPA comments for Army WRDA 2022 Implementation Guidance Sonya's Version.docx

Sonya Baskerville
BPA National Relations

(b)(6) m

----- Forwarded message -----

From: "Baskerville,Sonya L (BPA) - AIN-WASH" <slbaskerville@bpa.gov>
Date: Feb 21, 2023 6:19 PM
Subject: RE: Corps WRDA 2022 implementation comments
To: 'Marty Kanner' <mkanner@kannerandassoc.com>,'Samantha McDonald'
<Smcdonald@kannerandassoc.com>
Cc:

FYI the read aloud version. Got rid of some redundancies to get it closer to 3 minutes. Thanks.

Sonya Baskerville
BPA National Relations

(b)(6) m

From: Baskerville,Sonya L (BPA) - AIN-WASH
Sent: Tuesday, February 21, 2023 4:18 PM
To: Marty Kanner <mkanner@kannerandassoc.com>; Samantha McDonald <Smcdonald@kannerandassoc.com>
Subject: RE: Corps WRDA 2022 implementation comments

Great!

Sonya Baskerville
BPA National Relations

(b)(6) m

From: Marty Kanner <mkanner@kannerandassoc.com>
Sent: Tuesday, February 21, 2023 4:17 PM
To: Baskerville,Sonya L (BPA) - AIN-WASH <slbaskerville@bpa.gov>; Samantha McDonald
<Smcdonald@kannerandassoc.com>
Subject: Re: Corps WRDA 2022 implementation comments

Looks great!

PPC will be submitting written response on the DEIS. We'll get you those once they're final- but the themes are consistent

Marty Kanner

President
Kanner & Associates, LLC
(b)(6) Cell

From: Baskerville, Sonya L (BPA) - AIN-WASH <slbaskerville@bpa.gov>
Date: Tuesday, February 21, 2023 at 4:11 PM
To: Marty Kanner <mkanner@kannerandassoc.com>, Samantha McDonald
<Smcdonald@kannerandassoc.com>
Subject: Corps WRDA 2022 implementation comments

Hey there. I have planned to call into the WRDA implementation call tomorrow and read our comments, similar to Kieran's comments last time. Here's my edited version of Doug's initial draft. Let me know if anything jumps out as a problem. Thanks!

Sonya Baskerville
BPA National Relations
(b)(6) m

Suggested comments for Department of Army implementation guidance for Section 8220 of WRDA 2022 – Willamette Valley Disposition studies.

Thank you for the opportunity to comment on implementation guidance for Section 8220 of WRDA 2022 – Willamette Valley Disposition studies.

Bonneville believes that we have a shared interest with the Corps in ensuring that the sufficiency of the final Programmatic Environmental Impact Statement for Willamette Valley System Operations. Given the timeline for completion of the PEIS, Bonneville urges the Corps to meet Congress' schedule for completion of the disposition studies of the hydropower purpose of the Willamette dams by June 2024. BPA believes the PEIS would be improved by the Corps incorporating analysis of the disposition studies into the draft PEIS.

BPA appreciates that the Corps has expressed a sense of urgency on addressing mitigation of impacts on fish species in the Willamette. To facilitate that, the Congress directed the Corps in WRDA 2020 Section 218 to study the impacts on other authorized project purposes from any deauthorization of power at Cougar and Detroit/Big Cliff dams, in an effort to assist the Corps in expanding options that could help to mitigate the impacts to fish. Bonneville is not aware that the report has been provided to Congress as required. Bonneville provided to the Corps Bonneville's assessment that other project purposes would not be negatively impacted by deauthorization of the power purpose. Bonneville believes that the Corps's own assessment or the Corps's views of Bonneville's assessment would be useful for a complete assessment of deauthorizing the power purpose.

For WRDA 2022 Section 8220 in particular, Bonneville believes that the Corps should confine the disposition studies to the scope defined by section 8220: the hydropower purposes of the dams. Bonneville also believes that the Corps should rely on Bonneville's expertise for the finding of federal interest in the production of commercial power generation from the Willamette dams.

Bonneville also wants to reiterate points it recently provided to the Corps on the draft PEIS:

- An implementation plan for the consideration of deauthorization and cost allocation updates should be included in the final PEIS.
- The Draft PEIS estimates the annual benefit of flood protection to be at least \$1 billion and power generation to be \$26 million, yet the power purpose's cost allocation averages around 40 percent. This estimate itself highlights the need for updated cost allocations, and should help inform the Corps of its appropriate short and long-term federal funding requests necessary to meet its most valued project purposes.
- The current PEIS analysis does not reflect the anticipated significant cost impact from continue operations of the 2021 Oregon District Court injunction until the Corps completes structural measures. These operations stand to reduce the value of

hydropower generation by nearly a third. Having that information incorporated into the analysis will help inform both Congress and the Final PEIS.

- Finally, Bonneville continues to urge the Corps to update structural cost estimates which the Corps states in the Draft PEIS are likely more than double the current estimates. In addition, recent economic events of inflation, constrained supply chains, and escalated interest rates also likely impact the cost estimates.

Thank you again for the opportunity to comment.

From: Kintz, Jesse H (BPA) - PG-5
Sent: Thursday, April 20, 2023 3:14 PM
To: Spear, Daniel J (BPA) - PGB-5; Marker, Doug R (BPA) - AIR-7; Baskerville, Sonya L (BPA) - AIN-WASH; Komoroski, Kenneth D (BPA) - PGA-6; Maslow, Jeffrey J (BPA) - EC-4; Mai, Amy E (BPA) - EC-4; Sullivan, Leah S (BPA) - PGB-5; Koehler, Birgit G (BPA) - PG-5; Nagra, Angad S (BPA) - LN-7; Senters, Anne E (BPA) - LN-7; Chase, Luke B (BPA) - PGAF-6; Chennell, Mildrid A (BPA) - PGPR-5; Van Calcar, Pamela M (BPA) - PGS-5
Cc: Welch, Julee A (BPA) - LP-7; Smith, Glen A (BPA) - PG-5; Ashby, Gordon S (BPA) - PGA-6; Todd, Wayne A (BPA) - PGA-6
Subject: Notes from Corps Willamette hydropower disposition study 4/11 planning charrette meeting

All,
I've posted a compilation of the BPA team's notes from last week's Corps "charrette" planning meeting on the Willamette Sharepoint site [here](#) (shout out to Julee for putting together the majority of these).

Overall, the meeting demonstrated that the Corps is (slowly) getting some traction on this effort, that they are serious about meeting the 18 month deadline with some kind of product, and that they view this study as significant within the Corps (evidenced by the # of staff and HQ/ASA attendance). The meeting served as a way for the Corps to get all of the key parties in one room and make significant progress in socializing some of the considerations related to the study, and to make progress on defining the approach and scope to meet the 18 month deadline.

In the aftermath of this meeting and given the insights gained on the Corps' approach, BPA is pondering strategy considerations on the overall Willamette power economics issue and how to best work with the Corps on this effort. As a first step, BPA has a follow up opportunity to provide comments on one of the Corps planning documents from the meeting by early next week (a subset of this list will see an email seeking review on that document shortly).

Please reach out to any of the attendees (myself, Julee, Glen, and Gordon) with any questions.

-Jesse

Jesse Kintz

Power Generation – Senior Policy and Project Lead | [PG-2]

BONNEVILLE POWER ADMINISTRATION

bpa.gov | P 503-230-3340 | C (b)(6)

From: Marker,Doug R (BPA) - AIR-7
Sent: Monday, January 23, 2023 8:54 AM
To: Baskerville,Sonya L (BPA) - AIN-WASH
Subject: RE: CLOSE HOLD, BPA Non-Monetary Appeal: FY 2024 Passback

So I won't say anything internally for now. I'll continue to push for our analysis to determine our view of the economic viability of power production from the Willamette dams.

I think there's agreement within BPA that the determination of federal interest comes first. From that we can pursue either deauthorization or reallocation.

But Jesse continues to relay from Bill that we "offer our expertise" to the Corps and allow the Corps to do the analysis. Bill believes the Corps has a hydro analysis group that should play a role.

I am trying to complete our comments on the draft EIS asserting our role in determining federal interest in hydro.

From: Baskerville,Sonya L (BPA) - AIN-WASH <slbaskerville@bpa.gov>
Sent: Monday, January 23, 2023 8:31 AM
To: Marker,Doug R (BPA) - AIR-7 <drmarker@bpa.gov>
Subject: RE: CLOSE HOLD, BPA Non-Monetary Appeal: FY 2024 Passback

They typically respond within a few weeks because it has to be taken care of prior to the President's budget submission. But that's expected to be late this time.

We will stay on Nathan to try to get a determination as soon as possible.

Sonya Baskerville
BPA National Relations
(b)(6) m

On Jan 23, 2023 11:29 AM, "Marker,Doug R (BPA) - AIR-7" <drmarker@bpa.gov> wrote:
Do we hope for confirmation via another passback? I'm wondering about timing for incorporating into the Willamette group's planning.

From: Baskerville,Sonya L (BPA) - AIN-WASH <slbaskerville@bpa.gov>
Sent: Monday, January 23, 2023 7:28 AM
To: Shapiro, Adam <adam.shapiro@hq.doe.gov>
Cc: Lucas, Darlene <darlene.lucas@hq.doe.gov>; Harris-Cameron, Maya <Maya.Harris-Cameron@hq.doe.gov>; katherine.donley@hq.doe.gov; fatima.pashaei@hq.doe.gov; Seifert,Roger E (BPA) - AIN-WASH <reseifert@bpa.gov>; Alexander,Doug (BPA) - FAC-2 <daalexander@bpa.gov>; Manary,David (BPA) - LG-7 <dbmanary@bpa.gov>; Marker,Doug R (BPA) - AIR-7 <drmarker@bpa.gov>; Ellison,Nathan B (BPA) - FAC-2 <NBellison@bpa.gov>; melissa.ardis@hq.doe.gov; Baumann, Jeremiah <jeremiah.baumann@hq.doe.gov>
Subject: RE: CLOSE HOLD, BPA Non-Monetary Appeal: FY 2024 Passback
Importance: High

Hello, Adam. Here is BPA's Category 3 non-monetary appeal. Hopefully this gets to you! Can you confirm that you or other DOE folks received this? Thanks!

Sonya Baskerville
BPA National Relations

(b)(6) m

From: Shapiro, Adam <adam.shapiro@hq.doe.gov>
Sent: Friday, January 20, 2023 10:29 PM
To: Hairston,John L (BPA) - A-7 <jlhairston@bpa.gov>
Cc: Seifert,Roger E (BPA) - AIN-WASH <reseifert@bpa.gov>; Baskerville,Sonya L (BPA) - AIN-WASH <slbaskerville@bpa.gov>; Lucas, Darlene <darlene.lucas@hq.doe.gov>; Harris-Cameron, Maya <Maya.Harris-Cameron@hq.doe.gov>; Donley, Katherine <katherine.donley@hq.doe.gov>; Pashaei, Fatima <fatima.pashaei@hq.doe.gov>
Subject: CLOSE HOLD: FY 2024 Passback - Comments Due Monday, January 23, 12:00 pm - Receiving Office [Attachment Contains CUI]

CUI//SP-BUDG [When separated from attachment, email does not contain CUI]

Good Evening,

Attached is OMB's "Passback" to the Department regarding development of the FY 2024 President's budget. Distribution is being limited to a very small, senior group. Please keep any further distribution of this material to a limited group (e.g., your budget lead and Chief of Staff).

Office heads who are part of an Under Secretariat should provide any appeals to your Under Secretary, CF's Budget Director Katie Donley, Fatima Pashaei (CF-31), and your budget analyst (cc'd) concurrently. Direct Report offices should provide appeals directly to CF's Budget Director Katie Donley and Fatima Pashaei. Appeals are due no later than **Monday, January 23 at 12:00 p.m. with no exceptions, utilizing the attached prescribed format.**

Please note, there should be no discussions with OMB at this time. If you have any questions for OMB, they should be provided to the CF Budget Office.

Thanks,

Adam Shapiro
Congressional Liaison
CF-34, Office of Budget, External Coordination
Department of Energy
Adam.Shapiro@hq.doe.gov
(240) 267-9346

From: Baskerville,Sonya L (BPA) - AIN-WASH
Sent: Wednesday, March 15, 2023 10:29 AM
To: markd@summitstrategies.us
Cc: Marker,Doug R (BPA) - AIR-7
Subject: Question re Willamette litigation schedule

Hey there. I'm thinking through how to move the Corps to incorporate the disposition studies and proposed deauthorization of power into the EIS. They continue to be reluctant to do that even when they are aware that there is pressure building on them to get moving on the disposition studies.

We think the Corps is stuck on the litigation schedule itself as their priority. It appears they believe they need to meet the court ordered timelines regardless of the quality of their work and the sufficiency of any decision that results.

I'm wondering whether you have thoughts on whether the litigating parties would be open to a litigation schedule change in order to accommodate a better EIS outcome? I'm just asking as a matter of interest in the sufficiency of the EIS, not related to litigation strategy at all since I'm not engaged in that part. But it does seem like the Corps' resistance to connecting the the EIS and the disposition studies is tied to the current litigation schedule.

On a related note, I'm expecting that OMB will meet with BPA and the Corps on related cost reallocation and the disposition study process sometime in April. Hoping the OMB engagement makes the Corps more motivated to move these efforts expeditiously.

Thanks.

Sonya Baskerville
BPA National Relations

(b)(6) m

From: Kintz,Jesse H (BPA) - PG-5
Sent: Wednesday, March 1, 2023 10:43 AM
To: Marker,Doug R (BPA) - AIR-7; Welch,Julee A (BPA) - LP-7; Smith,Glen A (BPA) - PG-5
Cc: Baskerville,Sonya L (BPA) - AIN-WASH; Todd,Wayne A (BPA) - PGA-6
Subject: RE: Cost allocations / deauthorization core team bi-weekly
Attachments: Willamette Dams Analysis Scoping.xlsx

Great - I'll add a room for you two.

I've attached an updated version of the file I want to discuss and get your input on – the areas highlighted in green specifically.

-Jesse

From: Marker,Doug R (BPA) - AIR-7 <drmarker@bpa.gov>
Sent: Wednesday, March 1, 2023 10:21 AM
To: Welch,Julee A (BPA) - LP-7 <jawelch@bpa.gov>; Kintz,Jesse H (BPA) - PG-5 <jhkintz@bpa.gov>; Smith,Glen A (BPA) - PG-5 <gasmith@bpa.gov>
Cc: Baskerville,Sonya L (BPA) - AIN-WASH <slbaskerville@bpa.gov>; Todd,Wayne A (BPA) - PGA-6 <watodd@bpa.gov>
Subject: RE: Cost allocations / deauthorization core team bi-weekly

I can join in person, Julee.

From: Welch,Julee A (BPA) - LP-7 <jawelch@bpa.gov>
Sent: Wednesday, March 1, 2023 10:19 AM
To: Kintz,Jesse H (BPA) - PG-5 <jhkintz@bpa.gov>; Smith,Glen A (BPA) - PG-5 <gasmith@bpa.gov>; Marker,Doug R (BPA) - AIR-7 <drmarker@bpa.gov>
Cc: Baskerville,Sonya L (BPA) - AIN-WASH <slbaskerville@bpa.gov>; Todd,Wayne A (BPA) - PGA-6 <watodd@bpa.gov>
Subject: RE: Cost allocations / deauthorization core team bi-weekly

Just an FYI that I'm in the office today, if anyone wants to gather in person for the meeting.

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

From: Kintz,Jesse H (BPA) - PG-5 <jhkintz@bpa.gov>
Sent: Wednesday, April 20, 2022 4:55 PM
To: Kintz,Jesse H (BPA) - PG-5; Smith,Glen A (BPA) - PG-5; Welch,Julee A (BPA) - LP-7; Marker,Doug R (BPA) - AIR-7
Cc: Baskerville,Sonya L (BPA) - AIN-WASH; Todd,Wayne A (BPA) - PGA-6
Subject: Cost allocations / deauthorization core team bi-weekly
When: Wednesday, March 1, 2023 3:30 PM-4:00 PM (UTC-08:00) Pacific Time (US & Canada).
Where: WebEx - link to follow

AGENDA

Willamette scoping discussion/questions (see attachment)

Julee and Doug have conflicts Thursday so moving this to tomorrow afternoon and hoping this time works for most (Sonya, realize it's late for you but we'll be going over some nuts and bolts so probably OK if you miss this one). For anyone it doesn't work for who wants to weigh in, I can touch base with you separately or do a second brief session on Thursday.

Jesse

From: Johnson,G Douglas (BPA) - DK-7
Sent: Monday, March 6, 2023 9:29 AM
To: Kintz,Jesse H (BPA) - PG-5; Marker,Doug R (BPA) - AIR-7; Baskerville,Sonya L (BPA) - AIN-WASH
Cc: Goodwin,Summer G (BPA) - DKS-7
Subject: RE: Responding to you about sending our comments on WVS EIS

(b)(5)

From: Kintz,Jesse H (BPA) - PG-5 <jhkintz@bpa.gov>
Sent: Monday, March 6, 2023 9:22 AM
To: Marker,Doug R (BPA) - AIR-7 <drmarker@bpa.gov>; Johnson,G Douglas (BPA) - DK-7 <gdjohnson@bpa.gov>; Baskerville,Sonya L (BPA) - AIN-WASH <slbaskerville@bpa.gov>
Cc: Goodwin,Summer G (BPA) - DKS-7 <sggoodwin@bpa.gov>
Subject: RE: Responding to you about sending our comments on WVS EIS

No concerns from me either with sharing. Thanks.

-Jesse

From: Marker,Doug R (BPA) - AIR-7 <drmarker@bpa.gov>
Sent: Sunday, March 5, 2023 6:18 PM
To: Johnson,G Douglas (BPA) - DK-7 <gdjohnson@bpa.gov>; Baskerville,Sonya L (BPA) - AIN-WASH <slbaskerville@bpa.gov>; Kintz,Jesse H (BPA) - PG-5 <jhkintz@bpa.gov>
Cc: Goodwin,Summer G (BPA) - DKS-7 <sggoodwin@bpa.gov>
Subject: Responding to you about sending our comments on WVS EIS

Doug J –

In the flurry of e-mails about this on Friday, I missed you asked about sending OPB our comments on the WV EIS.

We meant for them to be public and expected that the Corps would be posting them as received. On that basis, they're absolutely sharable with OPB and anyone else.

From: Johnson,G Douglas (BPA) - DK-7 <gdjohnson@bpa.gov>
Sent: Friday, March 3, 2023 9:56 AM
To: Baskerville,Sonya L (BPA) - AIN-WASH <slbaskerville@bpa.gov>; Marker,Doug R (BPA) - AIR-7 <drmarker@bpa.gov>; Kintz,Jesse H (BPA) - PG-5 <jhkintz@bpa.gov>
Cc: Goodwin,Summer G (BPA) - DKS-7 <sggoodwin@bpa.gov>
Subject: RE: Willamette Valley System

Agreed. Thanks for the info on (b)(5)

From: Baskerville,Sonya L (BPA) - AIN-WASH <slbaskerville@bpa.gov>
Sent: Friday, March 3, 2023 9:55 AM

To: Marker,Doug R (BPA) - AIR-7 <drmarker@bpa.gov>; Johnson,G Douglas (BPA) - DK-7 <gdjohnson@bpa.gov>; Kintz,Jesse H (BPA) - PG-5 <jhkintz@bpa.gov>
Cc: Goodwin,Summer G (BPA) - DKS-7 <sggoodwin@bpa.gov>
Subject: RE: Willamette Valley System

(b)(5)

Sonya Baskerville
BPA National Relations

(b)(6) m

On Mar 3, 2023 12:52 PM, "Johnson,G Douglas (BPA) - DK-7" <gdjohnson@bpa.gov> wrote:
Appears hitting us on multiple flanks is the new normal. Thanks for the intel Sonya.

From: Baskerville,Sonya L (BPA) - AIN-WASH <slbaskerville@bpa.gov>
Sent: Friday, March 3, 2023 9:48 AM
To: Marker,Doug R (BPA) - AIR-7 <drmarker@bpa.gov>; Johnson,G Douglas (BPA) - DK-7 <gdjohnson@bpa.gov>; Kintz,Jesse H (BPA) - PG-5 <jhkintz@bpa.gov>
Cc: Goodwin,Summer G (BPA) - DKS-7 <sggoodwin@bpa.gov>
Subject: RE: Willamette Valley System

(b)(5)

Sonya Baskerville
BPA National Relations

(b)(6) m

On Mar 3, 2023 12:44 PM, "Johnson,G Douglas (BPA) - DK-7" <gdjohnson@bpa.gov> wrote:
Thanks! See my last email. Should we share before the Corps posts? Not that Tony is going to write any time soon The other pieces he has done on BPA/the FCRPS/The tribes, have taken months. I don't think there would be any harm in sharing. Just want to make sure you and Jesse are comfortable with that approach.

From: Marker,Doug R (BPA) - AIR-7 <drmarker@bpa.gov>
Sent: Friday, March 3, 2023 9:42 AM
To: Johnson,G Douglas (BPA) - DK-7 <gdjohnson@bpa.gov>; Kintz,Jesse H (BPA) - PG-5 <jhkintz@bpa.gov>
Cc: Goodwin,Summer G (BPA) - DKS-7 <sggoodwin@bpa.gov>; Baskerville,Sonya L (BPA) - AIN-WASH <slbaskerville@bpa.gov>
Subject: RE: Willamette Valley System

Here are our comments, Doug. Good intro to our perspective.

From: Johnson,G Douglas (BPA) - DK-7 <gdjohnson@bpa.gov>
Sent: Friday, March 3, 2023 8:41 AM
To: Marker,Doug R (BPA) - AIR-7 <drmarker@bpa.gov>; Kintz,Jesse H (BPA) - PG-5 <jhkintz@bpa.gov>
Cc: Goodwin,Summer G (BPA) - DKS-7 <sggoodwin@bpa.gov>
Subject: FW: Willamette Valley System

FYI Doug and Jesse. You may recognize Tony's name. Just making sure you know this is out there.

From: Johnson,G Douglas (BPA) - DK-7
Sent: Friday, March 3, 2023 8:40 AM
To: Conning, Edward T <Edward.T.Conning@usace.army.mil>; Rabe, James M (Matt) CIV USARMY CENWD (USA) <J.Matt.Rabe@usace.army.mil>
Cc: Wingert, Kevin M (BPA) - DKP-7 <kwingert@bpa.gov>; Goodwin, Summer G (BPA) - DKS-7 <sggoodwin@bpa.gov>
Subject: FW: Willamette Valley System

Tony Schick, who has written numerous stories on BPA, the federal system and mostly fish and wildlife issues over the past year and a half or so sent the inquiry below. Tony is a good, thorough reporter. He is not a federal family fan.

I looked on the EIS site and could not find a link to comments. Can you please help me find that if it exists, so I can provide a link to our comments?

I just wanted you to know this was in flight. Tony also sent BPA a FOIA on this subject. Please let me know if you need anything else. Thanks.

From: Tony Schick <aschick@opb.org>
Sent: Friday, March 3, 2023 8:34 AM
To: Johnson,G Douglas (BPA) - DK-7 <[gdjohnson@bpa.gov](mailto:gjohnson@bpa.gov)>
Cc: Media Relations <mediarelations@bpa.gov>
Subject: [EXTERNAL] Willamette Valley System

Hi Doug,

I'm hoping to set up an interview about the Willamette Valley System. I'm interested in Bonneville's perspective on the viability of hydropower at the Willamette dams and how to weigh matters of costs, grid reliability, fish passage, etc. Is there someone at Bonneville who could talk with me about this? Ideally would like to get something on the books in the next week or so, but can be flexible.

Also, can you send me a copy of any public comments Bonneville filed with the Corps as part of the EIS process?

Thanks,

Tony Schick
Reporter, OPB
503-329-7962
aschick@opb.org



Department of Energy

Official File

Bonneville Power Administration
P.O. Box 3621
Portland, Oregon 97208-3621

POWER SERVICES

February 3rd, 2023

In reply refer to: PG-5

Liza Wells
Deputy District Engineer for Programs and Project Management
Portland District, United States Army Corps of Engineers
333 SW First Ave.
Portland, OR 97204

Dear Ms. Wells,

The Bonneville Power Administration (Bonneville) appreciates this opportunity to comment on the Draft Programmatic Environmental Impact Statement (Draft PEIS) for operations and maintenance of the Willamette Valley System.

Bonneville is participating in the development of the Draft PEIS as a cooperating agency, focusing on its expertise on the hydropower purpose of the Willamette Valley System, including hydropower generation and marketing, and electric transmission facilities and operations.

As contemplated by the Cooperating Agency Memorandum of Understanding between Bonneville and the Corps, Bonneville would like to take this opportunity to present its views on the Draft PEIS, particularly where it believes the PEIS would benefit from additional analysis. In addition to the themes discussed in this letter, Bonneville will provide the Corps with specific updates and revisions related to hydropower generation and transmission analysis in the Draft PEIS, as part of Bonneville's ongoing participation in this PEIS process as a cooperating agency. Bonneville continues to acknowledge and thank the Corps staff and leadership for its engagement and collaboration with Bonneville in the preparation of the Draft PEIS.

The Draft PEIS evaluated alternatives to achieve multiple objectives; however, none of the action alternatives to restore naturally spawning salmon and steelhead above Willamette Valley dams would maintain economical hydropower as a residual benefit of the system.

The Corps constructed the Willamette Valley System to primarily provide flood protection for Oregon communities. The system's storage capacity also provides benefits for recreation, water supply, and water quality. As the Draft PEIS notes, hydropower is a residual benefit of the Willamette Valley System, available after the Corps has optimized operations for other project purposes. The current action alternatives in the draft PEIS have outcomes which reduce the availability of hydropower generation while multiplying its costs.

Although the Draft PEIS clarifies some of the challenges of maintaining economical hydropower as a benefit of the Willamette Valley System, Bonneville believes that the Final PEIS would benefit by including specific elements to more completely capture the scope of those challenges, as well as identifying steps towards addressing them. Accordingly, Bonneville has three requests for inclusion in the Final PEIS:

- Bonneville continues to request that the Corps include in the final PEIS its implementation plan for the consideration of de-authorization and cost allocation updates at these projects. Bonneville notes the recent mandate from Congress in the 2022 Water Resources Development Act directing system-wide disposition studies of the power purpose of the Willamette dams by June 2024. Bonneville also offers the following considerations for the disposition studies:
 - Disposition studies will inform potential congressional deauthorization of power at the Willamette dams. If Congress does deauthorize power, the Corps may be able to design less costly and more effective passage routes for juvenile salmon.
 - Disposition study analysis should also inform needed cost allocation updates. Significant operational changes and the shifting economics of managing hydropower and flood control at Willamette Valley projects make cost allocation updates necessary. The Draft PEIS estimates the annual benefit of flood protection to be at least \$1 billion and power generation to be \$26 million, yet power's cost allocation averages around 40 percent. If the disposition studies, as part of assessing whether hydropower is in the federal interest, do find net economic value for remaining hydropower generation at one or more of the Willamette dams, the Corps and Bonneville should use that analysis to implement the needed appropriate cost allocation between flood risk management and power.
 - Meeting Congress' timeline for completing disposition studies by June 2024 should support implementation planning for the Final PEIS and help inform Bonneville's decisions for continued investments in the dams' power facilities. It will be important for the Corps to limit the scope of the disposition studies and focus only on the effects of deauthorizing hydropower.
- The Corps should revise the PEIS analysis to fully include the impact of the continuation of the near-term operations in the planned implementation of the final preferred alternative. The most significant impact on hydropower is the provision to continue the operations of the 2021 Oregon District Court injunction until the Corps completes structural measures, which, for some of the measures, would be well into the 2040s under the Draft PEIS implementation schedule. The current analysis does not reflect these operations which stand to reduce the value of hydropower generation by nearly a third. The Final PEIS should include revised estimates for the remaining value of hydropower generation that incorporates the near-term measures. Because these estimates are also

necessary for the disposition studies directed by Congress, their inclusion will help inform both Congress and the Final PEIS.

- Bonneville continues to urge the Corps to update structural cost estimates. The estimated costs of structures for fish passage and water temperature seem to be quite conservative. The Corps states in the Draft PEIS that it is basing cost estimates on conceptual designs and that actual costs could likely more than double. Additionally, recent economic events of inflation, constrained supply chains, and escalated interest rates make the Draft PEIS estimates likely out of date.

Again, Bonneville appreciates the Corps' collaboration during the preparation of the PEIS. This represents an important milestone for the future management of the Willamette Valley System. The system continues to provide substantial regional value through flood risk management, water supply, and recreation as its operations evolve to benefit fish and wildlife. We submit these comments with the objective of resolving the anticipated major, adverse impacts presented in the PEIS to economic and reliable power generation.

Sincerely,

William J. Leady P.E.
Vice President for Generation Asset Management
Bonneville Power Administration

cc: Beth Coffey
Director of Programs
Northwestern Division, USACE

Brad Thompson
Chief of Planning, Environmental Resources and Fish Policy
Northwestern Division, USACE

Jesse Kintz
Senior Policy and Project Lead, Power Generation, Bonneville

From: Baskerville,Sonya L (BPA) - AIN-WASH
Sent: Thursday, March 2, 2023 8:38 PM
To: Jason Heuser
Subject: RE: Updated List of Advocacy Groups supporting Willamette Project Power Deauthorization

Thanks. Yes, we had a great 30 minute meeting with Grand Rhonde. I will be touching base with Mark as we roll on through the effort with the Corp.

Hope you all had a great rally out here!

Sonya Baskerville
BPA National Relations

(b)(6) m

From: Jason Heuser <Jason.HEUSER@eweb.org>
Sent: Thursday, March 2, 2023 8:19 PM
To: Baskerville,Sonya L (BPA) - AIN-WASH <slbaskerville@bpa.gov>
Subject: Updated List of Advocacy Groups supporting Willamette Project Power Deauthorization

Hi Sonya,

It sounds like this news already has reached you in the last 24 hours, as I understand the Confederate Tribes of Grand Ronde caught up with you and John Hairston while he was still in DC? Their DC lobbyist Mark Dedrick shared with me that all the following parties signed a letter dated 2/27 that specified support for Willamette Project Power Deauthorization:

Confederated Tribes of Grande Ronde, American Rivers, Trout Unlimited, Oregon Wild, Willamette Riverkeeper, Water Watch, Center for Biological Diversity, Advocates for the West, Native Fish Society and WildEarth Guardians.

Just making sure you had the updated list of groups if you didn't have it already, but I suspect you heard this already yesterday from Grande Ronde.

Nice seeing you again this week! Cheers

Jason Heuser
Public Policy and Government Affairs Director
Eugene Water & Electric Board (EWEB)
Cell: (b)(6)

From: Baskerville,Sonya L (BPA) - AIN-WASH
Sent: Tuesday, March 7, 2023 7:54 AM
To: Marty Kanner
Cc: Samantha McDonald
Subject: Re: Apropos requests

Thanks!

Sonya Baskerville
BPA National Relations

(b)(6) m

On Mar 7, 2023 10:50 AM, Marty Kanner <mkanner@kannerandassoc.com> wrote:
Here are the two report language pieces we will be shopping:

Willamette:

The Committee is aware that the Water Resources Development Act of 2022 directs the Corps of Engineers to complete a disposition study to assess the deauthorization of commercial hydropower production at the projects within the Willamette Basin. The Committee affirms the importance of the Corps completing the disposition study no later than the stipulated 18 months, since the results will have significant impact on the design and costs of any fish mitigation plans for the Willamette Basin. The Committee further believes that design or construction of any mitigation plans shall not begin until the disposition study has been submitted to this Committee as well as the House Transportation and Infrastructure Committee and Senate Environment and Public Works Committee.

Fish Funding Alternatives

Restoration of salmonid populations in the Pacific Northwest is a regional and national priority. Nonetheless, the majority of costs for current mitigation efforts are borne by a relatively narrow regional group: the power customers of the Bonneville Power Administration. At least one-quarter of BPA rates are devoted to fish and wildlife mitigation efforts and that percent could increase depending on the outcome of pending litigation. The considerable and unpredictable fish mitigation costs is a disincentive for BPA customers to sign new long-term contracts, which could jeopardize the reliable funding stream for fish mitigation efforts. Given the broad interest in fish mitigation and inequitable allocation of mitigation expenditures, the Committee directs the Department of Energy, in consultation with other relevant federal agencies, to develop additional fish mitigation funding options that do not require BPA ratepayer funding. Such findings shall be reported to the House and Senate Committees on Appropriations within six months of enactment of this Act.

Marty Kanner

President

Kanner & Associates, LLC

(b)(6) Cell

From: Baskerville,Sonya L (BPA) - AIN-WASH <slbaskerville@bpa.gov>
Date: Tuesday, March 7, 2023 at 10:43 AM
To: Marty Kanner <mkanner@kannerandassoc.com>

Cc: Samantha McDonald <Smcdonald@kannerandassoc.com>

Subject: Re: Apropos requests

Revised draft

Sonya Baskerville
BPA National Relations

(b)(6) m

On Mar 6, 2023 7:55 PM, "Baskerville,Sonya L (BPA) - AIN-WASH" <slbaskerville@bpa.gov> wrote:
Thanks!

Sonya Baskerville
BPA National Relations

(b)(6) m

On Mar 6, 2023 6:50 PM, Marty Kanner <mkanner@kannerandassoc.com> wrote:
That should work

Marty Kanner
President
Kanner & Associates, LLC
202-624-3501 — Direct

(b)(6) — Cell

Not Responsive



From: Baskerville, Sonya L (BPA) - AIN-WASH <slbaskerville@bpa.gov>

Date: Monday, March 6, 2023 at 1:51 PM

To: Marty Kanner <mkanner@kannerandassoc.com>

Cc: Samantha McDonald <Smcdonald@kannerandassoc.com>

Subject: Apropos requests

Glad you emailed! I am going to submit workforce language per several member requests, same with disposition studies, and we also were thinking of holding the line on CRFM.

Here is the workforce draft. Of course, it will generate discussion. It is based on earlier work BPA did between 2014-2017 and TVA and FDIC. We have a PowerPoint that provides analysis and background on the issue. I know that Spencer has

been talking to the Hill about our competitiveness as well as customers, and that issue seems to now have the Hill's attention. I will send you the PowerPoint once I'm back to the full network.

Thanks!

Sonya Baskerville
BPA National Relations

(b)(6) m

On Mar 6, 2023 12:22 PM, Marty Kanner <mkanner@kannerandassoc.com> wrote:

FYI – we don't expect regular approps bills to pass, which makes requests kind of silly, but we decided to change things up given our lack of success to date thru approps. This year we will submit report language requests to:

- Hold the Corps feet to the fire on the disposition studies and
- Direct DOE to develop alternative fish funding mechanisms that do not rely on ratepayer funds

Marty Kanner

President

Kanner & Associates, LLC

(b)(6) Cell

From: Jennifer Joly <jenniferjoly@omeu.org>
Sent: Wednesday, March 1, 2023 3:02 AM
To: Baskerville, Sonya L (BPA) - AIN-WASH
Subject: Re: Question from Bonamici's Staffer, Morgan McCue

Great. Thanks, Sonya!

Jennifer Joly
Director, Oregon Municipal Electric Utility Association
(971) 600-6976

On Feb 28, 2023, at 11:50 PM, Baskerville, Sonya L (BPA) - AIN-WASH <slbaskerville@bpa.gov> wrote:

Native Fish Society and WildEarth Guardian

Sonya Baskerville
BPA National Relations
202.253.7352 m

On Feb 28, 2023 11:37 PM, Jennifer Joly <jenniferjoly@omeu.org> wrote:
When we were speaking with her yesterday and talking about the support for the Willamette deauthorization, she asked which specific fish advocates were in favor of deauthorizing the power use. Can you send me a list? I thought I heard you mention one group tonight.

Thanks, Jennifer

Jennifer Joly, Director
Oregon Municipal Electric Utilities Association
1201 Court Street NE, Suite 102
Salem, OR 97301
Cell (b)(6)
jenniferjoly@omeu.org
www.omeu.org

From: Marker,Doug R (BPA) - AIR-7
Sent: Monday, March 6, 2023 5:52 PM
To: Hairston,John L (BPA) - A-7
Cc: Baskerville,Sonya L (BPA) - AIN-WASH; Kintz,Jesse H (BPA) - PG-5; Hannigan IV,Benjamin R (BPA) - A-7
Subject: Willamette talking points for ASA Mike Connor tomorrow

John – These are talking points about our efforts with the Corps to perform the disposition studies for Willamette Valley hydro generation. For your use when you meet with Assistant Secretary of the Army Mike Connor tomorrow

Discussion points for ASA Mike Connor

- It's important to BPA that the Corps meets the 18 month hydropower disposition study deadline called for in WRDA 2022 and BPA wants to help the Corps meet the deadline – including providing economic analysis and scope input.
- The economic analysis of the WVS EIS shows that under almost all scenarios, hydropower will be uneconomical. This situation worsens with the Draft EIS's measure to extend injunction operations until completion of capital construction in the 2040s, and the very likely escalation of capital project costs from the estimates used in the WVS EIS.
- This spring, Bonneville will update its own analysis of the economic viability of commercial power generation. This analysis will confirm BPA's position on seeking deauthorization or, if some commercial power generation remains viable, appropriately rebalancing project cost allocations more equitably between flood control and power.
- BPA continues to seek the Corps' use of BPA's analysis to determine the federal interest in continued commercial power generation in the Willamette.
- Cost allocation updates continue to be warranted at Willamette projects due to significant operational changes for the injunction and EIS and shifting economic benefits.
- The Draft PEIS estimates the annual benefit of flood protection to be at least \$1 billion and power generation to be \$26 million, yet power's cost allocation averages around 40 percent.
- Bonneville is not aware that the WRDA 2020 Sec 218 report has been provided to Congress by the Corps as required. Bonneville provided to the Corps Bonneville's assessment that other project purposes would not be negatively impacted by deauthorization of the power purpose. Bonneville believes that the Corps's own assessment and the Corps's views of Bonneville's assessment would be useful for a complete assessment of deauthorizing the power purpose.

Doug Marker
Intergovernmental Affairs
Bonneville Power Administration
drmarker@bpa.gov

(b)(6) phone and text

From: Blecker,Stephanie F (BPA) - LG-7
Sent: Tuesday, February 21, 2023 10:36 AM
To: Welch,Julee A (BPA) - LP-7
Cc: Manary,David (BPA) - LG-7; Senters,Anne E (BPA) - LN-7
Subject: Bond Disclosure: Willamette River Basin
Attachments: Willamette River Basin.docx

Hi Julee:

Dave & I are working to prepare bond disclosure for an Energy Northwest bond sale that is scheduled to close on May 17, 2023.

Could you please review and update the attached section regarding the Willamette River Basin, including the discussion of the study directed by Congress for the Corps to study de-authorization of the power purpose at three Willamette dams (Big Cliff, Cougar, and Detroit). Is that study now complete? If so, what are the next steps?

We are targeting release of the preliminary bond offering on April 21, 2023, so that is the pertinent date that we are shooting to have accurate and complete information to include as of as of that date. If there is anything that is developing or changing materially between now and mid-April, please let us know and we could plan to circle back with you to confirm whether any additional updates should be made.

Thank you.

Stephanie Faith Blecker

Attorney | Office of General Counsel LG-7

BONNEVILLE POWER ADMINISTRATION

sfblecker@bpa.gov | P 503-230-3357 | C (b)(6)



Willamette River Basin. The Corps owns and operates 13 dams (eight of which include a power purpose) in the Willamette River Basin (the “Willamette Project”) for the primary purpose of flood risk reduction, and also for power, recreation, and water supply purposes. The Willamette Project is included in the Federal System. Bonneville markets the power from the Willamette Project and funds the Corps for the power purpose share of both capital and operations and maintenance costs at the facilities of the Willamette Project. Bonneville estimates that approximately 197 megawatts of power are produced by the Willamette Project under average water conditions. In December 2020, Congress directed the Corps to study de-authorization of the power purpose at three Willamette dams (Big Cliff, Cougar, and Detroit). The Corps has until December 2022 to complete the study. Congressional de-authorization of one or more of these dams would not be automatic once the study is complete, regardless of its findings. If a decision were made to seek de-authorization of the power purpose at any of the Willamette Project dams, Congress would need to pass legislation authorizing such action. If Congress were to enact legislation to de-authorize the power purpose, Bonneville estimates that power that could be produced by the Willamette Project under average water conditions could decline as much as 42 percent. It is unknown at this time whether Bonneville would be relieved of the commitment to fund future costs related to de-authorized dams or if such reduction in power production would require Bonneville to acquire additional resources to meet its future load obligations.

From: Kintz,Jesse H (BPA) - PG-5
Sent: Friday, January 20, 2023 12:10 PM
To: Welch,Julee A (BPA) - LP-7; Ashby,Gordon S (BPA) - PGA-6
Subject: FW: BPA-Corps Willamette coordination team (monthly)
Attachments: Prep for Jan2023 BPA-Corps Willamette meeting.docx

Julee and Gordon,

Here is a BPA-centric background for Monday's meeting (includes what I sent the Corps plus some additional BPA notes). Give this a skim and we can discuss at our pre-meeting on Monday. Note that it'll be the three of us for BPA (Glen is on a TDY detail, Gordon is attending for Wayne). This will be an important meeting to try to make progress with the Corps on disposition study scoping and roles, and identify any big areas of disagreement early.

-Jesse

From: Kintz,Jesse H (BPA) - PG-5
Sent: Friday, January 20, 2023 12:05 PM
To: Welch,Julee A (BPA) - LP-7 <jawelch@bpa.gov>; bradley.e.thompson@usace.army.mil;
Mark.D.Bierman@usace.army.mil; Christina.A.Austin-Smith@usace.army.mil; Thomas.Topi@usace.army.mil;
Ashby,Gordon S (BPA) - PGA-6 <gsashby@bpa.gov>
Cc: Smith,Glen A (BPA) - PG-5 <gasmith@bpa.gov>; Todd,Wayne A (BPA) - PGA-6 <watodd@bpa.gov>
Subject: RE: BPA-Corps Willamette coordination team (monthly)

Hello all,

Here is an agenda and two attachments for Monday's 2pm BPA-Corps Willamette meeting.

AGENDA:

1. *Walk through of WRDA 2022 Congressional direction language – INFORM/DISCUSS (Corps/BPA)*
2. *Disposition studies status – INFORM (Corps)*
3. *Disposition studies: scoping and BPA's role – DISCUSS (Corps/BPA)*
4. *Cost allocations touch base – topics could include basis for potential updates, status, and path forward considerations (methods, third party, etc.) – INFORM/DISCUSS (Corps/BPA)*
5. *Next steps / wrap up*

Looking forward to the discussion.

Have a nice weekend all,

-Jesse

Jesse Kintz

Power Generation – Senior Policy and Project Lead | [PG-2]

BONNEVILLE POWER ADMINISTRATION

bpa.gov | P 503-230-3340 | C (b)(6)

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

From: Kintz,Jesse H (BPA) - PG-5

Sent: Tuesday, June 28, 2022 3:24 PM

To: Kintz,Jesse H (BPA) - PG-5; Welch,Julee A (BPA) - LP-7; Smith,Glen A (BPA) - PG-5; Todd,Wayne A (BPA) - PGA-6; bradley.e.thompson@usace.army.mil; Mark.D.Bierman@usace.army.mil; Christina.A.Austin-Smith@usace.army.mil; Thomas.Topi@usace.army.mil

Cc: Ashby,Gordon S (BPA) - PGA-6

Subject: BPA-Corps Willamette coordination team (monthly)

When: Monday, January 23, 2023 2:00 PM-3:30 PM (UTC-08:00) Pacific Time (US & Canada).

Where: WebEx - links to follow

Extended meeting time due to lack of December meeting and to allow sufficient discussion on WRDA recent developments.

Recurring monthly invite

Purpose: To coordinate between BPA and Corps on the Corps' disposition study and other issues related to the future of power at the Willamette dams given the EIS and injunction measures impacts on power economics.

1/23 Corps disposition study meeting prep

DRAFT AGENDA:

1. Walk through of WRDA 2022 Congressional direction language – INFORM/DISCUSS (Corps/BPA)
2. Disposition studies status – INFORM (Corps)
3. Disposition studies: scoping and BPA's role – DISCUSS (Corps + BPA)
4. Cost allocations touch base – topics could include basis for potential updates, status, and path forward considerations (methods, third party, etc.) – INFORM/DISCUSS (Corps/BPA)
5. Next steps / wrap up

BPA POINTS TO EMPHASIZE:

- **DISPOSITION STUDY - SCOPE.** Important to keep scope reasonable to achieve 18 month timeline
 - Importance of federal interest determination including focus on the “if” first before the “how”
 - Suggest commercial / federally marketed power as scope
- **DISPOSITION STUDY- BPA'S ROLE.**
 - BPA is updating our power economics analysis based on our power marketing expertise
 - BPA will provide economic analysis as part of federal interest determination. Can help alleviate the burden on the Corps given short timeline
- **COST ALLOCATIONS.**
 - This issue is about equity between ratepayers and taxpayers and also can be a path to retaining economic hydropower.
 - Disposition study determination of remaining federal interest can lead to allocation update
 - Should update allocations even if power isn't deauthorized.
 - Triggers: Major ops changes from injunction/EIS should be trigger. Could disposition study be a trigger?

QUESTIONS:

- What does the Corps see as BPA's role?
- Corps status on setting up PDT and schedule?
- Should BPA be part of PDT?
- Does the disposition study have a NEPA component?
- Does it help the Corps to use the disposition study as a cost allocation trigger?

BPA's previous disposition study scoping comments (Sept 2022)

(Outline based on August 22, 2016 Corps disposition study memo; BPA comments in green)

Overall: BPA views timely completion of the federal interest determination in Section E as critical to inform path forward. If it's determined there is no federal interest in hydropower at certain projects, it could have implications on subsequent actions, including EIS work, repayment responsibilities, etc.

A. Purpose of Study –

-Scope should be system-wide due to economics concerns at all 8 power Willamette projects. Consider options to streamline including studying subset and applying broadly.

B. Project Authorization and History

C. Study Area Detailed Project Description

D. Historic and Existing Conditions

- a. History of Performance
- b. Operation and Maintenance History
- c. Existing Safety Evaluation
- d. Summary of Asset Holding

-Could be largely gathered from existing (EIS, Willamette Falls locks) documentation?

-Call out commercial power distinction (vs station service, TDG mgmt)

-Consider whether the commercial power purpose is still being met (vs minimal power for station service, total dissolved gases management)

-Include Congressional intent of cost-benefit for power and regional benefits that were expected from House Document 531

-Include description of Bonneville's role as the sole power marketer

E. Description of Federal Interest in Disposition

-Timing. Consistent with the Corps' memo guidance, Corps has shared that this will be the first phase of the disposition study process and determined within a period of months (Spring 2023?). BPA supports this approach and believes that this determination early in the process will be critical in informing the path forward on multiple fronts.

-Federal interest should be grounded in original Congressional intent.

-Include consideration of potential benefits of de-authorizing commercial power including flexibility for fish and water quality

a. Screening and Selection Criteria –

-Criteria should include economic viability consistent with Congressional intent

-BPA, given our expertise in power marketing, should have significant input, partnering with Corps HAC

b. Eligibility for disposition

- i. *Limit this to commercial power generating facilities (as opposed to turbine functions for reservoir releases, water quality and fish).*

Bonneville's **DRAFT** Willamette EIS public comments on disposition study:

- Bonneville continues to request that the Corps include in the final PEIS its implementation plan for the consideration of de-authorization and cost allocation updates at these projects. Bonneville notes the recent mandate from Congress in the 2022 Water Resources Development Act directing Willamette system-wide disposition studies of the power purpose of the Willamette dams by June 2024. Bonneville also offers the following considerations for the disposition studies:
 - Disposition studies will inform potential congressional deauthorization of power at the Willamette dams. If power were deauthorized, the Corps may be able to design less costly and more effective passage routes for juvenile salmon.
 - Disposition study analysis should also inform needed cost allocation updates. If the disposition studies, as part of assessing whether hydropower is in the federal interest, do find net economic value for remaining hydro generation at one or more of the Willamette dams, the Corps and Bonneville should use that analysis to implement the needed appropriate cost allocation between flood risk management and power.
 - Cost allocation updates are needed as a result of significant operational changes and the shifting economics of managing hydropower and flood control at Willamette Valley projects. The Draft PEIS estimates the annual benefit of flood protection is at least at \$1 billion dollars and power generation at \$21 million dollars on average under current output levels, which it proposes to reduce.
 - Completion of the disposition studies prior to Congress's deadline of June 2024 would help ensure that they coincide with the additional evaluations for the Final PEIS, which would allow the studies to inform both the implementation plan and decisions on continued investments in the dams' power facilities. To complete the studies on Congress's requested timeline, and consistent with its direction, the disposition studies will need to be limited in scope and be focused only on hydropower.
 - It is also important to complete disposition studies on the Congressional timeline to inform decisions on continued investments in the power facilities of the dams. Responding to diminished power generation, and pending determination of the ability to provide economic power from the Willamette dams, Bonneville informed the Corps last year of its pause on new power facility capital spending except as required for dam safety.

From: Kintz,Jesse H (BPA) - PG-5
Sent: Monday, January 23, 2023 10:53 AM
To: Welch,Julee A (BPA) - LP-7; Ashby,Gordon S (BPA) - PGA-6
Cc: Smith,Glen A (BPA) - PG-5
Subject: FW: Excerpt from USACE Project Management Process - What we could expect

FYI- see Glen's points below. This is a topic we should bring up with them today.

From: Smith,Glen A (BPA) - PG-5 <gasmith@bpa.gov>
Sent: Friday, January 13, 2023 7:44 AM
To: Kintz,Jesse H (BPA) - PG-5 <jhkintz@bpa.gov>; Marker,Doug R (BPA) - AIR-7 <drmarker@bpa.gov>; Welch,Julee A (BPA) - LP-7 <jawelch@bpa.gov>; Spear,Daniel J (BPA) - PGB-5 <djspear@bpa.gov>
Subject: RE: Excerpt from USACE Project Management Process - What we could expect

I think we have a strong case to have a seat on the product delivery team. Not sure who that person should be (maybe you or someone from Wayne's group).

Glen

From: Kintz,Jesse H (BPA) - PG-5 <jhkintz@bpa.gov>
Sent: Thursday, January 12, 2023 5:16 PM
To: Smith,Glen A (BPA) - PG-5 <gasmith@bpa.gov>; Marker,Doug R (BPA) - AIR-7 <drmarker@bpa.gov>; Welch,Julee A (BPA) - LP-7 <jawelch@bpa.gov>; Spear,Daniel J (BPA) - PGB-5 <djspear@bpa.gov>
Subject: RE: Excerpt from USACE Project Management Process - What we could expect

Thanks for the background, Glen.

We should definitely ask them about this on 1/23.

-Jesse

From: Smith,Glen A (BPA) - PG-5 <gasmith@bpa.gov>
Sent: Monday, January 9, 2023 1:45 PM
To: Kintz,Jesse H (BPA) - PG-5 <jhkintz@bpa.gov>; Marker,Douglas R (BPA) - AIR-7 <drmarker@bpa.gov>; Welch,Julee A (BPA) - LP-7 <jawelch@bpa.gov>; Spear,Daniel J (BPA) - PGB-5 <djspear@bpa.gov>
Subject: Excerpt from USACE Project Management Process - What we could expect

Here are some sections from their engineering regulation regarding managing projects. This how we did projects when I was with USACE. The PMP should have a schedule with task deliverables. It should have the date when they expect to determine federal interest etc.

In theory, we (BPA) are a stakeholder and should be part of this process.

No. ER 5-1-11 31 Jul 2018 Management USACE BUSINESS PROCESS

Project Delivery Process. A project is a temporary endeavor undertaken to create a unique product, service, or result.¹ The project delivery business process (PDBP) is the fundamental method used to deliver quality projects at all echelons of USACE (Refer to Appendix C for a listing of the PDBP processes).

PDBP Imperatives. In addition to the five USACE business process principles, there are three imperatives that govern the successful completion of projects. PDBP Imperatives 1. One project, one team, **one Project Manager** (PM). 2. Manage all projects with a **Project Management Plan** (PMP). 3. The **Project Delivery Team** (PDT) is responsible for project success.

Manage all projects with a Project Management Plan (PMP). To meet mission objectives, each project is managed under a project management plan (PMP). A PMP is a roadmap for quality project delivery. The PM and the PDT work with the stakeholder early in the project planning process to determine the **stakeholder's needs**, and to refine those requirements in light of quality, safety, fiscal, **schedule**, legal, communications, change management and other constraints. The PDT measures its success against the expectations documented in the PMP, which is an agreement between USACE and the stakeholder that defines **project objectives and project-specific quality control procedures appropriate to the size, complexity, acquisition strategy, project delivery, and nature of each product. It should be signed by all PDT members, including the stakeholder, to document their commitment to project success.**

Glen A. Smith

Senior Policy Advisor | PG-5

BONNEVILLE POWER ADMINISTRATION

gasmith@bpa.gov | P 503-230-3105 | C (b)(6)



From: Kintz, Jesse H (BPA) - PG-5
Sent: Wednesday, March 22, 2023 3:17 PM
To: Welch, Julee A (BPA) - LP-7; Smith, Glen A (BPA) - PG-5; Todd, Wayne A (BPA) - PGA-6; bradley.e.thompson@usace.army.mil; Mark.D.Bierman@usace.army.mil; Christina.A.Austin-Smith@usace.army.mil; Thomas.Topi@usace.army.mil; Ashby, Gordon S (BPA) - PGA-6; Weber, Jeremy J CIV USARMY CENWD (USA); Hanneken, Charles D CIV USARMY CENWD (USA); Ryan, Margaret C CIV USARMY CENWP (USA); James.D.Kiel@usace.army.mil
Subject: Follow ups from Monday's meeting: BPA WRDA 2022 Sec 8220 comments and OMB budget cost allocation language
Attachments: Bonneville Power Administration Comment to Army on implementation guidance for WRDA 2022 Sec 8220_03.21.2023.pdf; DOE FY 2024 Budget Request Vol 3 PMAs FCRPS Reallocation.pdf

All,

I've attached the two follow ups we discussed during our meeting on Monday afternoon:

1. BPA's comments to Army on WRDA 2022 Sec 8220 for implementation guidance consideration (Hot off the press)
2. Subset of the BPA Congressional Justification portion of the FY24 President's budget which includes a section on cost allocations, including mentions of a meeting with OMB, joint schedule, and joint BPA-Corps proposal ("FCRPS Cost Allocations" section)

Please feel free to reach out to me if any questions on these.

I also updated our monthly BPA-Corps Willamette meeting invite to include the full invitee list (I hope), so hopefully that is corrected going forward.

Lastly, we received the invite for the April 11 charrette meeting from Kelly James, NWP so it's on our calendars. We'll keep an eye out for further descriptions/agendas when available so we can make sure the right BPA folks are there and we're prepared for the appropriate topics. In the meantime for fun, I looked up the spelling, definition and origin of "charrette" – here is a link for the Wikipedia article which seemed to do a reasonably good job of summarizing: [Charrette - Wikipedia](#). Should be a good discussion!

-Jesse

Jesse Kintz

Power Generation – Senior Policy and Project Lead | [PG-2]

BONNEVILLE POWER ADMINISTRATION

bpa.gov | P 503-230-3340 | C (b)(6)

From: Welch, Julee A (BPA) - LP-7
Sent: Monday, April 10, 2023 2:33 PM
To: Blecker, Stephanie F (BPA) - LG-7
Cc: Manary, David (BPA) - LG-7; Nagra, Angad S (BPA) - LN-7; Senters, Anne E (BPA) - LN-7
Subject: RE: Bond Disclosure: Corps Study re: Disposition of Power at Willamette Dams

Hi Stephanie –

Unfortunately we were not given a courtesy copy of the Corps' report that is currently being circulated for final review, so I don't know what is in it. We did have discussions with Corps' staff and made recommendations on what we would like to see in it, but have no idea what was actually included or whether they accepted our suggestions.

The new Study under the 2022 Act is somewhat related only in that it deals with power generation at the Willamettes and possible de-authorization, but it is more expansive and the analysis is a lot more detailed. There is an all-day meeting tomorrow to discuss and that is when we are supposed to decide what the actual scope is and how it will be carried out. So a lot happening with it as we speak.

Sorry I couldn't offer more details but the short answer is either we don't know or the details are forthcoming.

Let me know if you'd like to chat.

Thanks,
Julee

From: Blecker, Stephanie F (BPA) - LG-7 <sfblecker@bpa.gov>
Sent: Monday, April 10, 2023 1:44 PM
To: Welch, Julee A (BPA) - LP-7 <jawelch@bpa.gov>
Cc: Manary, David (BPA) - LG-7 <dbmanary@bpa.gov>; Nagra, Angad S (BPA) - LN-7 <ASNagra@bpa.gov>; Senters, Anne E (BPA) - LN-7 <aesenters@bpa.gov>
Subject: RE: Bond Disclosure: Corps Study re: Disposition of Power at Willamette Dams

Hi Julee:

We are circling back since the near-final bond offering is being routed to the bond team tomorrow (since it will get released to the public next week on April 21).

Is there anything you can share (from a high level) regarding the study that was expected to be complete by December 2022? Is the new study required under the Water Resource Development Act of 2022 a continuation of the initial study or something different?

Steph

From: Welch, Julee A (BPA) - LP-7 <jawelch@bpa.gov>
Sent: Wednesday, March 15, 2023 3:29 PM
To: Blecker, Stephanie F (BPA) - LG-7 <sfblecker@bpa.gov>
Subject: RE: Bond Disclosure: Willamette River Basin

Just an FYI that I haven't forgotten about this...the person I need to chat with is currently on leave but back on Monday. Will check in with him soon.

Thanks,
Julee

From: Blecker,Stephanie F (BPA) - LG-7 <sfblecker@bpa.gov>
Sent: Monday, February 27, 2023 2:39 PM
To: Welch,Julee A (BPA) - LP-7 <jawelch@bpa.gov>; Senters,Anne E (BPA) - LN-7 <aesenters@bpa.gov>
Cc: Manary,David (BPA) - LG-7 <dbmanary@bpa.gov>; Nagra,Angad S (BPA) - LN-7 <ASNagra@bpa.gov>
Subject: RE: Bond Disclosure: Willamette River Basin

The bond offering is scheduled for release on April 21, so we have some time to incorporate this development and it is not urgent.

Thanks for the update. I thought the study we referred to earlier was expected to be done by December 2022, but it sounds like that study work will continue? Is that right (basically additional study work related to the same effort)?

Steph

From: Welch,Julee A (BPA) - LP-7 <jawelch@bpa.gov>
Sent: Monday, February 27, 2023 2:29 PM
To: Blecker,Stephanie F (BPA) - LG-7 <sfblecker@bpa.gov>; Senters,Anne E (BPA) - LN-7 <aesenters@bpa.gov>
Cc: Manary,David (BPA) - LG-7 <dbmanary@bpa.gov>; Nagra,Angad S (BPA) - LN-7 <ASNagra@bpa.gov>
Subject: RE: Bond Disclosure: Willamette River Basin

Hi all-

The Water Resource Development Act of 2022 directed the Corps to study disposition of power at all Willamette dams. See p. 3344.

[54F4D613DB981AF6D76BDD1F686B0E06.wrda-2022.pdf \(senate.gov\)](#)

We have been working with the Corps to learn more about how they plan on doing this work, but so far there is a lot of "not sure yet" responses.

When do you need the information for the disclosure? I'm trying to focus on another project but can prioritize this if needed.

Thanks,
Julee

From: Blecker,Stephanie F (BPA) - LG-7 <sfblecker@bpa.gov>
Sent: Monday, February 27, 2023 2:08 PM
To: Senters,Anne E (BPA) - LN-7 <aesenters@bpa.gov>; Welch,Julee A (BPA) - LP-7 <jawelch@bpa.gov>
Cc: Manary,David (BPA) - LG-7 <dbmanary@bpa.gov>; Nagra,Angad S (BPA) - LN-7 <ASNagra@bpa.gov>
Subject: RE: Bond Disclosure: Willamette River Basin

Sorry I spelled your name wrong, Julee.

From: Blecker,Stephanie F (BPA) - LG-7
Sent: Monday, February 27, 2023 2:07 PM
To: Senters,Anne E (BPA) - LN-7 <aesenters@bpa.gov>; Welch,Julee A (BPA) - LP-7 <jawelch@bpa.gov>
Cc: Manary,David (BPA) - LG-7 <dbmanary@bpa.gov>; Nagra,Angad S (BPA) - LN-7 <ASNagra@bpa.gov>
Subject: RE: Bond Disclosure: Willamette River Basin

Thanks, Anne.

Julee: Could you please direct us to the new legislation and status?

Steph

From: Senters,Anne E (BPA) - LN-7 <aesenters@bpa.gov>
Sent: Thursday, February 23, 2023 4:22 PM
To: Blecker,Stephanie F (BPA) - LG-7 <sfblecker@bpa.gov>; Welch,Julee A (BPA) - LP-7 <jawelch@bpa.gov>
Cc: Manary,David (BPA) - LG-7 <dbmanary@bpa.gov>; Nagra,Angad S (BPA) - LN-7 <ASNagra@bpa.gov>
Subject: RE: Bond Disclosure: Willamette River Basin

Hi Stephanie,

I just had one comment here and am adding Angad for his information. The injunction has resulted in a significant reduction of aMW, down to 120ish but we'd have to ask PG for details (unless Julee or Angad remember.)

There's new legislation on the study – Julee can describe appropriately. Thanks!

Anne Senters (she/her)
Assistant General Counsel | Office of General Counsel
BONNEVILLE POWER ADMINISTRATION
bpa.gov | P 503-230-4998 | C (b)(6)

From: Blecker,Stephanie F (BPA) - LG-7 <sfblecker@bpa.gov>
Sent: Tuesday, February 21, 2023 10:36 AM
To: Welch,Julee A (BPA) - LP-7 <jawelch@bpa.gov>
Cc: Manary,David (BPA) - LG-7 <dbmanary@bpa.gov>; Senters,Anne E (BPA) - LN-7 <aesenters@bpa.gov>
Subject: Bond Disclosure: Willamette River Basin

Hi Julee:

Dave & I are working to prepare bond disclosure for an Energy Northwest bond sale that is scheduled to close on May 17, 2023.

Could you please review and update the attached section regarding the Willamette River Basin, including the discussion of the study directed by Congress for the Corps to study de-authorization of the power purpose at three Willamette dams (Big Cliff, Cougar, and Detroit). Is that study now complete? If so, what are the next steps?

We are targeting release of the preliminary bond offering on April 21, 2023, so that is the pertinent date that we are shooting to have accurate and complete information to include as of as of that date. If there is anything that is developing or changing materially between now and mid-April, please let us know and we could plan to circle back with you to confirm whether any additional updates should be made.

Thank you.

Stephanie Faith Blecker

Attorney | Office of General Counsel LG-7

BONNEVILLE POWER ADMINISTRATION

sfblecker@bpa.gov | P 503-230-3357 | C (b)(6)



From: Spear, Daniel J (BPA) - PGB-5
Sent: Monday, April 10, 2023 12:49 PM
To: Marker, Doug R (BPA) - AIR-7; Kintz, Jesse H (BPA) - PG-5; Smith, Glen A (BPA) - PG-5; Welch, Julee A (BPA) - LP-7
Cc: Sullivan, Leah S (BPA) - PGB-5
Subject: RE: Estimate WVS Generation Loss Timing

Hello:

The PA does not offer a return to baseline (by baseline I mean baseline in the PA analysis context – meaning no court ordered measures but with the TC spill measure at DET, fall/spring spill at Cougar, spill at Foster, etc.) at all projects.

Explicitly, Cougar will be drawn down to the diversion tunnel and will never generate electricity again. Green Peter features identical drawdowns in both the court ordered measures and the PA, so it will also generate significantly less.

A SWS/FSS at Detroit and a FSS at LOP (and likely HCR) would presumably return these projects to their prior levels of generation. So as a best case scenario, BPA could assume that the Willamettes as a whole will all generate at about the prior levels minus all of Cougar and much of Green Peter once the PA/BiOP measures are in place.

That said, in my opinion the more likely outcome is that the FSS’ at DET and LOP (and likely HCR) will not work well. Even if they exceed the ~60% collection efficiency needed for replacement and hit the very optimistic target of 80% presumed by UBC researchers recently, then there will still be strong regional interest in improving them to reach the NMFS criteria of 98% collection efficiency.

While it is certainly a guessing game to presume how to improve the performance of a structure that has not been designed, built or operated yet; the likely course of action will be to try to increase collection efficiency by lowering the reservoir to narrow the amount of space needed for the FSS to “find” fish. Or, perhaps there would be some manner of pulse or attraction flow.

Of course, even with heroic efforts to improve the collection efficiency of the FSS’ they may not work at all or as well as the drawdowns they would be replacing at LOP (and likely HCR) or the spill they are replacing at Detroit. So we could be left with the worse of all outcomes: expensive failed FSS’ on the books and reservoirs that are still drawn down (LOP and HCR) or spilling aggressively (DET).

Dan Spear

Project	Court Ordered Measure	PA Measure	Energy /
Cougar	Drawdown, Sprill Spill	Diversion Tunnel Drawdown	None
Detroit/BC	Temp Control Spill, Prioritize RO Passage	TC Tower and FSS	Presumably about the same
Green Peter	Fall/Winter Drawdown and Spill	Same as Court Order	Same as Court Order
Foster	Spill, try again with spill weir	Same as Court Order	Same as Court Order
LOP/DEX	Drawdown at LOP, Dex Spill	FSS at LOP, Dex Spill	Presumably about the same
Hills Creek	Spill	Spill	Same as Court Order

From: Marker,Doug R (BPA) - AIR-7 <drmarker@bpa.gov>
Sent: Friday, April 7, 2023 6:17 PM
To: Kintz,Jesse H (BPA) - PG-5 <jhkintz@bpa.gov>; Smith,Glen A (BPA) - PG-5 <gasmith@bpa.gov>; Welch,Julee A (BPA) - LP-7 <jawelch@bpa.gov>; Spear,Daniel J (BPA) - PGB-5 <djspear@bpa.gov>
Subject: RE: Estimate WVS Generation Loss Timing

Thanks for prompting a response, Jesse. Clearly, I accepted the invitation to just wait to discuss this at a Monday meeting.

But if I understand the question about the timing, the construction will be staged over 20 years at the most optimistic schedule. So 20 – 30 years for an optimistic scenario seems reasonable. Consider the lead time for the Corps to develop an appropriations request of the magnitude of the big projects and then secure Congressional allocation.

The scenario would contemplate that generation would be restored back to current levels after completion of construction and confirmation of effective passage. Back to the full 171 aMW? But that's the promise of the EIS

But I'm not sure 120 MW is the floor, and here, once again, I look to Dan's knowledge. Again, I think we should expect deep drawdowns at Hills Creek; uncertain duration of lowered reservoirs. But as pointed out in an earlier e-mail, there may more spill contemplated. All of that is to say that 120 MW seems a shaky guarantee pending the ambitious construction schedule.

From: Kintz,Jesse H (BPA) - PG-5 <jhkintz@bpa.gov>
Sent: Friday, April 7, 2023 5:17 PM
To: Smith,Glen A (BPA) - PG-5 <gasmith@bpa.gov>; Marker,Doug R (BPA) - AIR-7 <drmarker@bpa.gov>; Welch,Julee A (BPA) - LP-7 <jawelch@bpa.gov>; Spear,Daniel J (BPA) - PGB-5 <djspear@bpa.gov>
Subject: RE: Estimate WVS Generation Loss Timing

Thanks for teeing up this question Glen.

I think we should analyze at least two different scenario timings for potential loss of power (and associated financials), one more aggressive and other more conservative. Maybe something like:

Deauthorization (or loss of commercial power for BPA and associated payment responsibilities) occurs in:

1. 5-7 years
2. 18-20 years

Ideally we could tie this to something but not coming up with anything specific right away. Thoughts?

From: Smith,Glen A (BPA) - PG-5 <gasmith@bpa.gov>
Sent: Tuesday, April 4, 2023 7:06 AM
To: Marker,Doug R (BPA) - AIR-7 <drmarker@bpa.gov>; Kintz,Jesse H (BPA) - PG-5 <jhkintz@bpa.gov>; Welch,Julee A (BPA) - LP-7 <jawelch@bpa.gov>; Spear,Daniel J (BPA) - PGB-5 <djspear@bpa.gov>
Subject: Estimate WVS Generation Loss Timing

Hey All,

We have a number of studies requested that assesses the impacts of losing generation in the Valley. The two scenarios consider the injunction measure losses and the total loss of generation if the dams have hydropower deauthorized.

I want to get some thoughts or concurrence with the following timing scenarios that will be given to those studying the effects of losing generation.

- 1) Expected average annual generation due to injunction measures (~ 30% loss) 120 aMW - in placed until deauthorization
- 2) Expected total loss of annual generation due to deauthorization 171 aMW – 20 to 30 years??

If needed, we could discuss at our next Monday meeting.

Glen

Glen A. Smith

Senior Policy Advisor | PG-5

BONNEVILLE POWER ADMINISTRATION

gasmith@bpa.gov | P 503-230-3105 | C (b)(6)



From: Leady Jr,William J (BPA) - PG-5
Sent: Thursday, March 16, 2023 2:04 PM
To: Marker,Doug R (BPA) - AIR-7
Cc: Kintz,Jesse H (BPA) - PG-5; Smith,Glen A (BPA) - PG-5; Welch,Julee A (BPA) - LP-7; Senters,Anne E (BPA) - LN-7; Baskerville,Sonya L (BPA) - AIN-WASH
Subject: RE: For approval by march 21 - Comments to Army for implementation guidance for Section 8220 of WRDA 2022

Doug,

Nice work, I will certainly sign this.

Bill Leady P.E.

Vice President, Generation Asset Management | PG
BONNEVILLE POWER ADMINISTRATION
bpa.gov | Office 503-230-4270 | Cell (b)(6)

From: Marker,Doug R (BPA) - AIR-7 <drmarker@bpa.gov>
Sent: Thursday, March 16, 2023 11:51 AM
To: Leady Jr,William J (BPA) - PG-5 <wjleady@bpa.gov>
Cc: Kintz,Jesse H (BPA) - PG-5 <jhkintz@bpa.gov>; Smith,Glen A (BPA) - PG-5 <gasmith@bpa.gov>; Welch,Julee A (BPA) - LP-7 <jawelch@bpa.gov>; Senters,Anne E (BPA) - LN-7 <aesenters@bpa.gov>; Baskerville,Sonya L (BPA) - AIN-WASH <slbaskerville@bpa.gov>
Subject: For approval by march 21 - Comments to Army for implementation guidance for Section 8220 of WRDA 2022

Bill – Comments are due next Tuesday to the Army for implementation guidance for the Willamette disposition studies section of 2022 WRDA.

I drafted proposed comments for your review and signature. These largely reiterate the points that Sonya made earlier this month in the Army’s public workshops and reiterate points we made in our comments on the draft EIS. I’ve incorporated suggestions from Jesse.

Could you review these and let me know if you approve and will sign? I’m happy to discuss.

Best,

Doug

Doug Marker
Intergovernmental Affairs
Bonneville Power Administration
drmarker@bpa.gov
(b)(6) phone and text

From: Kintz,Jesse H (BPA) - PG-5
Sent: Tuesday, April 4, 2023 4:43 PM
To: Ashby,Gordon S (BPA) - PGA-6; Welch,Julee A (BPA) - LP-7; Todd,Wayne A (BPA) - PGA-6; Smith,Glen A (BPA) - PG-5
Subject: RE: Recap of 3/20 Corps meeting and prep for 4/11 disposition study meeting with Corps

Looks like the agenda details just came out and it's actually going to be here in Portland. The materials are in the meeting invite so hopefully you all have access (let me know if not) – a ton of interesting information in there and insights on the Corps process. I'm just starting to read through it.

From: Kintz,Jesse H (BPA) - PG-5
Sent: Tuesday, April 4, 2023 3:08 PM
To: Ashby,Gordon S (BPA) - PGA-6 <gsashby@bpa.gov>; Welch,Julee A (BPA) - LP-7 <jawelch@bpa.gov>; Todd,Wayne A (BPA) - PGA-6 <watodd@bpa.gov>; Smith,Glen A (BPA) - PG-5 <gasmith@bpa.gov>
Subject: RE: Recap of 3/20 Corps meeting and prep for 4/11 disposition study meeting with Corps

The invite says it might be in Eugene but I haven't seen a finalized location yet.

From: Ashby,Gordon S (BPA) - PGA-6 <gsashby@bpa.gov>
Sent: Tuesday, April 4, 2023 3:01 PM
To: Welch,Julee A (BPA) - LP-7 <jawelch@bpa.gov>; Kintz,Jesse H (BPA) - PG-5 <jhkintz@bpa.gov>; Todd,Wayne A (BPA) - PGA-6 <watodd@bpa.gov>; Smith,Glen A (BPA) - PG-5 <gasmith@bpa.gov>
Subject: RE: Recap of 3/20 Corps meeting and prep for 4/11 disposition study meeting with Corps

I am in a meeting with the Corps (HDC) all day on 4/11.

From: Welch,Julee A (BPA) - LP-7 <jawelch@bpa.gov>
Sent: Tuesday, April 4, 2023 2:59 PM
To: Kintz,Jesse H (BPA) - PG-5 <jhkintz@bpa.gov>; Todd,Wayne A (BPA) - PGA-6 <watodd@bpa.gov>; Ashby,Gordon S (BPA) - PGA-6 <gsashby@bpa.gov>; Smith,Glen A (BPA) - PG-5 <gasmith@bpa.gov>
Subject: RE: Recap of 3/20 Corps meeting and prep for 4/11 disposition study meeting with Corps

My preference would be in person. Do you know where it is at?

From: Kintz,Jesse H (BPA) - PG-5 <jhkintz@bpa.gov>
Sent: Tuesday, April 4, 2023 2:58 PM
To: Todd,Wayne A (BPA) - PGA-6 <watodd@bpa.gov>; Ashby,Gordon S (BPA) - PGA-6 <gsashby@bpa.gov>; Welch,Julee A (BPA) - LP-7 <jawelch@bpa.gov>; Smith,Glen A (BPA) - PG-5 <gasmith@bpa.gov>
Subject: FW: Recap of 3/20 Corps meeting and prep for 4/11 disposition study meeting with Corps

Can you let me know if you plan on attending the 4/11 meeting with the Corps in person, remotely, or are unavailable? I plan to attend in person. I believe Gordon and Wayne may have potential conflicts – if still the case, we can finalize once we get the agenda from the Corps.

Thanks,
-Jesse

From: Kintz, Jesse H (BPA) - PG-5

Sent: Monday, April 3, 2023 12:06 PM

To: Leady Jr, William J (BPA) - PG-5 <wjleady@bpa.gov>; Marker, Doug R (BPA) - AIR-7 <drmarker@bpa.gov>; Baskerville, Sonya L (BPA) - AIN-WASH <sibaskerville@bpa.gov>; Spear, Daniel J (BPA) - PGB-5 <djspear@bpa.gov>; Senters, Anne E (BPA) - LN-7 <aesenters@bpa.gov>; Nagra, Angad S (BPA) - LN-7 <ASNagra@bpa.gov>; Maslow, Jeffrey J (BPA) - EC-4 <jjmaslow@bpa.gov>; Mai, Amy E (BPA) - EC-4 <aemai@bpa.gov>; Wingert, Kevin M (BPA) - DKP-7 <kwingert@bpa.gov>

Cc: Ashby, Gordon S (BPA) - PGA-6 <gsashby@bpa.gov>; Smith, Glen A (BPA) - PG-5 <gasmith@bpa.gov>; Welch, Julee A (BPA) - LP-7 <jawelch@bpa.gov>; Todd, Wayne A (BPA) - PGA-6 <watodd@bpa.gov>

Subject: Recap of 3/20 Corps meeting and prep for 4/11 disposition study meeting with Corps

All,

Below is a recap from the most recent monthly meeting we had with the Corps on the Willamette, along with a few notes on the planned approach to the upcoming planning meeting with the Corps on disposition study. Let me know if any questions.

-Jesse

BPA-Corps monthly Willamette meeting (3/20/23):

-Corps has finalized 4/11 as date for an all day disposition study planning/scoping meeting called a "charrette". BPA invited. Attendees are likely to be planning-focused, disposition study leads, economists, possibly real estate or budgeting (middle levels, not execs). Meeting should help clarify the analysis to do for federal interest. Corps is emphasizing achieving vertical alignment up to HQ/Army level.

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-BPA asked if any additional BPA opportunities for review and Corps confirmed no. BPA reiterated that we view the impact on other purposes as an unresolved issue in that report and requested that at minimum the BPA perspective is shared alongside Corps'.

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-BPA mentioned the budget language mentioning an OMB meeting and joint proposal for FY2025 budget. Corps had not heard much on this yet.

-After the meeting BPA sent copy of budget language and our WRDA 2022 Sec 8220 implementation comments we sent to Army.

BPA approach to 4/11 disposition study planning meeting:

-Corps plans to send an agenda by middle of this week.

-Potential BPA attendees: Jesse Kintz, Glen Smith, Julee Welch, PGA rep (Wayne Todd and/or Gordon Ashby), possibly a PGS rep (TBD). Will finalize attendees after receiving agenda.

-BPA to compile set of talking points this week to prepare for the meeting. Jesse will draft and send to team for input, and set up a pre-meeting for the attendees.

-BPA will also get opportunity to provide some brief opening remarks after the Corps does theirs. Can use talking points, I will likely be the one doing this, will coordinate with others as needed.

Jesse Kintz

Power Generation – Senior Policy and Project Lead | [PG-2]

BONNEVILLE POWER ADMINISTRATION

bpa.gov | P 503-230-3340 | C (b)(6)

From: Smith,Glen A (BPA) - PG-5
Sent: Thursday, April 6, 2023 10:22 AM
To: Spear,Daniel J (BPA) - PGB-5; Kintz,Jesse H (BPA) - PG-5; Leady Jr,William J (BPA) - PG-5; Baskerville,Sonya L (BPA) - AIN-WASH; Todd,Wayne A (BPA) - PGA-6; Marker,Doug R (BPA) - AIR-7; Welch,Julee A (BPA) - LP-7; Senters,Anne E (BPA) - LN-7; Nagra,Angad S (BPA) - LN-7; Sullivan,Leah S (BPA) - PGB-5
Subject: RE: Recap of 3/20 Corps meeting and prep for 4/11 disposition study meeting with Corps

I'm not sure who, but, someone could ask the Corps, NWP's project management group for the funding source. I think that Mike Turaski would be able to answer the question. If I recall correctly, they may have received funding in the latest Work Plan allocation that is provided as part of the budget. Work plan is a bit different than the original budget request and President's Budget. The Corps districts are asked for capability and needs and then Congress may decide to add the budget amounts/items when they approve the budget (Glen's poor interpretation of how it all works).

Glen

From: Spear,Daniel J (BPA) - PGB-5 <djspear@bpa.gov>
Sent: Thursday, April 6, 2023 10:15 AM
To: Kintz,Jesse H (BPA) - PG-5 <jhkintz@bpa.gov>; Leady Jr,William J (BPA) - PG-5 <wjleady@bpa.gov>; Baskerville,Sonya L (BPA) - AIN-WASH <slbaskerville@bpa.gov>; Todd,Wayne A (BPA) - PGA-6 <watodd@bpa.gov>; Marker,Doug R (BPA) - AIR-7 <drmarker@bpa.gov>; Welch,Julee A (BPA) - LP-7 <jawelch@bpa.gov>; Senters,Anne E (BPA) - LN-7 <aesenters@bpa.gov>; Nagra,Angad S (BPA) - LN-7 <ASNagra@bpa.gov>; Smith,Glen A (BPA) - PG-5 <gasmith@bpa.gov>; Sullivan,Leah S (BPA) - PGB-5 <lsullivan@bpa.gov>
Subject: RE: Recap of 3/20 Corps meeting and prep for 4/11 disposition study meeting with Corps

Hello:

Willamette Falls Lock is owned by the Corps (although the Willamette Falls Dam itself is owned by PGE) and it has not functioned as a working navigation lock for quite some time. The Willamette Falls Lock Disposition study is a discrete effort by the Corps to dispossess themselves of the Willamette Falls Lock and possibly give it to the Grande Ronde tribe, which may have an interest in that area as part of their management of lamprey.

The broader Power Purpose Disposition study may be funded out of investigations, but it is a completely different effort than the disposition study concerning just the NavLock.

Best,

Daniel Spear

From: Kintz,Jesse H (BPA) - PG-5 <jhkintz@bpa.gov>
Sent: Thursday, April 6, 2023 12:36 PM
To: Leady Jr,William J (BPA) - PG-5 <wjleady@bpa.gov>; Baskerville,Sonya L (BPA) - AIN-WASH <slbaskerville@bpa.gov>; Todd,Wayne A (BPA) - PGA-6 <watodd@bpa.gov>; Marker,Doug R (BPA) - AIR-7 <drmarker@bpa.gov>; Welch,Julee A (BPA) - LP-7 <jawelch@bpa.gov>; Spear,Daniel J (BPA) - PGB-5 <djspear@bpa.gov>; Senters,Anne E (BPA) - LN-7 <aesenters@bpa.gov>; Nagra,Angad S (BPA) - LN-7 <ASNagra@bpa.gov>; Smith,Glen A (BPA) - PG-5 <gasmith@bpa.gov>
Subject: RE: Recap of 3/20 Corps meeting and prep for 4/11 disposition study meeting with Corps

The Corps has mentioned that the study would be “100% federally funded” and non-reimbursable to BPA but I haven’t heard any specifics including whether it’s the I bucket that Bill mentions below. This may come up at the meeting on Tuesday and if so, can pass along.

-Jesse

From: Leady Jr,William J (BPA) - PG-5 <wjleady@bpa.gov>
Sent: Thursday, April 6, 2023 9:00 AM
To: Baskerville,Sonya L (BPA) - AIN-WASH <slbaskerville@bpa.gov>; Todd,Wayne A (BPA) - PGA-6 <watodd@bpa.gov>; Marker,Doug R (BPA) - AIR-7 <drmarker@bpa.gov>; Welch,Julee A (BPA) - LP-7 <jawelch@bpa.gov>; Spear,Daniel J (BPA) - PGB-5 <djspear@bpa.gov>; Kintz,Jesse H (BPA) - PG-5 <jhkintz@bpa.gov>; Senters,Anne E (BPA) - LN-7 <aesenters@bpa.gov>; Nagra,Angad S (BPA) - LN-7 <ASNagra@bpa.gov>; Smith,Glen A (BPA) - PG-5 <gasmith@bpa.gov>
Subject: RE: Recap of 3/20 Corps meeting and prep for 4/11 disposition study meeting with Corps

I would assume it’s I (investigations) but it’s been eight years since I was in the Corps and I was not very good at it then so we should verify.

I checked my memory with a google search and found this , Willamette Falls Disposition Study was funded under I

[FY 2020 U.S. Army Corps of Engineers Agency Financial Report](#)

The USACE-CW program includes work funded directly to the USACE-CW through Energy and Water Development (E&WD) appropriations through nine accounts – Investigations (I), Construction (C), Operation and Maintenance (O&M), Mississippi River & Tributaries (MR&T), Flood Control and Coastal Emergencies (FCCE), Regulatory, Expenses, Formerly Utilized Sites Remedial Action Program (FUSRAP), and the Office of the Assistant Secretary of the Army for Civil Works (OASA-CW). The USACE-CW program also includes work funded by others, using their funds, under reimbursable authorities such as the Economy Act.

Performance Results – Investigations

Investigations funds were used in FY 2020 to evaluate the benefits and costs of options for navigation improvements, the pre-construction engineering and design cost of navigation improvements, and for programmatic Remaining Items for Navigation, such as Research and Development. Examples of potential investments under consideration in these studies are (1) lock replacements and inland waterways channel improvements; and (2) deepening and/or widening of coastal harbors and channels. USACE-CW completed the following 14 navigation feasibility studies in FY 2020:

- „ GIWW – Brazos River Floodgates & Colorado River Lock, TX
- „ Corpus Christi Ship Channel, TX (Deepening and Widening and Barge Shelves) (Post Authorization Change Report)
- 28 FY 2020 United States Army Corps of Engineers Agency Financial Report
- „ Matagorda Ship Channel (Widening and Deepening), TX
- „ **Willamette Falls Locks, Willamette River, OR (Disposition Study)**

Bill Leady P.E.

Vice President, Generation Asset Management | PG

BONNEVILLE POWER ADMINISTRATION

bpa.gov | Office 503-230-4270 | Cell (b)(6)

From: Baskerville,Sonya L (BPA) - AIN-WASH <slbaskerville@bpa.gov>

Sent: Thursday, April 6, 2023 7:20 AM

To: Todd,Wayne A (BPA) - PGA-6 <watodd@bpa.gov>; Marker,Doug R (BPA) - AIR-7 <drmarker@bpa.gov>; Welch,Julee A (BPA) - LP-7 <jawelch@bpa.gov>; Leady Jr,William J (BPA) - PG-5 <wjleady@bpa.gov>; Spear,Daniel J (BPA) - PGB-5 <djspear@bpa.gov>; Kintz,Jesse H (BPA) - PG-5 <jhkintz@bpa.gov>; Senters,Anne E (BPA) - LN-7 <aesenters@bpa.gov>; Nagra,Angad S (BPA) - LN-7 <ASNagra@bpa.gov>; Smith,Glen A (BPA) - PG-5 <gasmith@bpa.gov>

Subject: RE: Recap of 3/20 Corps meeting and prep for 4/11 disposition study meeting with Corps

Hey, all. Question: do we know what pot of money the Corps is using to begin the disposition study work? A T&I staff is interested in pinpointing where the money is coming from. It seems they want to make sure the Corps really does have funding available. Curious they haven't simply asked the Corps, but they could be doing a trust and verify check. Thanks.

Sonya Baskerville
BPA National Relations

(b)(6) m

On Apr 4, 2023 11:26 AM, "Marker,Doug R (BPA) - AIR-7" <drmarker@bpa.gov> wrote:

Good morning, Bill. I asked Jesse to make that point to our sponsors because of the significance of not knowing how the Corps will represent issues that are our expertise and authority.

This places us in the position of having to challenge the Corps' report with the committee staff and Northwest delegation, instead of collaborating on what the report will say about issues such as transmission system impacts and hydro generation.

A preferable option, in my opinion, is for the district and/or division to present their findings with our comments and any response they have.

If they hold their information to themselves, that's going to be a difficult precedent for how they work with us on the disposition studies.

I think we should try to maintain a "no surprises" relationship with the Corps. (b)(5)

(b)(5)

From: Leady Jr,William J (BPA) - PG-5 <wjleady@bpa.gov>

Sent: Monday, April 3, 2023 4:41 PM

To: Kintz,Jesse H (BPA) - PG-5 <jhkintz@bpa.gov>; Marker,Doug R (BPA) - AIR-7 <drmarker@bpa.gov>; Baskerville,Sonya L (BPA) - AIN-WASH <slbaskerville@bpa.gov>; Spear,Daniel J (BPA) - PGB-5 <djspear@bpa.gov>; Senters,Anne E (BPA) - LN-7 <aesenters@bpa.gov>; Nagra,Angad S (BPA) - LN-7 <ASNagra@bpa.gov>; Maslow,Jeffrey J (BPA) - EC-4 <jjmaslow@bpa.gov>; Mai,Amy E (BPA) - EC-4 <aemai@bpa.gov>; Wingert,Kevin M (BPA) - DKP-7 <kwingert@bpa.gov>

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Subject: RE: Recap of 3/20 Corps meeting and prep for 4/11 disposition study meeting with Corps

Jesse,

Good update, thanks.

One point

-Corps shared that the WRDA 2020 report on Cougar/Detroit has cleared Corps HQ and is now at ASA Civil Works level. Not sure when final report will be shared with Congress. Gave example of some WRDA 2018 items just recently being shared for perspective.

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(b)(5)

Bill Leady P.E.

Vice President, Generation Asset Management | PG

BONNEVILLE POWER ADMINISTRATION

bpa.gov | Office 503-230-4270 | Cell (b)(6)

From: Kintz, Jesse H (BPA) - PG-5 <jhkintz@bpa.gov>

Sent: Monday, April 3, 2023 12:06 PM

To: Leady Jr, William J (BPA) - PG-5 <wjleady@bpa.gov>; Marker, Doug R (BPA) - AIR-7 <drmarker@bpa.gov>; Baskerville, Sonya L (BPA) - AIN-WASH <slbaskerville@bpa.gov>; Spear, Daniel J (BPA) - PGB-5 <djspear@bpa.gov>; Senter, Anne E (BPA) - LN-7 <aesenters@bpa.gov>; Nagra, Angad S (BPA) - LN-7 <ASNagra@bpa.gov>; Maslow, Jeffrey J (BPA) - EC-4 <jjmaslow@bpa.gov>; Mai, Amy E (BPA) - EC-4 <aemai@bpa.gov>; Wingert, Kevin M (BPA) - DKP-7 <kwingert@bpa.gov>

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Jesse Kintz

Power Generation – Senior Policy and Project Lead | [PG-2]

BONNEVILLE POWER ADMINISTRATION

bpa.gov | P 503-230-3340 | C (b)(6)

From: Kintz,Jesse H (BPA) - PG-5
Sent: Monday, April 10, 2023 6:10 PM
To: Ashby,Gordon S (BPA) - PGA-6; Welch,Julee A (BPA) - LP-7; Todd,Wayne A (BPA) - PGA-6; Smith,Glen A (BPA) - PG-5
Subject: RE: Recap of 3/20 Corps meeting and prep for 4/11 disposition study meeting with Corps

Sounds good Gordon. Here is what I'm thinking for the breakout coverage:

BREAKOUT SESSIONS COVERAGE

- Session 1: Policy Considerations (Welch, Kintz), Federal Interest (Ashby), Dam Specific Considerations (G. Smith)
- Session 2: Policy Considerations (Welch, Kintz), Criteria/Metrics (Ashby) - G. Smith choice

We can finalize tomorrow morning, see you all then.

Jesse

From: Ashby,Gordon S (BPA) - PGA-6 <gsashby@bpa.gov>
Sent: Monday, April 10, 2023 11:55 AM
To: Kintz,Jesse H (BPA) - PG-5 <jhkintz@bpa.gov>; Welch,Julee A (BPA) - LP-7 <jawelch@bpa.gov>; Todd,Wayne A (BPA) - PGA-6 <watodd@bpa.gov>; Smith,Glen A (BPA) - PG-5 <gasmith@bpa.gov>
Subject: RE: Recap of 3/20 Corps meeting and prep for 4/11 disposition study meeting with Corps

Thanks Jesse. I'll plan to be in the lobby at 7:20.

For the breakout sessions, the Federal Interest discussion and the 3 criteria discussion seem to make the most sense for me.

From: Kintz,Jesse H (BPA) - PG-5 <jhkintz@bpa.gov>
Sent: Monday, April 10, 2023 11:48 AM
To: Welch,Julee A (BPA) - LP-7 <jawelch@bpa.gov>; Ashby,Gordon S (BPA) - PGA-6 <gsashby@bpa.gov>; Todd,Wayne A (BPA) - PGA-6 <watodd@bpa.gov>; Smith,Glen A (BPA) - PG-5 <gasmith@bpa.gov>
Subject: RE: Recap of 3/20 Corps meeting and prep for 4/11 disposition study meeting with Corps

Hi Gordon,

The Corps confirmed that you can attend in person, so we're good. They did say that it was too late to add you to the coordinated lunch order so you'll have to bring/pick up your own lunch. I'll be in the BPA lobby at 7:20 to walk over with anyone that wants to join.

A couple of items I wanted to highlight for you out of our pre-meeting this morning.

BPA's high level overall goals:

- Advocate for a streamlined scope focused on the commercial power economics
- Defend areas of BPA expertise (power marketing and transmission) and inform the Corps on those
- Learn more about Corps' approach and perspectives

- o Stay focused on scope and impacts of deauthorizing hydropower, suggest “parking lot” for other things (i.e. legal authority questions, etc.)

Also to the extent cost allocations comes up our general approach is:

- o BPA continues to believe cost allocation updates are warranted and appropriate – but not the focus for today (Disposition study timeline is short / more defined and needs attention)

Discussed an approach for the afternoon breakout sessions to spread out BPA coverage over the different topics. Take a look and see which ones you’d be interested in, and I’ll send some suggestions this afternoon.

Let me know if questions,
-Jesse

From: Kintz,Jesse H (BPA) - PG-5
Sent: Monday, April 10, 2023 9:30 AM
To: Welch,Julee A (BPA) - LP-7 <jawelch@bpa.gov>; Ashby,Gordon S (BPA) - PGA-6 <gsashby@bpa.gov>; Todd,Wayne A (BPA) - PGA-6 <watodd@bpa.gov>; Smith,Glen A (BPA) - PG-5 <gasmith@bpa.gov>
Subject: RE: Recap of 3/20 Corps meeting and prep for 4/11 disposition study meeting with Corps

Yes, that is great to hear – let me just send a note to the Corps as they were trying to nail down in person attendance last week for purposes of security, lunches, etc. to make sure they can still add you (worst case you could at least call in via WebEx). Will let you know what I hear ASAP.

From: Welch,Julee A (BPA) - LP-7 <jawelch@bpa.gov>
Sent: Monday, April 10, 2023 9:12 AM
To: Ashby,Gordon S (BPA) - PGA-6 <gsashby@bpa.gov>; Kintz,Jesse H (BPA) - PG-5 <jhkintz@bpa.gov>; Todd,Wayne A (BPA) - PGA-6 <watodd@bpa.gov>; Smith,Glen A (BPA) - PG-5 <gasmith@bpa.gov>
Subject: RE: Recap of 3/20 Corps meeting and prep for 4/11 disposition study meeting with Corps

Great news for us. Will be good to have you there

From: Ashby,Gordon S (BPA) - PGA-6 <gsashby@bpa.gov>
Sent: Monday, April 10, 2023 9:10 AM
To: Kintz,Jesse H (BPA) - PG-5 <jhkintz@bpa.gov>; Welch,Julee A (BPA) - LP-7 <jawelch@bpa.gov>; Todd,Wayne A (BPA) - PGA-6 <watodd@bpa.gov>; Smith,Glen A (BPA) - PG-5 <gasmith@bpa.gov>
Subject: RE: Recap of 3/20 Corps meeting and prep for 4/11 disposition study meeting with Corps

My meetings with HDC are getting rescheduled so I will be available tomorrow and plan to attend in-person. I will still miss the pre-meeting at 10 today as I have a conflict.

Gordon

From: Kintz,Jesse H (BPA) - PG-5 <jhkintz@bpa.gov>
Sent: Tuesday, April 4, 2023 4:43 PM
To: Ashby,Gordon S (BPA) - PGA-6 <gsashby@bpa.gov>; Welch,Julee A (BPA) - LP-7 <jawelch@bpa.gov>; Todd,Wayne A (BPA) - PGA-6 <watodd@bpa.gov>; Smith,Glen A (BPA) - PG-5 <gasmith@bpa.gov>
Subject: RE: Recap of 3/20 Corps meeting and prep for 4/11 disposition study meeting with Corps

Looks like the agenda details just came out and it’s actually going to be here in Portland. The materials are in the meeting invite so hopefully you all have access (let me know if not) – a ton of interesting information in there and insights on the Corps process. I’m just starting to read through it.

From: Kintz,Jesse H (BPA) - PG-5
Sent: Tuesday, April 4, 2023 3:08 PM
To: Ashby,Gordon S (BPA) - PGA-6 <gsashby@bpa.gov>; Welch,Julee A (BPA) - LP-7 <jawelch@bpa.gov>; Todd,Wayne A (BPA) - PGA-6 <watodd@bpa.gov>; Smith,Glen A (BPA) - PG-5 <gasmith@bpa.gov>
Subject: RE: Recap of 3/20 Corps meeting and prep for 4/11 disposition study meeting with Corps

The invite says it might be in Eugene but I haven't seen a finalized location yet.

From: Ashby,Gordon S (BPA) - PGA-6 <gsashby@bpa.gov>
Sent: Tuesday, April 4, 2023 3:01 PM
To: Welch,Julee A (BPA) - LP-7 <jawelch@bpa.gov>; Kintz,Jesse H (BPA) - PG-5 <jhkintz@bpa.gov>; Todd,Wayne A (BPA) - PGA-6 <watodd@bpa.gov>; Smith,Glen A (BPA) - PG-5 <gasmith@bpa.gov>
Subject: RE: Recap of 3/20 Corps meeting and prep for 4/11 disposition study meeting with Corps

I am in a meeting with the Corps (HDC) all day on 4/11.

From: Welch,Julee A (BPA) - LP-7 <jawelch@bpa.gov>
Sent: Tuesday, April 4, 2023 2:59 PM
To: Kintz,Jesse H (BPA) - PG-5 <jhkintz@bpa.gov>; Todd,Wayne A (BPA) - PGA-6 <watodd@bpa.gov>; Ashby,Gordon S (BPA) - PGA-6 <gsashby@bpa.gov>; Smith,Glen A (BPA) - PG-5 <gasmith@bpa.gov>
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My preference would be in person. Do you know where it is at?

From: Kintz,Jesse H (BPA) - PG-5 <jhkintz@bpa.gov>
Sent: Tuesday, April 4, 2023 2:58 PM
To: Todd,Wayne A (BPA) - PGA-6 <watodd@bpa.gov>; Ashby,Gordon S (BPA) - PGA-6 <gsashby@bpa.gov>; Welch,Julee A (BPA) - LP-7 <jawelch@bpa.gov>; Smith,Glen A (BPA) - PG-5 <gasmith@bpa.gov>
Subject: FW: Recap of 3/20 Corps meeting and prep for 4/11 disposition study meeting with Corps

Can you let me know if you plan on attending the 4/11 meeting with the Corps in person, remotely, or are unavailable? I plan to attend in person. I believe Gordon and Wayne may have potential conflicts – if still the case, we can finalize once we get the agenda from the Corps.

Thanks,
-Jesse

From: Kintz,Jesse H (BPA) - PG-5
Sent: Monday, April 3, 2023 12:06 PM
To: Ledy Jr,William J (BPA) - PG-5 <wjleady@bpa.gov>; Marker,Doug R (BPA) - AIR-7 <drmarker@bpa.gov>; Baskerville,Sonya L (BPA) - AIN-WASH <slbaskerville@bpa.gov>; Spear,Daniel J (BPA) - PGB-5 <djspear@bpa.gov>; Senters,Anne E (BPA) - LN-7 <aesenters@bpa.gov>; Nagra,Angad S (BPA) - LN-7 <ASNagra@bpa.gov>; Maslow,Jeffrey J (BPA) - EC-4 <jjmaslow@bpa.gov>; Mai,Amy E (BPA) - EC-4 <aemai@bpa.gov>; Wingert,Kevin M (BPA) - DKP-7 <kwingert@bpa.gov>
Cc: Ashby,Gordon S (BPA) - PGA-6 <gsashby@bpa.gov>; Smith,Glen A (BPA) - PG-5 <gasmith@bpa.gov>; Welch,Julee A (BPA) - LP-7 <jawelch@bpa.gov>; Todd,Wayne A (BPA) - PGA-6 <watodd@bpa.gov>
Subject: Recap of 3/20 Corps meeting and prep for 4/11 disposition study meeting with Corps

All,

Below is a recap from the most recent monthly meeting we had with the Corps on the Willamette, along with a few notes on the planned approach to the upcoming planning meeting with the Corps on disposition study. Let me know if any questions.

-Jesse

BPA-Corps monthly Willamette meeting (3/20/23):

-Corps has finalized 4/11 as date for an all day disposition study planning/scoping meeting called a “charrette”. BPA invited. Attendees are likely to be planning-focused, disposition study leads, economists, possibly real estate or budgeting (middle levels, not execs). Meeting should help clarify the analysis to do for federal interest. Corps is emphasizing achieving vertical alignment up to HQ/Army level.

-Corps confirmed that BPA is the only other federal agency invited to the 4/11 meeting (good sign that they agree with/acknowledge our significant role).

-Corps reiterated that the 18 month disposition study deadline is very short, so they will need to phase the work into what they can do for 18 months, and what would be after.

-Corps now says that they may not get any implementation guidance from the Army on the disposition study provision (WRDA 2022 Sec 8220). This is a change from before when they said guidance was likely.

-Corps shared that the WRDA 2020 report on Cougar/Detroit has cleared Corps HQ and is now at ASA Civil Works level. Not sure when final report will be shared with Congress. Gave example of some WRDA 2018 items just recently being shared for perspective.

-BPA asked if any additional BPA opportunities for review and Corps confirmed no. BPA reiterated that we view the impact on other purposes as an unresolved issue in that report and requested that at minimum the BPA perspective is shared alongside Corps’.

-BPA shared our chart with the categories of Willamette analysis we are working on for federal interest determination.

-Corps mentioned that they plan to include temperature and flow considerations as part of federal interest.

-BPA mentioned the budget language mentioning an OMB meeting and joint proposal for FY2025 budget. Corps had not heard much on this yet.

-After the meeting BPA sent copy of budget language and our WRDA 2022 Sec 8220 implementation comments we sent to Army.

BPA approach to 4/11 disposition study planning meeting:

-Corps plans to send an agenda by middle of this week.

-Potential BPA attendees: Jesse Kintz, Glen Smith, Julee Welch, PGA rep (Wayne Todd and/or Gordon Ashby), possibly a PGS rep (TBD). Will finalize attendees after receiving agenda.

-BPA to compile set of talking points this week to prepare for the meeting. Jesse will draft and send to team for input, and set up a pre-meeting for the attendees.

-BPA will also get opportunity to provide some brief opening remarks after the Corps does theirs. Can use talking points, I will likely be the one doing this, will coordinate with others as needed.

Jesse Kintz

Power Generation – Senior Policy and Project Lead | [PG-2]

BONNEVILLE POWER ADMINISTRATION

bpa.gov | P 503-230-3340 | C (b)(6)

From: Leady Jr,William J (BPA) - PG-5
Sent: Wednesday, March 1, 2023 9:58 AM
To: Kintz,Jesse H (BPA) - PG-5; Marker,Doug R (BPA) - AIR-7; Baskerville,Sonya L (BPA) - AIN-WASH; Todd,Wayne A (BPA) - PGA-6; Smith,Glen A (BPA) - PG-5; Welch,Julee A (BPA) - LP-7; Senters,Anne E (BPA) - LN-7; Nagra,Angad S (BPA) - LN-7; Spear,Daniel J (BPA) - PGB-5; Maslow,Jeffrey J (BPA) - EC-4; Mai,Amy E (BPA) - EC-4; Wingert,Kevin M (BPA) - DKP-7
Cc: Ashby,Gordon S (BPA) - PGA-6; Welch,Julee A (BPA) - LP-7
Subject: RE: Summary and notes from 2/27/23 meeting with Corps on Willamette disposition study and cost allocation

Jesse,

Great report and generally a positive outlook. A few thoughts (just thoughts, not assignments)

- The Corps is a process driving origination and NWP very much so. So they are going to form a PDT and then develop a Project Management Plan (PMP) and so on. There is a lot of good to this approach and we can't change it in any case so our objective needs to continue to be (1) encourage them to move as fast as possible and (2) keep BPA engaged.
- They are probably going to not move too much before they get implementation guidance. We can encourage them to move forward, certainly some work can be done based on expected guidance. But we can't beat on them. If PG had a big, nebulous tasks I would want guidance from Suzanne of the Front office, it's not different for them.
- Your points below are key:
 - BPA suggested conceptual analysis building on NPV in EIS
 - Corps HAC was thinking of detailed modeling approach
- Next meeting plan to:
 - Discuss differences between Corps and BPA views of federal interest This will be key. They will likely want to use a "proven" process to determine a NED [IWR Libraries \(planusace.us\)](#). Not sure if there is a process for this unique situation or if the national (or regional) economic develop approach is the best path. However, I am no expert in this area, just familiar with it. Many of the economic inputs and energy inputs will have wide error bands so using methods that deliver a high degree of precision (and take a long time) provides a false sense of rigor, it will not provide more accuracy.

Thanks

Bill Leady P.E.

Vice President, Generation Asset Management | PG

BONNEVILLE POWER ADMINISTRATION

bpa.gov | Office 503-230-4270 | Cell (b)(6)

From: Kintz,Jesse H (BPA) - PG-5 <jhkintz@bpa.gov>

Sent: Wednesday, March 1, 2023 8:46 AM

To: Leady Jr,William J (BPA) - PG-5 <wjleady@bpa.gov>; Marker,Doug R (BPA) - AIR-7 <drmarker@bpa.gov>; Baskerville,Sonya L (BPA) - AIN-WASH <slbaskerville@bpa.gov>; Todd,Wayne A (BPA) - PGA-6 <watodd@bpa.gov>; Smith,Glen A (BPA) - PG-5 <gasmith@bpa.gov>; Welch,Julee A (BPA) - LP-7 <jawelch@bpa.gov>; Senters,Anne E (BPA) - LN-7 <aesenters@bpa.gov>; Nagra,Angad S (BPA) - LN-7 <ASNagra@bpa.gov>; Spear,Daniel J (BPA) - PGB-5 <djspear@bpa.gov>; Maslow,Jeffrey J (BPA) - EC-4 <jjmaslow@bpa.gov>; Mai,Amy E (BPA) - EC-4 <aemai@bpa.gov>; Wingert,Kevin M (BPA) - DKP-7 <kwingert@bpa.gov>

Cc: Ashby,Gordon S (BPA) - PGA-6 <gsashby@bpa.gov>; Welch,Julee A (BPA) - LP-7 <jawelch@bpa.gov>

Subject: Summary and notes from 2/27/23 meeting with Corps on Willamette disposition study and cost allocation

Passing it on- Summary notes from our monthly Willamette working meeting with the Corps below.

Overall, they didn't have much disposition study progress to share. On the bright side, they gave a nod to being open towards BPA providing economic analysis work and we began discussing some possibilities for that. Also, the Corps is seeming to acknowledge that they need to focus on the power piece for the 18 months deadline, which also sounds promising.

-Jesse

1. The Corps had ~6 attendees including NWD/NWP, BPA had 4 (myself, Julee, Gordon and Wayne for part).
2. Overall disposition study status (Corps) – Not much to update from last month. Still pulling things together, including Project Development Team (PDT) structure. No update on whether BPA will be on PDT. Tracking towards large scoping/schedule meeting soon – group for several hours - aiming for April, to get vertical alignment. Also waiting on Army implementation guidance (NWD has requested this guidance and they assume it's on the Army's list given that there is room for interpretation on how to implement the WRDA language). BPA asked about process and whether guidance was required, Corps clarified that they need/want guidance on this from DC whether officially from the Army or not.
3. Corps discussed that the 18 months deadline will have be a “partial” response to address the power issue with focus on federal interest
 - a. Corps: Can't do everything in this short time especially if the recommendation is pointing to disposal of a purpose which would require deeper looks at dam safety, env. compliance, etc.)
4. They're tracking BPA's offer of economic analysis – see promise in it
5. Discussed what economic analysis might look like
 - a. BPA suggested conceptual analysis building on NPV in EIS
 - b. Corps HAC was thinking of detailed modeling approach
6. Next meeting plan to:
 - a. Discuss differences between Corps and BPA views of federal interest
 - b. BPA to share update on its own economic analysis to help inform choice between conceptual economic analysis vs detailed models or some combo
7. BPA reiterated that it's important to BPA to get the disposition study (and clarified path forward for power) done in 18 months, offered to help any way we can to support them to achieve that.
8. BPA shared more cost allocation background including GAO report which had concerns about SCRB

From: Kintz,Jesse H (BPA) - PG-5

Sent: Tuesday, January 24, 2023 12:45 PM

To: Leady Jr,William J (BPA) - PG-5 <wjleady@bpa.gov>; Marker,Doug R (BPA) - AIR-7 <drmarker@bpa.gov>; Baskerville,Sonya L (BPA) - AIN-WASH <slbaskerville@bpa.gov>; Todd,Wayne A (BPA) - PGA-6 <watodd@bpa.gov>;

Smith, Glen A (BPA) - PG-5 <gasmith@bpa.gov>; Welch, Julee A (BPA) - LP-7 <jawelch@bpa.gov>; Senters, Anne E (BPA) - LN-7 <aesenters@bpa.gov>; Nagra, Angad S (BPA) - LN-7 <ASNagra@bpa.gov>; Spear, Daniel J (BPA) - PGB-5 <djspear@bpa.gov>; Maslow, Jeffrey J (BPA) - EC-4 <jjmaslow@bpa.gov>; Mai, Amy E (BPA) - EC-4 <aemai@bpa.gov>; Conning III, Edward Thomas (BPA) - DKP-7 <ETConning@bpa.gov>

Cc: Ashby, Gordon S (BPA) - PGA-6 <gsashby@bpa.gov>; Welch, Julee A (BPA) - LP-7 <jawelch@bpa.gov>

Subject: Summary and notes from 1/23/23 meeting with Corps on Willamette disposition study and cost allocation

All,

Below are the notes from our meeting with the Corps yesterday. In summary, the Corps is getting going on disposition studies but still has a lot of questions about scope and expects to sort through them, with BPA input, over next 3 months or so. The Corps is not yet sure what their view is on BPA's role. The Corps also has been looking into cost allocation methodologies and had some questions for BPA that are being followed up on (interesting to see that there's been some movement here for first time in awhile). BPA shared that we'll be working on our economic analysis and will share it with the Corps.

Julee/Gordon, please add or highlight anything I may have missed.

-Jesse

Corps-BPA Willamette Monthly – 1/23/23

1. WRDA 2022 Congressional direction language – INFORM/DISCUSS (Corps/BPA)

Highlighted the phrase “in whole or in part” – Corps sees this as some projects not all. Highlighted that commercial power could also fit here.

Highlighted the phrase “for hydropower” – Corps agreed that “by and large” the intention for the study and the focus is consideration of deauthorizing hydropower only (but can't 100% guarantee anything)

Highlighted cost provision “new construction... not reimbursable” and agreed more discussion is needed between BPA/Corps to clarify

2. Disposition studies status – INFORM (Corps)

Getting team going – have had a few initial meetings with NWP

Corps will seek public comment for 60 days (BPA can comment) to inform implementation guidance and “ensure a national perspective”

18mo timeframe, limited funding means study may be more conceptual with follow on pieces needed (including NEPA, possibly dam safety modeling)

No exact dates but in first ~4 months / by Spring/April – nail down scoping. Joint agency meetings, open to ideas to contribute. Answer is it a viable effort? Line up vertical team and range of alternatives. Include how to go about determining federal interest

Federal interest very different than typical disposition study (i.e. obvious that locks not useful anymore but this is different)

3. Disposition studies: scoping and BPA's role – DISCUSS (Corps + BPA)

Jesse shared BPA's view that it should have significant role in disposition study as the power marketing expert – BPA is more than a NFMS-type stakeholder as this question directly relates to power marketing and hydropower economics. Corps said they hear our desire for that role but they aren't yet sure what their viewpoint is until they get more into scoping.

BPA suggested limiting scope to commercial power (to keep scope manageable and avoid TDG and station service issues). Corps said they are tracking and have brought it up in Corps internal discussions

BPA shared that it is doing its own economic analysis and will share it with Corps. Analysis will include scenarios. Discussed consideration of price changes, carbon free value, etc.

Corps confirmed they are putting together a PDT. Still forming. BPA asked if BPA is stakeholder in that process.

Corps not sure yet. BPA asked if Corps would know by our next monthly meeting. Corps not sure yet.

We discussed our common high level goal of “doing what makes most sense” for power long-term, to include consideration of the funding stakeholders (taxpayers/ratepayers) and the public

4. *Cost allocations touch base – topics could include basis for potential updates, status, and path forward considerations (methods, third party, etc.) – INFORM/DISCUSS (Corps/BPA)*

Thomas Topi, Corps has reviewed BPA’s 3 options for methodology recommendations

BPA not recommending use of a single purpose facility

Sees differences in specific costs or direct costs

Thomas to send email - BPA will follow up

BPA shared the \$1 billion flood benefits, \$26m power revenues, and 40% power joint cost figures as context for why cost allocation is justified

5. *Next steps / wrap up*

BPA to work on our Willamette economic analysis

Corps to send cost allocation Qs to BPA, BPA to follow up

Reschedule Feb meeting back a week due to Prez. Day and include additional Corps invitees

Jesse Kintz

Power Generation – Senior Policy and Project Lead | [PG-2]

BONNEVILLE POWER ADMINISTRATION

bpa.gov | P 503-230-3340 | C (b)(6)

From: Marker,Douglas R (BPA) - AIR-7
Sent: Monday, January 9, 2023 10:00 AM
To: Spear,Daniel J (BPA) - PGB-5; Spear,Daniel J (BPA) - PGB-5; Welch,Julee A (BPA) - LP-7; Baskerville,Sonya L (BPA) - AIN-WASH; Andersen,Eric J (BPA) - EWL-4; Kintz,Jesse H (BPA) - PG-5; Smith,Glen A (BPA) - PG-5; Sinters,Anne E (BPA) - LN-7; Welch,Julee A (BPA) - LP-7; Paustian,Jennavive F (BPA) - PGPL-5; Baskerville,Sonya L (BPA) - AIN-WASH; Andersen,Eric J (BPA) - EWL-4; Kintz,Jesse H (BPA) - PG-5; Smith,Glen A (BPA) - PG-5; Sinters,Anne E (BPA) - LN-7; Webster-Wharton,Stacy T (BPA) - PGA-6; Sullivan,Leah S (BPA) - PGB-5; Mai,Amy E (BPA) - EC-4; Biegel,Sarah T (BPA) - EC-4; Paustian,Jennavive F (BPA) - PGPL-5; Ledy Jr,William J (BPA) - PG-5
Cc: Wilson,David B (BPA) - DKS-7; Smith,Nathan A (BPA) - FAB-2; Hardy,Kyle R (BPA) - FAC-2; Wilson,David B (BPA) - DKS-7; Smith,Nathan A (BPA) - FAB-2; Hardy,Kyle R (BPA) - FAC-2; Johnson,Kimberly O (BPA) - PGAF-6; Dondy-Kaplan,Hannah A (BPA) - AIR-7; Maslow,Jeffrey J (BPA) - EC-4; Nagra,Angad S (BPA) - LN-7; Conning III,Edward Thomas (BPA) - DKP-7; Chase,Luke B (BPA) - PGAF-6
Subject: RE: Willamette Weekly

Passing on the Clearing Up article that discusses the Willamette provision of WRDA 2022

WRDA Includes Provisions for Columbia Basin Concerns

- [K.C. Mehaffey](#)
- Jan 6, 2023
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Regional public-power advocates are claiming victory after two significant provisions involving the federal hydroelectric system in the Columbia Basin were included in the [Water Resources Development Act](#) of 2022, while another proposed measure was taken out.

Congress usually passes a WRDA every two years to authorize numerous activities for the U.S. Army Corps of Engineers in the coming biennium involving flood control, navigation and operations at dams across the country.

WRDA 2022 was included in the National Defense Authorization Act, which President Joe Biden signed into law on Dec. 23.

According to the U.S. Senate Committee on Environment and Public Works, WRDA 2022 authorizes the Corps to conduct 94 new feasibility studies and 21 construction projects. The Corps will also study modifications to 12 existing projects, and undertake 170 projects involving environmental infrastructure such as drinking water systems and wastewater management.

In the Northwest, the Columbia River Treaty Power Group lobbied for provisions addressing concerns over flood risk management in the treaty, which is being renegotiated, and the Public Power Council worked with lawmakers to include a study of deauthorizing hydroelectricity as a purpose of the Willamette Valley Project, citing the high cost of power from it.

Northwest RiverPartners, meanwhile, pushed to remove language that would have initiated a new process to study impacts of removing the four lower Snake River dams.

All three efforts were successful, according to the groups.

Columbia River Treaty flood management

In a Dec. 29 [news release](#), the Columbia River Treaty Power Group reported that the newly passed bill authorizes the Corps to study the feasibility of a domestic alternative to Canadian storage reservoirs to manage flood risk in the Columbia Basin.

"Right now, power customers are bearing the brunt of an outdated Treaty, overpaying Canada by \$300 million or more in hydropower value each year for treaty operations that help flood control but does not create much additional benefit for U.S. generation," Scott Simms, chair of the CRT power group, said in the release.

Language in the bill says the study will include "recommendations for a project to potentially reduce the reliance on Canada for flood risk management in the basin."

It also addresses financial obligations if the U.S. and Canada have not completed negotiations on a new treaty by the time flood control provisions in the treaty expire in 2024. The bill lays out a process for payment through congressional committees if the U.S. entity calls upon Canada to store water for flood risk management and states that payment will not be made until funds are appropriated.

Simms told Clearing Up that Canada is currently prepaid through prior negotiations between the two countries, using ratepayer funds. "Taxpayers typically will foot the bill for these kinds of flood control measures, realizing there's a great public benefit," he said. Simms added, "I can't thank the Northwest Delegation enough for their continued prioritization of this issue."

Willamette Valley Project study

Another section of the bill directs the Corps to study the effects of deauthorizing hydropower as a purpose of the Willamette Valley hydropower project, either in whole or in part.

If the agency determines hydropower should be removed as a purpose, the agency is also directed to investigate and recommend structural or operational changes necessary to balance the remaining purposes.

Congress wants a report on the agency's findings sent to House and Senate committees within 18 months.

On Dec. 16, after Congress passed the bill, Simms—who is also executive director of the Public Power Council—sent an email to PPC members praising his lobbyists Marty Kanner and Sam McDonald for their work on getting this language into WRDA 2022.

He wrote that PPC began advocating for a review of the costs of Federal Columbia River Power System eight years ago. "The Willamette Basin projects stood out in that effort as the most egregious example—with the highest risk of major cost additions. Those projects produce power at about five times the cost of the Lower Snake River Dams, and the Corps was looking to make fish mitigation

capital investments premised on continued power generation—investments that would saddle [Bonneville Power Administration] customers with an additional \$1 billion in debt," he wrote.

The email said that Kanner came up with the idea to deauthorize power production through the WRDA. After addressing many concerns with the idea, lawmakers included a provision in WRDA 2020 for the Corps to study deauthorization of power at Cougar and Detroit dams. But the Corps decided that study wasn't sufficient to justify congressional deauthorization of power production, so PPC lobbied for the more expansive study with an 18-month deadline to look at deauthorizing power production at all of the dams, the email said.

"We're excited PPC was able to help get this language across the finish line and hope it will light a fire under the Corps once and for all," Simms told Clearing Up.

Study on breaching Snake River dams

While PPC and the power group were lobbying to include provisions, Northwest RiverPartners and others were trying to prevent inclusion of a provision that would spend federal dollars to study the impacts of removing the four lower Snake River dams.

"We worked successfully with other river stakeholders, and spent a lot of time talking, not only to the Northwest delegation but to other congressmen and women who were on the committees that oversaw WRDA," RiverPartners Executive Director Kurt Miller told Clearing Up.

Miller said Sen. Patty Murray (D-Wash.) initially introduced language for an ecosystem restoration study into the Senate's version of the bill that would have been a necessary precursor to congressional authorization for breaching the four lower Snake River dams.

He said Rep. Peter DeFazio (D-Ore.) then introduced language in the House version of the bill that would have delayed any examination of breaching the lower Snake River dams. "At the same time, it created this new entity that would have just been another group that would have been debating dam breaching. We just didn't want that codified into law," he said.

So after much behind-the-scenes activity, Northwest lawmakers—especially Sen. James Risch (R-Idaho) and Sen. Steve Daines (R-Mont.)—were successful in removing the Snake River study from the Senate's version of the bill, Miller said. "With the Senate language out, there was no reason at all to keep the House version," he added.

Miller said RiverPartners didn't know what language would come out of the reconciliation process until the bill was finalized. "At the end of the day, these dams are congressionally authorized. What Congress decides matters, and that's why we really paid close attention," he said.

Other provisions

The bill also authorizes Oregon State University to conduct a study on impacts of wildfire on water supply, quality and distribution in the Willamette River basin; a development plan for tribes in Oregon and Washington to address adverse impacts to tribal communities caused by The Dalles, Bonneville, McNary and John Day dams; shoreline protection and restoration projects on the Oregon coast and Willamette River basin; and dredging for navigation in the Columbia and lower Willamette rivers.

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

From: Spear, Daniel J (BPA) - PGB-5 <djspear@bpa.gov>

Sent: Thursday, November 29, 2018 10:11 AM

To: Spear, Daniel J (BPA) - PGB-5; Spear, Daniel J (BPA) - PGB-5; Welch, Julee A (BPA) - LP-7; Baskerville, Sonya L (BPA) - AIN-WASH; Marker, Douglas R (BPA) - AIR-7; Andersen, Eric J (BPA) - EWL-4; Kintz, Jesse H (BPA) - PG-5; Smith, Glen A (BPA) - PG-5; Sinters, Anne E (BPA) - LN-7; Welch, Julee A (BPA) - LP-7; Paustian, Jennavive F (BPA) - PGPL-5; Baskerville, Sonya L (BPA) - AIN-WASH; Marker, Douglas R (BPA) - AIR-7; Andersen, Eric J (BPA) - EWL-4; Kintz, Jesse H (BPA) - PG-5; Smith, Glen A (BPA) - PG-5; Sinters, Anne E (BPA) - LN-7; Webster-Wharton, Stacy T (BPA) - PGA-6; Sullivan, Leah S (BPA) - PGB-5; Mai, Amy E (BPA) - EC-4; Biegel, Sarah T (BPA) - EC-4; Paustian, Jennavive F (BPA) - PGPL-5
Cc: Wilson, David B (BPA) - DKS-7; Smith, Nathan A (BPA) - FAB-2; Hardy, Kyle R (BPA) - FAC-2; Wilson, David B (BPA) - DKS-7; Smith, Nathan A (BPA) - FAB-2; Hardy, Kyle R (BPA) - FAC-2; Johnson, Kimberly O (BPA) - PGAF-6; Dondy-Kaplan, Hannah A (BPA) - AIR-7; Maslow, Jeffrey J (BPA) - EC-4; Nagra, Angad S (BPA) - LN-7; Conning III, Edward Thomas (BPA) - DKP-7; Chase, Luke B (BPA) - PGAF-6

Subject: Willamette Weekly

When: Monday, January 9, 2023 1:00 PM-2:00 PM (UTC-08:00) Pacific Time (US & Canada).

Where: Teleconference

x4000 (internal)

- 503-230-4000 (external)
- 866-340-4886 (toll free)

Code: (b)(6)

1.) Positioning Disposition Positions (Kintz/Marker/Al)

* Preliminary Process Overview

* Resources Needed

* Team. Roles.

2.) NEPA/EIS/BA (Kintz/Mai/Maslow)

- Messaging on DEIS (All)

- Public Meetings Recap

- Prep for Next Public Meetings

- Corps EIS responses to BPA spreadsheet comments (All)

3.) Legal (Nagra/Senters/Welch)

4.) Other (All)

BPA notes for 4/11/23 Corps disposition study charrette planning session

ATTENDEES:

Confirmed: Jesse Kintz, Glen Smith, and Julee Welch (in person), Wayne Todd (1/2 day on phone)

Tentative: BPA operations rep (Pam Van Calcar?), BPA transmission rep (TBD)

OPENING REMARKS

- Happy to be here, interesting and important issue
- Appreciation to Corps for including us at the table
- Highlight importance of this topic to BPA
 - Economic power via sound business principles is central to BPA's power marketing mission and authorities
 - Power decreasing, costs increasing driving un-economical hydropower. BPA shouldn't pay for non-economic power
 - BPA has begun federal interest analysis (updated economics, future load requirements, carbon fuel mix, transmission, etc). Understand and acknowledge there are differences in how BPA views federal interest and Corps view from more national level
- Importance of meeting the 18 month deadline
 - Need a path forward to address this; impacts fish, EIS, funding prioritization, etc
 - Concerned about time remaining (14 months)
 - Looking forward to discussing ways to expedite / keep scope focused to meet timeline
- Optimism about the meeting and path forward
 - Useful bringing us all to the table including NWP team
 - Look forward to continuing working directly with NWP along with NWD going forward

BPA TALKING POINTS / PREP SHEET

- Regarding meeting the 18 month deadline (*First bullet point is copied from BPA's EIS comment letter*)
 - Meeting Congress' timeline for completing disposition studies by June 2024 would support implementation planning for the Final PEIS and help inform Bonneville's decisions for continued investments in the power facilities. It will be important for the Corps to limit the scope of the disposition studies and focus only on the effects of deauthorizing hydropower.
 - *Focus on the primary question being asked by Congress and stakeholders – this is about hydropower and whether there is a federal interest in hydropower*
 - *Limit scope to commercial hydropower – excludes station service / TDG issues (WRDA: "in whole or in part")*
 - *Identify early which of these four conceptual scenarios disposition study will evaluate (BPA to suggest focus on option in green, may also need to include option in blue?):*
 - **Remove hydropower altogether**

- Remove hydropower partially: **remove “commercial power”, mothball/caretaker**
 - Keep hydropower but replace BPA with 3rd party
 - Keep hydropower but reduce costs to improve economics (i.e. cost allocation update, different investment strategies)
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 - Willamette capital funding pause likely to continue until disposition study results.
 - BPA and ratepayers should not be assigned repayment to the U.S. Treasury during the disposition study and until future of power is more clear.

From: Kintz,Jesse H (BPA) - PG-5
Sent: Tuesday, January 24, 2023 12:45 PM
To: Ledy Jr,William J (BPA) - PG-5; Marker,Doug R (BPA) - AIR-7; Baskerville,Sonya L (BPA) - AIN-WASH; Todd,Wayne A (BPA) - PGA-6; Smith,Glen A (BPA) - PG-5; Welch,Julee A (BPA) - LP-7; Senter,Ane E (BPA) - LN-7; Nagra,Angad S (BPA) - LN-7; Spear,Daniel J (BPA) - PGB-5; Maslow,Jeffrey J (BPA) - EC-4; Mai,Amy E (BPA) - EC-4; Conning III,Edward Thomas (BPA) - DKP-7
Cc: Ashby,Gordon S (BPA) - PGA-6; Welch,Julee A (BPA) - LP-7
Subject: Summary and notes from 1/23/23 meeting with Corps on Willamette disposition study and cost allocation

All,
Below are the notes from our meeting with the Corps yesterday. In summary, the Corps is getting going on disposition studies but still has a lot of questions about scope and expects to sort through them, with BPA input, over next 3 months or so. The Corps is not yet sure what their view is on BPA's role. The Corps also has been looking into cost allocation methodologies and had some questions for BPA that are being followed up on (interesting to see that there's been some movement here for first time in awhile). BPA shared that we'll be working on our economic analysis and will share it with the Corps.

Julee/Gordon, please add or highlight anything I may have missed.

-Jesse

Corps-BPA Willamette Monthly – 1/23/23

1. WRDA 2022 Congressional direction language – INFORM/DISCUSS (Corps/BPA)

Highlighted the phrase “in whole or in part” – Corps sees this as some projects not all. Highlighted that commercial power could also fit here.

Highlighted the phrase “for hydropower” – Corps agreed that “by and large” the intention for the study and the focus is consideration of deauthorizing hydropower only (but can't 100% guarantee anything)

Highlighted cost provision “new construction... not reimbursable” and agreed more discussion is needed between BPA/Corps to clarify

2. Disposition studies status – INFORM (Corps)

Getting team going – have had a few initial meetings with NWP

Corps will seek public comment for 60 days (BPA can comment) to inform implementation guidance and “ensure a national perspective”

18mo timeframe, limited funding means study may be more conceptual with follow on pieces needed (including NEPA, possibly dam safety modeling)

No exact dates but in first ~4 months / by Spring/April – nail down scoping. Joint agency meetings, open to ideas to contribute. Answer is it a viable effort? Line up vertical team and range of alternatives. Include how to go about determining federal interest

Federal interest very different than typical disposition study (i.e. obvious that locks not useful anymore but this is different)

3. Disposition studies: scoping and BPA's role – DISCUSS (Corps + BPA)

Jesse shared BPA's view that it should have significant role in disposition study as the power marketing expert – BPA is more than a NFMS-type stakeholder as this question directly relates to power marketing and hydropower economics. Corps said they hear our desire for that role but they aren't yet sure what their viewpoint is until they get more into scoping.

BPA suggested limiting scope to commercial power (to keep scope manageable and avoid TDG and station service issues). Corps said they are tracking and have brought it up in Corps internal discussions BPA shared that it is doing its own economic analysis and will share it with Corps. Analysis will include scenarios. Discussed consideration of price changes, carbon free value, etc.

Corps confirmed they are putting together a PDT. Still forming. BPA asked if BPA is stakeholder in that process. Corps not sure yet. BPA asked if Corps would know by our next monthly meeting. Corps not sure yet.

We discussed our common high level goal of "doing what makes most sense" for power long-term, to include consideration of the funding stakeholders (taxpayers/ratepayers) and the public

4. *Cost allocations touch base – topics could include basis for potential updates, status, and path forward considerations (methods, third party, etc.) – INFORM/DISCUSS (Corps/BPA)*

Thomas Topi, Corps has reviewed BPA's 3 options for methodology recommendations

BPA not recommending use of a single purpose facility

Sees differences in specific costs or direct costs

Thomas to send email - BPA will follow up

BPA shared the \$1 billion flood benefits, \$26m power revenues, and 40% power joint cost figures as context for why cost allocation is justified

5. *Next steps / wrap up*

BPA to work on our Willamette economic analysis

Corps to send cost allocation Qs to BPA, BPA to follow up

Reschedule Feb meeting back a week due to Prez. Day and include additional Corps invitees

Jesse Kintz

Power Generation – Senior Policy and Project Lead | [PG-2]

BONNEVILLE POWER ADMINISTRATION

bpa.gov | P 503-230-3340 | C (b)(6)

Suggested comments for Department of Army implementation guidance for Section 8220 of WRDA 2022 – Willamette Valley Disposition studies.

Thank you for the opportunity to comment on implementation guidance for Section 8220 of WRDA 2022 – Willamette Valley Disposition studies.

Bonneville believes that we have a shared interest with the Corps in ensuring that the sufficiency of the final Programmatic Environmental Impact Statement for Willamette Valley System Operations. Given the timeline for completion of the PEIS, Bonneville urges the Corps to meet Congress' schedule for completion of the disposition studies of the hydropower purpose of the Willamette dams by June 2024. BPA believes the PEIS would be improved by the Corps incorporating analysis of the disposition studies into the draft PEIS.

BPA appreciates that the Corps has expressed a sense of urgency on addressing mitigation of impacts on fish species in the Willamette. To facilitate that, the Congress directed the Corps in WRDA 2020 Section 218 to study the impacts on other authorized project purposes from any deauthorization of power at Cougar and Detroit/Big Cliff dams, in an effort to assist the Corps in expanding options that could help to mitigate the impacts to fish. Bonneville is not aware that the report has been provided to Congress as required. Bonneville provided to the Corps Bonneville's assessment that other project purposes would not be negatively impacted by deauthorization of the power purpose. Bonneville believes that the Corps's own assessment or the Corps's views of Bonneville's assessment would be useful for a complete assessment of deauthorizing the power purpose.

For WRDA 2022 Section 8220 in particular, Bonneville believes that the Corps should confine the disposition studies to the scope defined by section 8220: the hydropower purposes of the dams. Bonneville also believes that the Corps should rely on Bonneville's expertise for the finding of federal interest in the production of commercial power generation from the Willamette dams.

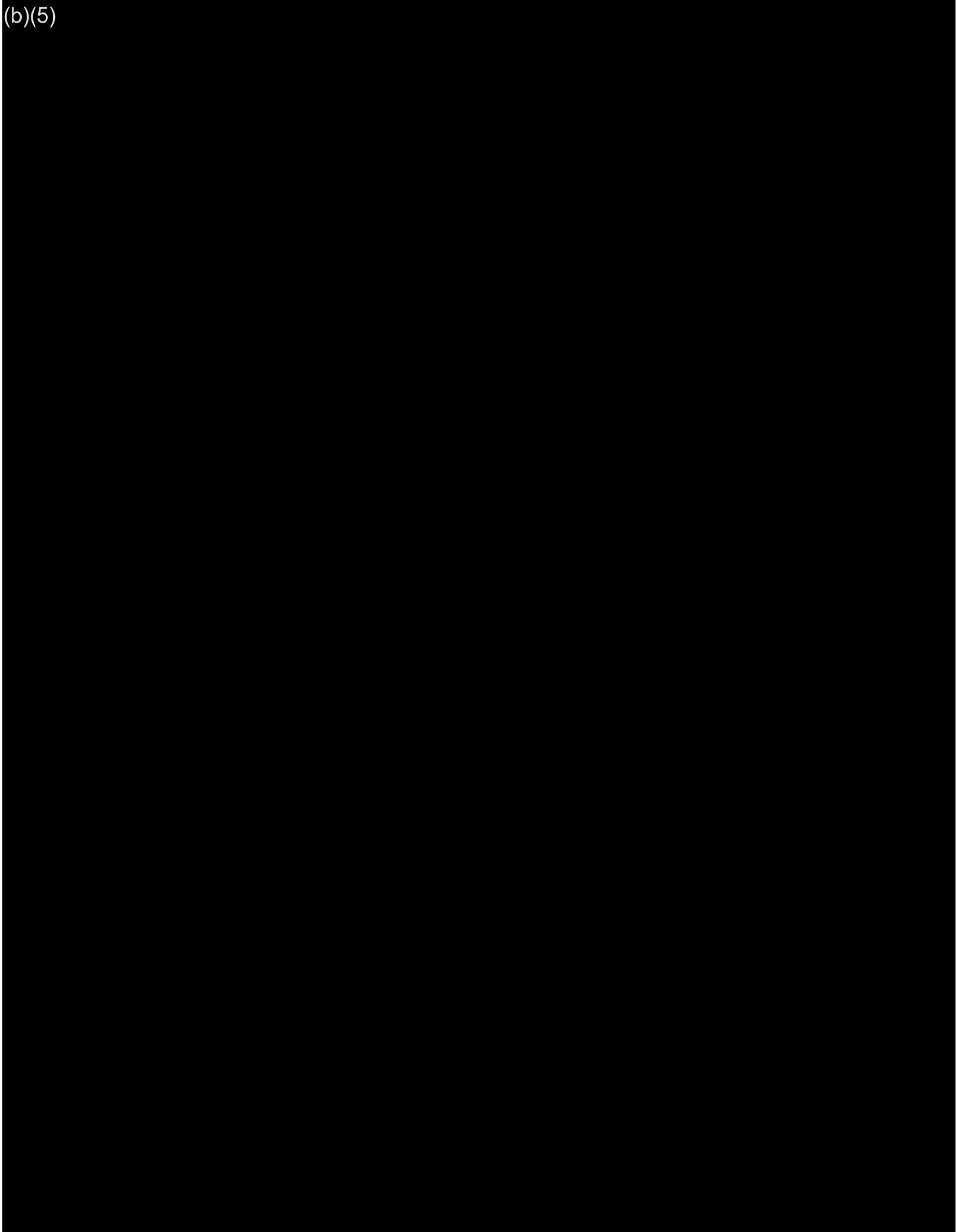
Bonneville also wants to reiterate points it recently provided to the Corps on the draft PEIS:

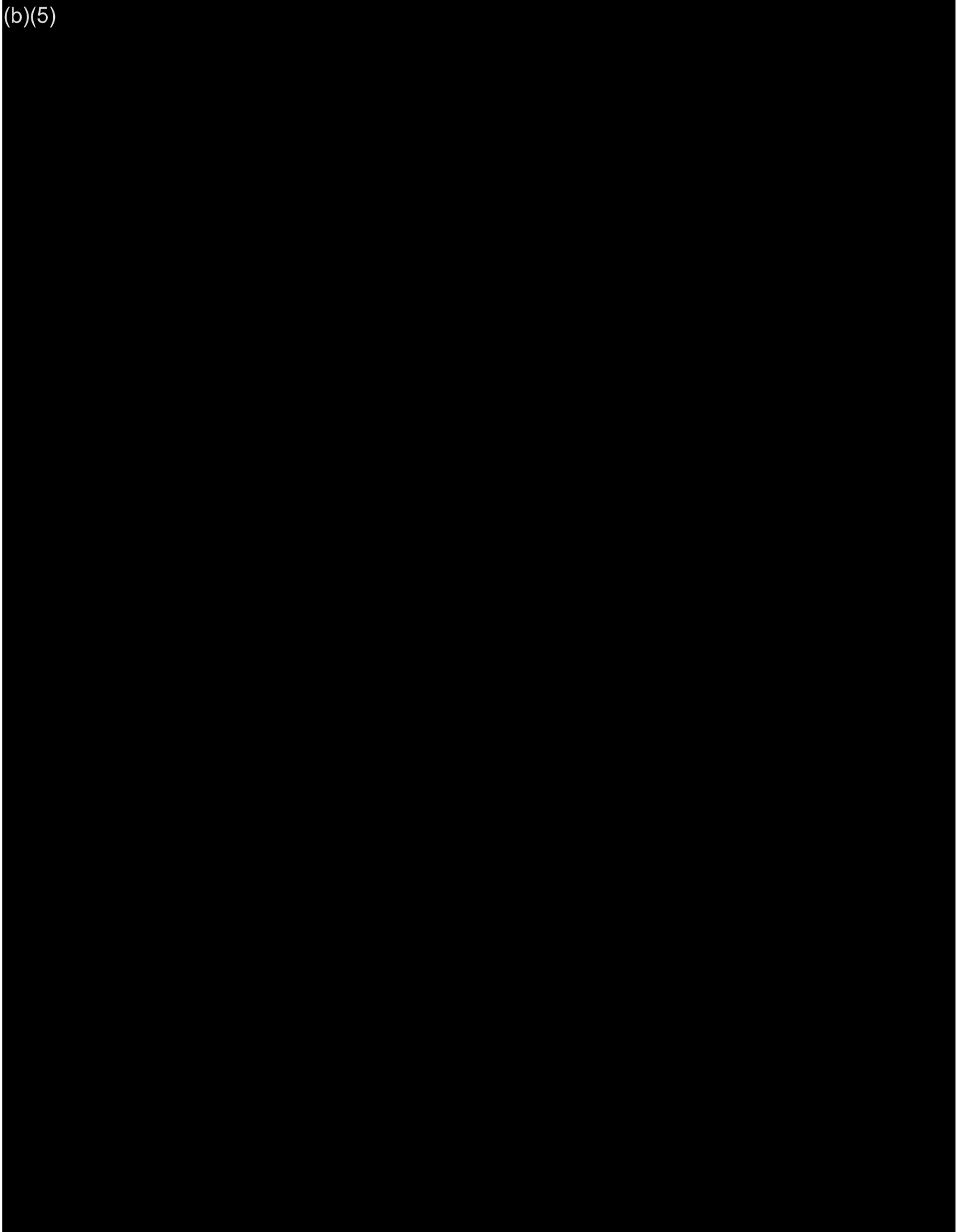
- An implementation plan for the consideration of deauthorization and cost allocation updates should be included in the final PEIS.
- The Draft PEIS estimates the annual benefit of flood protection to be at least \$1 billion and power generation to be \$26 million, yet the power purpose's cost allocation averages around 40 percent. This estimate itself highlights the need for updated cost allocations, and should help inform the Corps of its appropriate short and long-term federal funding requests necessary to meet its most valued project purposes.
- The current PEIS analysis does not reflect the anticipated significant cost impact from continue operations of the 2021 Oregon District Court injunction until the Corps completes structural measures. These operations stand to reduce the value of

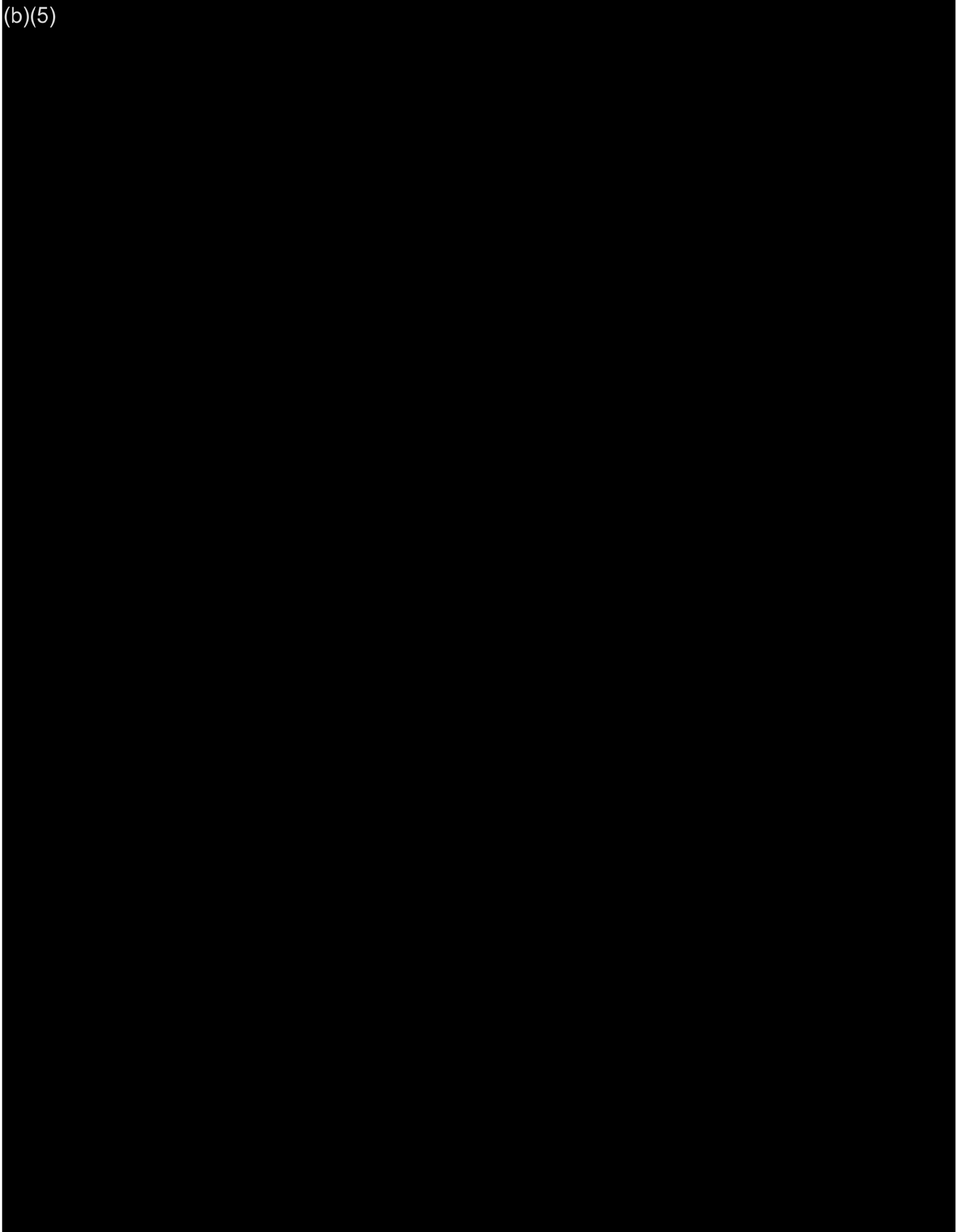
hydropower generation by nearly a third. Having that information incorporated into the analysis will help inform both Congress and the Final PEIS.

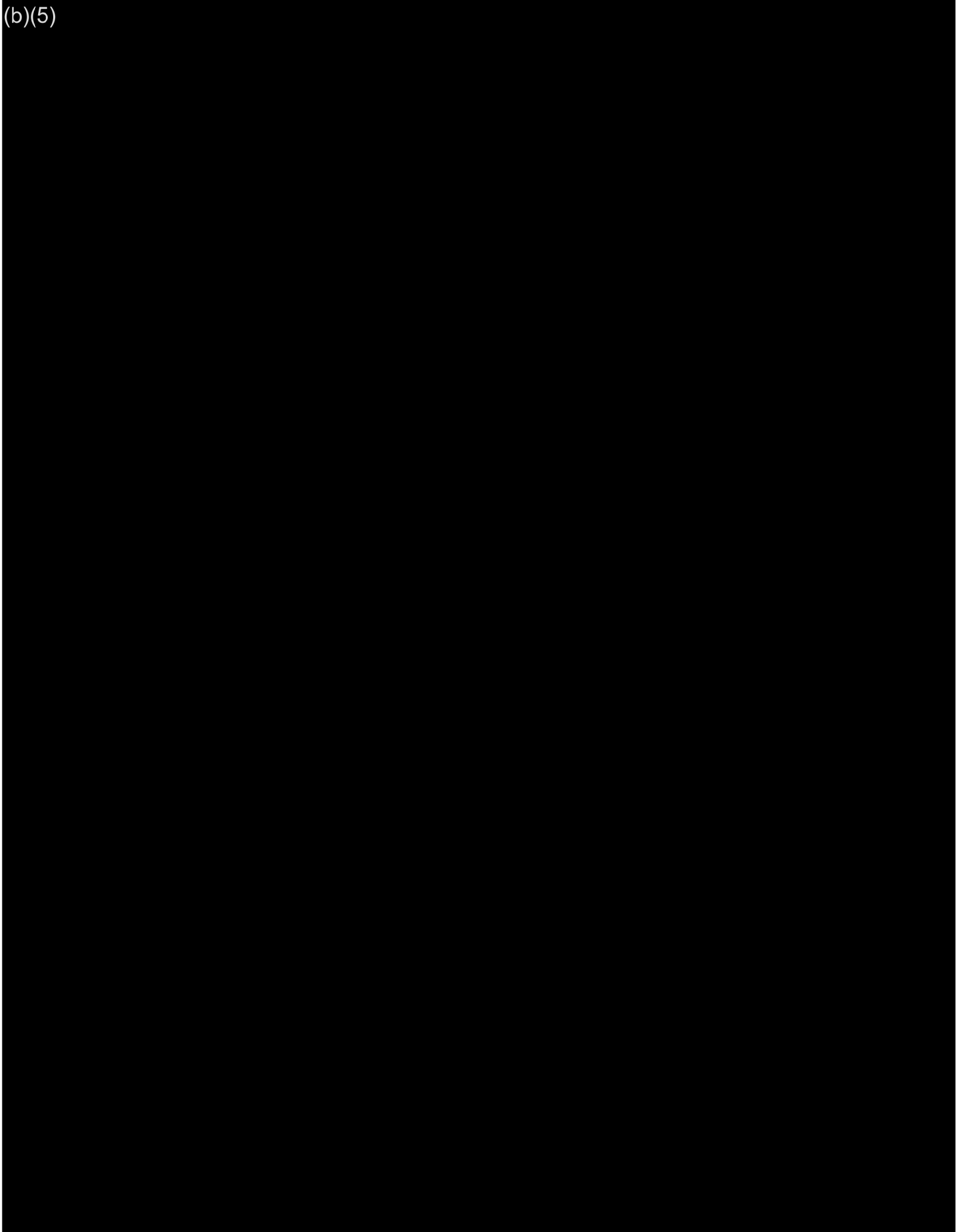
- Finally, Bonneville continues to urge the Corps to update structural cost estimates which the Corps states in the Draft PEIS are likely more than double the current estimates. In addition, recent economic events of inflation, constrained supply chains, and escalated interest rates also likely impact the cost estimates.

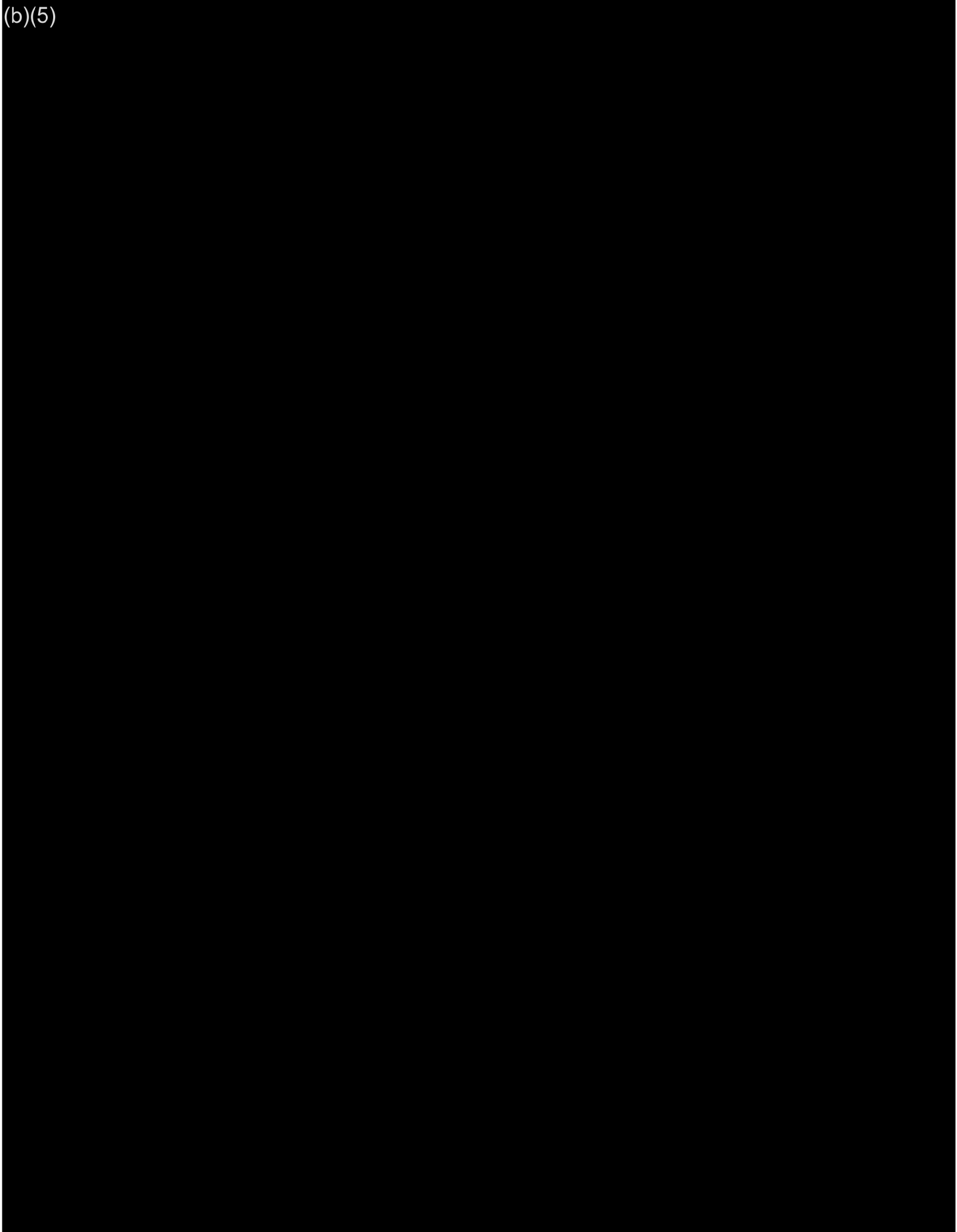
Thank you again for the opportunity to comment.

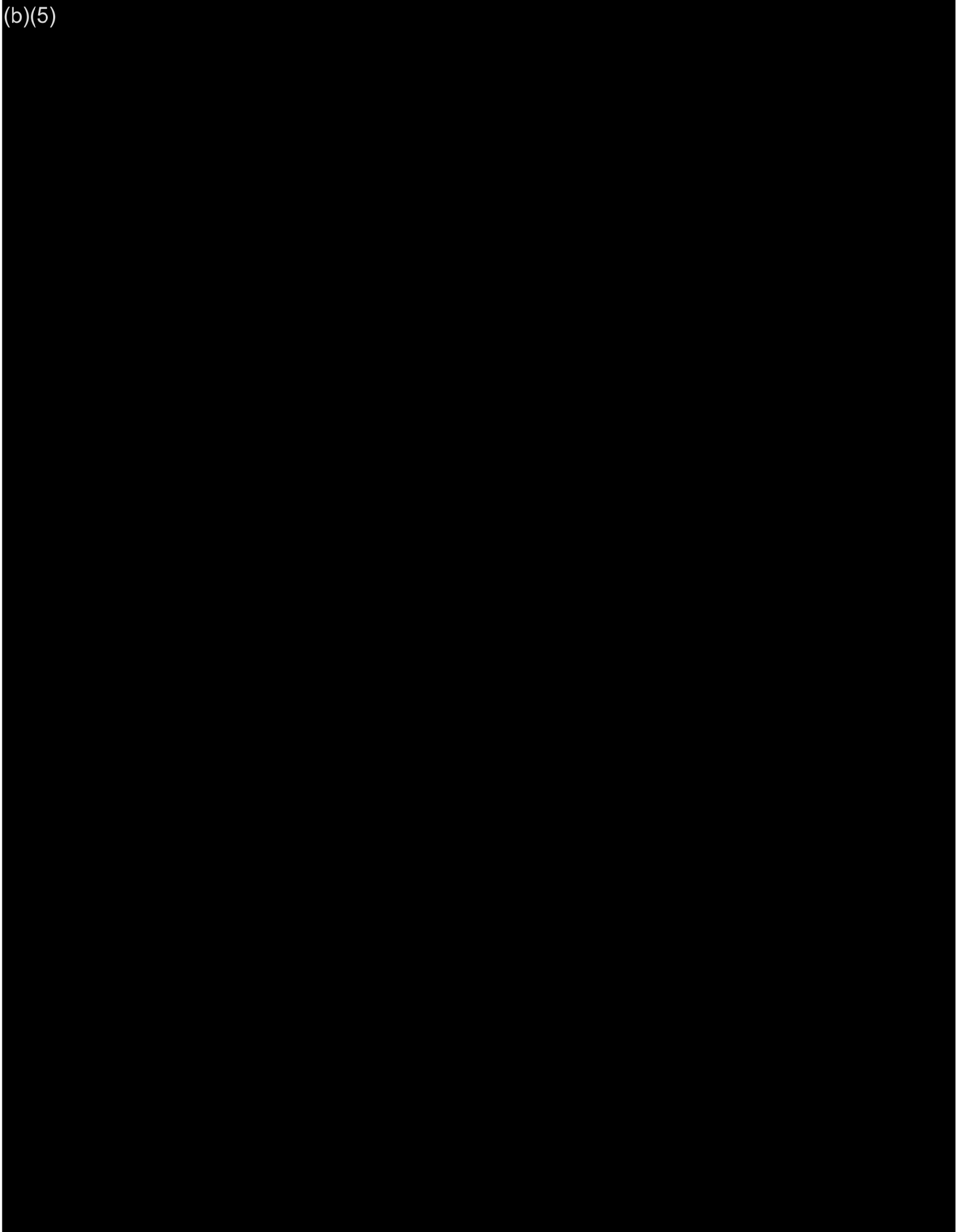


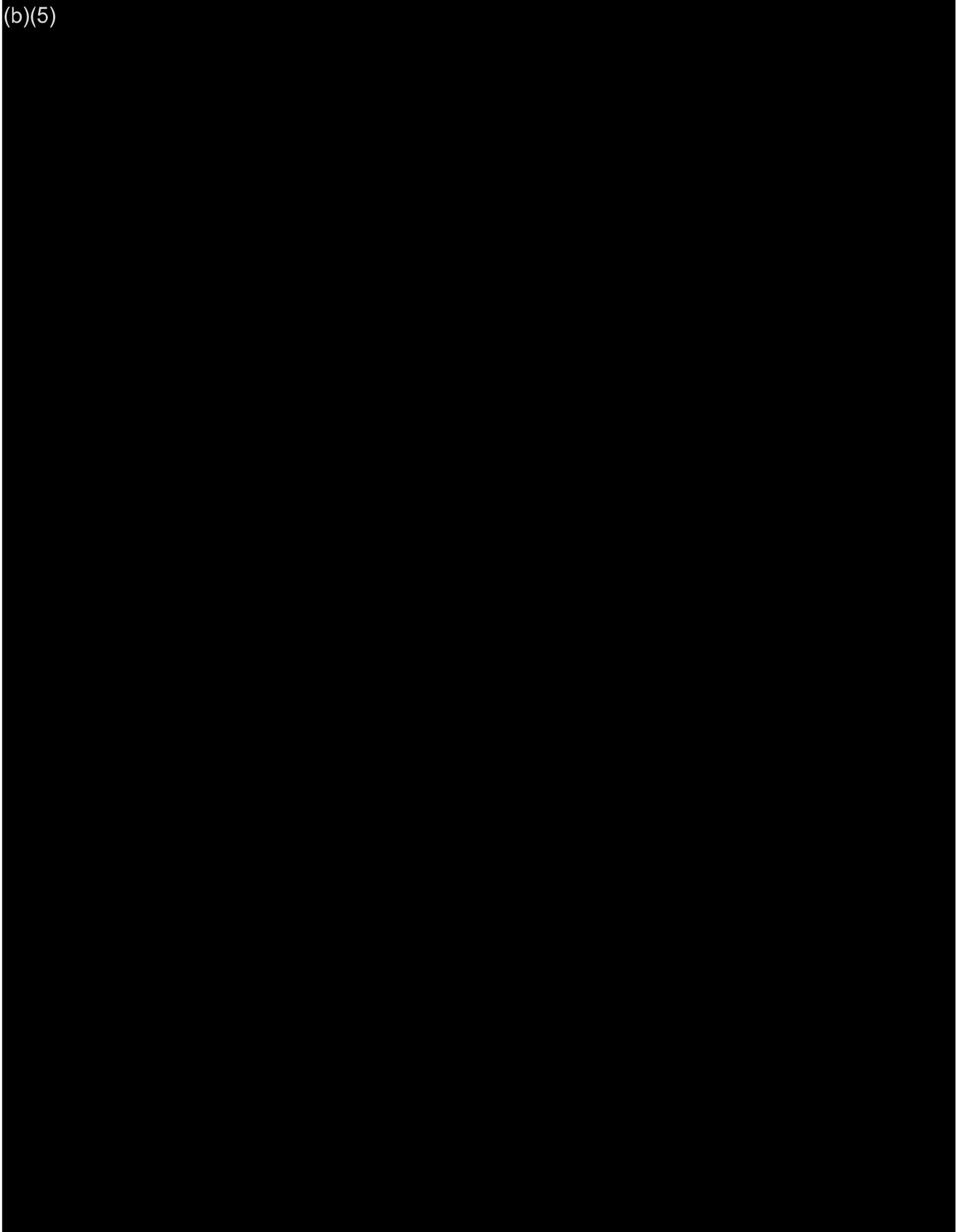




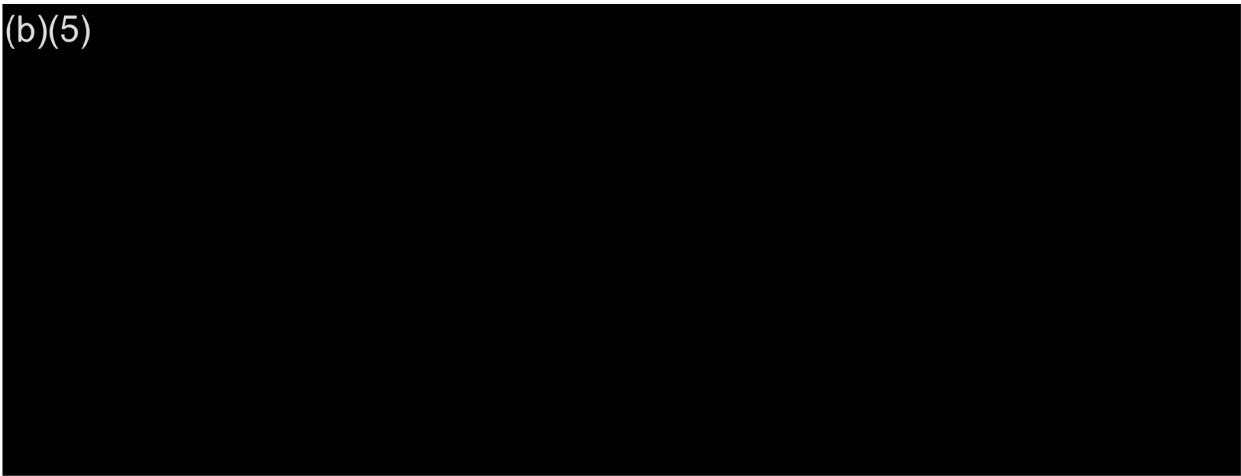








(b)(5)



BPA notes for 4/11/23 Corps disposition study charrette planning session

ATTENDEES:

Confirmed: Jesse Kintz, Glen Smith, Julee Welch, Gordon Ashby (in person), Wayne Todd (phone in AM)

Tentative: BPA operations rep (Pam Van Calcar)

MEETING OBJECTIVE (Corps agenda):

- What actions are necessary to implement WRDA 2022 and what is our strategy and framework for the 18-month report to Congress?

BPA OPENING REMARKS

- Intro – Good morning, Jesse Kintz, Senior Policy and Project Lead in Power Generation at BPA, Represent BPA as Deputy in the interagency Willamette EIS process.
- Nice to be here in person
- I'd like to first express appreciation to Corps for including us at the table
 - Happy to be here and digging in with you all side by side on this interesting/ important issue (WRDA, Determining federal interest of deauthorizing Willamette hydropower).
- Most of you know that the question being asked in this WRDA is an important one to BPA and one that we've been raising for some time.
 - Congress has entrusted the BPA Administrator with providing the Pacific NW with an economical power supply consistent with sound business principles and as a core part of BPA's power marketing mission
 - Decreasing power generation and increasing costs (due to litigation, fish mitigation, EIS) is resulting in un-economical hydropower. BPA and its electricity ratepayers shouldn't pay for power that is too expensive.
 - To clarify, BPA isn't pushing for de-authorization at all costs; but given the economics it needs to be on the table and seriously considered
- Two points to emphasize from BPA's perspective for today:
 - Importance of keeping the scope focused and streamlined to meet 18 mo deadline
 - BPA and Corps agree on this
 - BPA is concerned about time remaining (14 months)
 - Success with this will achieve clarity on a hydropower path forward and inform fish options, the EIS, funding prioritization along with meeting Congress intent
 - Considerations for approach to federal interest
 - Understand and acknowledge there are likely differences in how BPA and Corps view federal interest, look forward to discussing

- May be helpful to consider federal interest in two ways “side by side”:
 - 1. What constitutes federal interest in commercial hydropower (BPA’s expertise) – *commercial hydropower = power marketed and transmitted, excludes turbines to pass water or station service*
 - 2. What constitutes federal interest in hydropower as a holistic feature of a multipurpose project (Corps’ expertise)
 - BPA has begun an analysis to inform the federal interest question focused on our power marketing and transmission areas of expertise (updated economics, future load requirements, carbon fuel mix, transmission, etc).
- Close. Thanks again for the opportunity to provide opening comments on behalf of BPA and look forward to today’s discussion.

BPA TALKING POINTS / PREP SHEET

- Corps Stated Goal:
 - What actions are necessary to implement WRDA 2022 and what is our strategy and framework for the 18-month report to Congress?
- BPA’s overall goal(s):
 - Advocate for a streamlined scope focused on the commercial power economics
 - Defend areas of BPA expertise (power marketing, transmission) and inform Corps on those
 - Learn about Corps’ approach and perspectives
 - Stay focused on scope and impacts of deauthorizing hydropower, suggest “parking lot” for other things (i.e. legal authority questions, etc.)
- Regarding meeting the 18 month deadline (*First bullet point is copied from BPA’s EIS comment letter*)
 - Meeting Congress’ timeline for completing disposition studies by June 2024 would support implementation planning for the Final PEIS and help inform Bonneville’s decisions for continued investments in the power facilities. It will be important for the Corps to limit the scope of the disposition studies and focus only on the effects of deauthorizing hydropower.
 - *Focus on the primary question being asked by Congress and stakeholders – this is about hydropower and whether there is a federal interest in hydropower. The Corps’ staff paper is very constructive, but introduces many secondary considerations (such as serving as a national “test case”), that we don’t have time to engage.*
 - *Limit scope to commercial hydropower – excludes station service / TDG issues (WRDA: “in whole or in part”)*
 - *Identify early which of these four conceptual scenarios disposition study will evaluate (BPA to suggest focus on option in green, may also need to include option in blue?):*
 - **Remove hydropower altogether**

- Remove hydropower partially: **remove “commercial power”, mothball/caretaker**
- Keep hydropower but replace BPA with 3rd party
- Keep hydropower but reduce costs to improve economics (i.e. cost allocation update, different investment strategies)
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 - BPA has a significant role as power marketing expert provide power marketing economic components of the federal interest analysis
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Transmission impacts - reliability	TO, TP	Grid reliability, Islanding

- Regarding cost allocations
 - BPA continues to believe cost allocation updates are warranted and appropriate but not the focus for today
 - OMB is planning a meeting on this topic
 - BPA remains interested in working on this if Corps is willing
- Other BPA context / perspectives
 - Under current law, only BPA is authorized to market power generated at federal dams.
 - The cost of mitigating local and area transmission support concerns is likely far less than costs of uneconomical power. BPA is working on updated description of transmission impacts as part of analyzing federal interest. The Corps should defer to Bonneville on transmission system impacts; they are entirely out of the scope of the authorized purposes of the dams themselves. Issues beyond the busbar are out of the Corps’ role.
 - Willamette capital funding pause likely to continue until disposition study results.
 - BPA and ratepayers should not be assigned repayment to the U.S. Treasury during the disposition study and until future of power is more clear.

BREAKOUT SESSIONS COVERAGE

- Session 1: Policy Considerations (Welch, Kintz), Federal Interest (Ashby), Dam Specific Considerations (G. Smith)
- Session 2: Policy Considerations (Welch, Kintz), Criteria/Metrics (Ashby) - G. Smith choice