

1 **UNDERTAKING J5.2**

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3 **Undertaking**

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5 To update the table at L-4.3-5 CCC-018, part b) for U2EE, and to validate and explain
6 any variance to the math used by Mr. Mondrow.

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9 **Response**

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11 OPG corrected the math used by Mr. Mondrow on the transcript. See Tr. Vol. 5, p. 54,
12 lines 13-26.

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14 The Unit 2 Execution Estimate (U2EE) cannot be estimated at the P50 level by updating
15 solely for the contingency amount because other elements in addition to contingency
16 have changed from RQE to U2EE (see Ex. L-4.3-1 Staff-055 Attachment 1, p. 13). The
17 cost flow profile also changed, which affects cumulative interest costs.

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19 The U2EE is provided at Ex. L-4.3-1 Staff-055, Attachment 1, p. 13. The high
20 confidence Unit 2 contingency amount has decreased by \$12M from \$689.5M at RQE
21 (November 2015) to \$677.5M at U2EE (August 2016). Applying the same approximation
22 methodology utilized in Ex. L-4.3-5 CCC-018, part b), the contingency amount at the
23 time of U2EE at the P50 confidence level can be estimated by prorating the P50 and the
24 P90 contingency estimates (those at the time of RQE are utilized for the pro-rating),
25 which would yield \$563.9M ($\$677.5M \times (\$1.420B/\$1.706B)$), including interest and
26 escalation. Therefore, the estimated reduction in the U2EE contingency amount would
27 be approximately \$114M ($\$677.5M$ less $\$563.9M$).

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29 Chart 1 provides an estimate of \$4,735M for the U2EE in-service amount at an
30 approximate P50 contingency level.

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Chart 1

<i>\$M</i>	2017	2018	2019	2020	2021
As filed on May 27, 2016 – In-Service Additions ⁽¹⁾	374.4	8.9	0.0	4,809.2	0.4
Updated to remove D2O Project (per Ex. N2-1-1) and for U2EE In-Service Amounts	8.5 ⁽²⁾	8.9	0.0	4,849 ⁽³⁾	0.4
Estimated In-Service Additions with Unit 2 EE In-service Amount including P50 Contingency	8.5	8.9	0.0	4,735 ⁽⁴⁾	0.4

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- Note (1) See Ex. D2-2-10, Table 5
- Note (2) OPG's Second Impact Statement Ex. N2-1-1 removed the forecast in-service amount of \$365.9M in 2017 associated with the D2O Project.
- Note (3) Ex. N1-1-1 Attachment 1, p. 17. Although OPG's Unit 2 EE estimate update resulted in a new interim in-service amount projection of \$4,849M in 2020, this is a point-in-time estimate and OPG is not changing its in-service amount forecast at this time (see Tr. Vol. 4, p. 58, lines 22-28 and p.59, lines 1-7).
- Note (4) Calculated as \$4,849M U2EE in-service amount less \$114M estimated reduction in contingency moving from P90 to P50 level, described above

1 **UNDERTAKING J5.5**

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3 **Undertaking**

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5 Why is the bleed cooler inspection/repair for the Steam Generators work package only
6 required for Unit 2?
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9 **Response**

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11 The decision to perform the Unit 2 Bleed Cooler Inspection/Repair during the Unit 2
12 refurbishment was endorsed by the Program Scope Review Board as a risk mitigation
13 measure and because of timing.
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15 None of the bleed coolers in any of the Darlington units has ever been inspected, and it
16 was deemed prudent to inspect these bleed coolers in all units at the earliest
17 opportunity, with the Unit 2 refurbishment outage being the first scheduled outage at the
18 time of the decision. There is a low probably risk that the bleed cooler tube bundles,
19 which are long lead procurement items, will need replacement. Replacement is most
20 effective when the bleed cooler is already in a drained and dried state during
21 refurbishment. The inspection results will inform the risk of tube bundle replacement in
22 subsequent units.
23

24 The current plan for the remaining three Darlington units is to complete the inspections
25 during upcoming planned outages. Should prior units' inspections indicate that tube
26 bundle replacement may be required (considered a very low probability), the
27 replacement will be scheduled in planned outages or refurbishment outages depending
28 on timing.
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1 **UNDERTAKING J5.6**
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3 **Undertaking**
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5 With reference to the projects listed in J2.9, to provide an explanation as to the nature of
6 the projects and why a project will come in service before Unit 2, with Unit 2, or spread
7 across all units.
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11 **Response**
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15 Please refer to OPG's response in J2.9.