

OPG CONFIDENTIAL

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**ENGINEERING, PROCUREMENT
AND CONSTRUCTION
AGREEMENT, AMENDMENT #1**

For

**DARLINGTON REFURBISHMENT TURBINE
GENERATOR PROJECT**

between

OPG

and

**AECON CONSTRUCTION GROUP
INC. AND SNC-LAVALIN
NUCLEAR INC.**

**Confidential
&
Commercially Sensitive**

ONTARIOPOWER
GENERATION

S180-0001

AMENDMENT #1

AMENDMENT AGREEMENT NUMBER 1

This Amendment Agreement Number 1 (this "**Agreement**") is made as of March 1, 2016 between:

ONTARIO POWER GENERATION INC., a corporation existing under the laws of Ontario ("**OPG**"),

-and-

AECON CONSTRUCTION GROUP INC., a corporation existing under the laws of Canada, and **SNC-LAVALIN NUCLEAR INC.**, a corporation existing under the laws of Canada, acting jointly and severally (collectively, the "**Contractor**") doing business as a contractual joint venture known as the "SLN-AECON TG, a Joint Venture".

Recitals

- A. OPG and the Contractor entered into an engineering, procurement and construction agreement for the turbine generator refurbishment project dated as of January 22, 2014 (the "**Original Agreement**"). Under the Original Agreement, the Contractor is obliged to perform the Work and provide the Goods for the Project in support of the Darlington Refurbishment Program at the Darlington nuclear generation station ("**DNGS**") in Clarington, Ontario, on the terms and conditions set out in the Original Agreement.
- B. OPG and the Contractor have agreed to amend the Original Agreement to:
 - 1. incorporate the Optional Work Notice to Proceed dated as of June 26, 2014 and Project Change Directives numbers 1, 2, 3, 7, 8, 9 into the Original Agreement through changes to the following schedules of the Original Agreement:
 - i. Schedule 1.1(E) (Specifications);
 - ii. Schedule 2.7(a)(1) (Contract Schedule); and
 - iii. Schedule 7.1(Contract Price);

5.2.0

2. incorporate other changes to the Original Agreement, as specified in this Agreement.

For value received, the Parties agree as follows.

1. Interpretation

Any defined term used in this Agreement that is not defined in this Agreement has the meaning given to that term in the Original Agreement.

2. Change to Schedule 1.1(E) (Specifications)

Schedule 1.1(E) (Specifications) of the Original Agreement is changed by deleting the following documents in their entirety and replacing them with the revised documents attached to this Agreement as Attachment A:

1. NK38-SOW-41000-10003; Scope of Work: Darlington Steam Turbine and Auxiliaries Refurbishment;
2. NK38-SOW-42000-10003; Scope of Work: Darlington Generator and Auxiliaries Refurbishment;
3. NK38-SOW-64100-10004; Scope of Work: Darlington Turbine Controls Upgrade;
4. NK38-SOW-64220-10003; Scope of Work: Darlington Generator Excitation Controls Upgrade;
5. NK38-SOW-41800-10003; Scope of Work: Darlington Moisture Separators Reheaters Refurbishment; and
6. NK38-SOW-09701-10041; Turbine, Generator, and Auxiliaries Systems Layup – Technical Scope of Work.

3. Change to Schedule 2.7(a)(1) (Contract Schedule)

The table relating to the Definition Phase milestones in Schedule 2.7(a)(1) (Contract Schedule) of the Original Agreement is deleted in its entirety and replaced with the revised table included in Attachment B. The revised table further clarifies Units to which specific milestones apply.

A new milestone entitled “Level 5 Progress Schedule for Units 3, 1 and 4” is added to the table relating to the Execution Phase milestones in Schedule 2.7(a)(1) (Contract Schedule) of the Original Agreement as specified in Attachment B.

Handwritten signature/initials

4. Change to Schedule 2.7(a)(2) (Progress Schedule)

Schedule 2.7(a)(2) (Progress Schedule) of the Original Agreement is deleted in its entirety and replaced with the revised document entitled "Schedule 2.7(a)(2) – Progress Schedule" attached to this Agreement as Attachment C.

5. Change to Schedule 2.7(d) (Development of the Execution Phase Plan)

Schedule 2.7(d) (Development of the Execution Phase Plan) of the Original Agreement is deleted in its entirety and replaced with the revised document entitled "Schedule 2.7(d) – Development of the Execution Phase Plan" attached to this Agreement as Attachment D.

6. Change to Schedule 2.14(d) (Subcontractors)

Schedule 2.14(d) (Subcontractors) of the Original Agreement is deleted in its entirety and replaced with the updated document entitled "Schedule 2.14(d) – Subcontractors" attached to this Agreement as Attachment E.

7. Change to Schedule 5.7 (Economic Cost Adjustment)

Schedule 5.7 (Economic Cost Adjustment) of the Original Agreement is changed as follows:

- (a) the last sentence in section 1.3 (Effect on Prices) is deleted in its entirety and replaced with the following sentence:

"All such adjustments will be documented in a Project Change Directive provided by OPG to the Contractor."; and

- (b) the second to last sentence in section 1.4 (Adjustment of Reimbursable Work Fixed Fee) is deleted in its entirety and replaced with the following sentence:

"Each such adjustment will be documented in a Project Change Directive provided by OPG to the Contractor."

- (c) the last sentence in section 1.4 (Adjustment of Reimbursable Work Fixed Fee) is deleted in its entirety and replaced with the following sentence:

5.8.0.2

"For certainty, such adjustment will not be restricted to the profit component of the Execution Phase Fixed Fee as contemplated by section 5.6 of this Agreement."

8. Change to Schedule 7.1 (Contract Price)

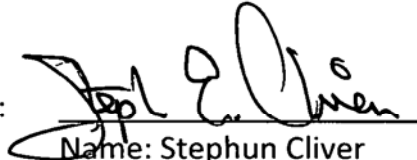
Schedule 7.1(1) (Contract Price) of the Original Agreement is deleted in its entirety and replaced with the revised document entitled "Schedule 7.1(1) – Contract Price" attached to this Agreement as Attachment F.

9. Original Agreement Remains in Full Force

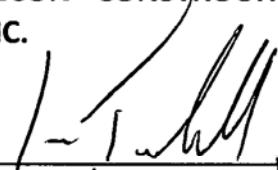
Except for changes to the Original Agreement set out in this Agreement and any previous Amendment, the Original Agreement remains in full force, unamended.

The Parties have duly executed this Agreement.

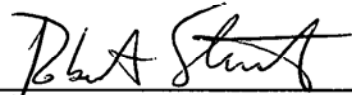
ONTARIO POWER GENERATION INC.

By:  5/27/16
Name: Stephun Cliver
Title: Chief Supply Officer

AECON CONSTRUCTION GROUP INC.

By: 
Name: Ian Turnbull
Title: President

SNC-LAVALIN NUCLEAR INC.

By: 
Name: ROBERT STEWART
Title: SR. VICE PRESIDENT, OPERATIONS

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SCHEDULE 1.1 (eee)

EXECUTION VERSION

ATTACHMENT A

Change to Schedule 1.1(E) (Specifications)

See attached

Schedule 1.1(E) was not included in OPG's filing

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SCHEDULE 2.7 (a)(1)

ATTACHMENT B**Change to Schedule 2.7(a)(1) (Contract Schedule)**

(a) **Definition Phase Milestones.** With respect to the table relating to the Definition Phase milestones, the rows for the milestones entitled:

- "PC1s Prepared (Segment 1)";
- "Final Work Assessments (for Additional Maintenance Work)";
- "PC1s Prepared (Segments 2, 3, 4)"; and
- "Comprehensive Work Packages (for Additional Maintenance Work)"

are added; and the rows for the milestones entitled:

- "Engineering Change Control / Engineered Tooling Documentation"
- "Execution Phase Target Cost & Schedule";
- "Modification Installation Work Plans";
- "Commissioning Requirements"

are deleted in their entirety and replaced with those listed in the following revised table. The Units to which specific milestones apply are also further clarified in the following revised table:

Milestone	Definition/Completion Criteria	Milestone Date
Baseline Schedule	Contractor will submit a level 3 resource loaded Definition Phase schedule to identify the number of person-hours required for each activity in the schedule. The schedule must consider OPG review periods as applicable, contains activity codes per OPG provided WBS structure and complete critical path analysis based on activities logic ties. The baseline schedule will be used to measure Contractor's performance in accordance with milestones and agreed upon earning rules. Milestone is declared complete upon OPG acceptance of the schedule.	60 days after the date of this Agreement for draft and final 30 days later (applicable to DNGS Unit 2 only)

Milestone	Definition/Completion Criteria	Milestone Date
Cooperation Agreement	Contractor will enter into and accept tri-partite Cooperation Agreement with OPG and the ESES contractor. The Agreement will be developed in accordance with and based on key principles previously agreed upon by all involved parties. Milestone is declared complete upon Contractor's sign off.	90 days after the date of this Agreement (applicable to all four DNGS Units)
Engineering Change Control / Engineered Tooling Documentation	The Contractor is to build an integrated Progress Schedule in alignment with the ESES Deliverables Schedule and the COIR and to commence and complete all required engineering activities (note: this is to include all ESES Vendor engineered equipment/ solutions). This also includes all relevant design packages and engineered tooling documentation required for the Execution Phase. The milestone is declared complete upon OPG acceptance of all design packages, completion assurance requirements, AFS strategy, and related documentation / information to be ready for issuance of notice-to-proceed with field installation prerequisites (see Modification Installation Work Plans).	<p>First Release – Acceptance of Design Completion Assurance Verification Review (the "DCAVR"): July 31, 2015 (applicable to DNGS Unit 2 only)</p> <p>** Second Release – Completion of exempted items from DCAVR process as concurred by OPG Design Authority: March 31, 2016 (applicable to DNGS Unit 2 only)</p>

Milestone	Definition/Completion Criteria	Milestone Date
Project Management Plan – Definition Phase	<p>The Contractor is to develop and deliver to OPG a detailed project management plan (“PMP”) for the Definition Phase of the Project. This document will outline the Contractor’s management plans, including the following areas:</p> <ul style="list-style-type: none"> • Safety/ Environment • Engineering • Quality • Resources/staffing • Tooling and materials • Fabrication • Waste • Project control • Project Integration • Communication • Risk Register • Space allocation <p>Milestone is declared complete upon OPG acceptance of the Definition Phase PMP.</p>	February 28, 2014 (applicable to all four DNGS Units)
Initial Work Assessment(s)	<p>The Contractor is to identify all long lead materials, support tasks and any pre/post-requisites associated with the Execution Phase Work. Milestone is declared complete upon entering the information in the required OPG work management system.</p>	September 30, 2014 (applicable to DNGS Unit 2 only)

Milestone	Definition/Completion Criteria	Milestone Date
Project Management Plan - Execution Phase	<p>The Contractor is to develop and deliver to OPG a detailed PMP for the Execution Phase of the Project. This document will outline the Contractor's management plans including the following areas:</p> <ul style="list-style-type: none"> • Safety/ Environment • Engineering • Quality • Resources/staffing • Tooling and materials • Fabrication • Waste • Project control • Project Integration • Communication • Space allocation <p>Milestone is declared complete upon OPG acceptance of the Execution Phase PMP.</p>	October 31, 2014 (applicable to all four DNGS Units)
Execution Phase Risk Register	The Execution Phase Risk Register is complete in accordance with Schedule 2.7(d) and has been agreed to and accepted by OPG.	November 30, 2014 (applicable to all four DNGS Units)
Maintenance Procedures	The Contractor is to develop and deliver to OPG maintenance procedures with usage classifications and related quality assurance documents for the maintenance-based Execution Phase Work in alignment with ESES Vendor and OPG supplied reference materials. Milestone is declared complete upon OPG acceptance of all maintenance procedures.	July 15, 2015 (applicable to DNGS Unit 2 only)

Milestone	Definition/Completion Criteria	Milestone Date
Modification Installation Work Plans	Upon completion of detailed engineering for each modification work package, the Contractor is to develop and deliver to OPG installation work plans and related quality assurance documents. Milestone is declared complete upon OPG acceptance of all modification installation work plans.	July 15, 2016 (applicable to DNGS Unit 2 only)
Commissioning Requirements/Specifications	Contractor shall develop a set of commissioning requirements/specifications for static and dynamic (related to their scope) commissioning for all modification work packages (except for Deferred Modification Work in Unit 2) and present it to OPG Design Authority or delegate for review / acceptance (note: all commissioning work to be completed in accordance with OPG Available-for-Service (AFS) requirements as defined in the AFS Strategy prepared in the Definition Phase). Upon OPG acceptance of the commissioning requirements/specifications, Contractor is to develop static commissioning workplan(s) for all planned modifications. Milestone is declared complete upon OPG acceptance of commissioning requirements / specifications.	July 31, 2016 (applicable to DNGS Unit 2 only)

Milestone	Definition/Completion Criteria	Milestone Date
Execution Phase Target Cost & Schedule	<p>The Contractor is to develop and deliver to OPG, in accordance with Schedule 2.7(d), an initial Execution Phase Cost Estimate (AACE Class 4) followed by an interim Execution Phase Cost Estimate (AACE Class 3). Further, the Contractor is to develop and deliver to OPG, in accordance with Schedule 2.7(d), Class 2 (RQE) Cost Estimate / Level 5 Schedule for Unit 2 only. Based on its Class 2 (RQE) Cost Estimate / Level 5 Schedule for Unit 2 only, the Contractor is to develop and deliver to OPG, in accordance with Schedule 2.7(d), Execution Phase Cost Estimate (AACE Class 3) / Level 4 Execution Phase Progress Schedule for Units 3, 1 and 4. All Execution Phase Cost Estimates are to be submitted to and accepted by OPG. Milestones are declared complete upon OPG acceptance of the respective Execution Phase Cost Estimates / Progress Schedules. The Contractor is to submit Execution Phase Progress Schedules for each of the corresponding Execution Phase Cost Estimates for acceptance by OPG. The Execution Phase Cost Estimate AACE Class 2 (RQE) and Level 5 Execution Phase Progress Schedule for Unit 2 and the Execution Phase Cost Estimate AACE Class 3 and Level 4</p>	<p>Class 4 Cost Estimate / Level 3 Schedule: May 31, 2014 (applicable to all four DNGS Units)</p> <p>Class 3 Cost Estimate / Level 4 Schedule September 30, 2014 (applicable to all four DNGS Units)</p> <p>Class 2 (RQE) Cost Estimate / Level 5 Schedule March 31, 2015 (applicable to DNGS Unit 2 only)</p> <p>Hybrid Execution Phase Cost Estimate AACE Class 2 and Level 5 Execution Phase Progress Schedule for Unit 2 and estimate AACE Class 3 and Level 4 Execution Phase Progress Schedule for Units 3, 1 and 4 November 15, 2015 (applicable to all four DNGS Units)</p>

Milestone	Definition/Completion Criteria	Milestone Date
	Execution Phase Progress Schedule for Units 3, 1 and 4 will be used as the basis for an agreed upon Execution Phase Target Cost and Execution Phase Progress Schedule in accordance with Schedule 2.7(d).	
PC1s Prepared (Segment 1)	Contractor will prepare all required PC1s (Segment 1), excluding Additional Maintenance Work. Milestone is declared complete upon OPG acceptance.	January 29, 2016 (applicable to DNGS Unit 2 only)
Final Work Assessments (for Additional Maintenance Work)	Contractor will submit all required field execution requests, input additional work order/tasks, ensure all regulatory approvals have been obtained, and all tasks / documents for OPG's work management are complete. Milestone is declared complete upon OPG acceptance	February 16, 2016 (applicable to DNGS Unit 2 only)
PC1s Prepared (Segments 2,3,4)	Contractor will prepare all required PC1s (Segments 2,3,4), excluding Additional Maintenance Work. Milestone is declared complete upon OPG acceptance	April 15, 2016 (applicable to DNGS Unit 2 only)
Comprehensive Work Packages (for Additional Maintenance Work)	The Contractor is to develop and deliver to OPG comprehensive work packages. Milestone is declared complete upon OPG final acceptance of all comprehensive work packages.	March 31, 2016 (applicable to DNGS Unit 2 only)

- (b) **Execution Phase Milestones.** With respect to the table relating to the Execution Phase milestones, the following new row is inserted at the end of the table:

<i>Milestone</i>	<i>Definition/Completion Criteria</i>	<i>Subsequent Units Milestone Date</i>
Level 5 Progress Schedule for Units 3, 1 and 4	The Contractor is to develop and deliver to OPG, in accordance with Schedule 2.7(d), a Level 5 Schedule for each of the Units 3, 1 and 4, using the Level 4 Execution Phase Progress Schedule for each of such Units as a baseline and taking into account lessons learned from the Unit that was completed prior to each of such Unit Breaker Open Dates.	TBD (applicable to DNGS Units 3,1,4 only)

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SCHEDULE 2.7 (a)(2)

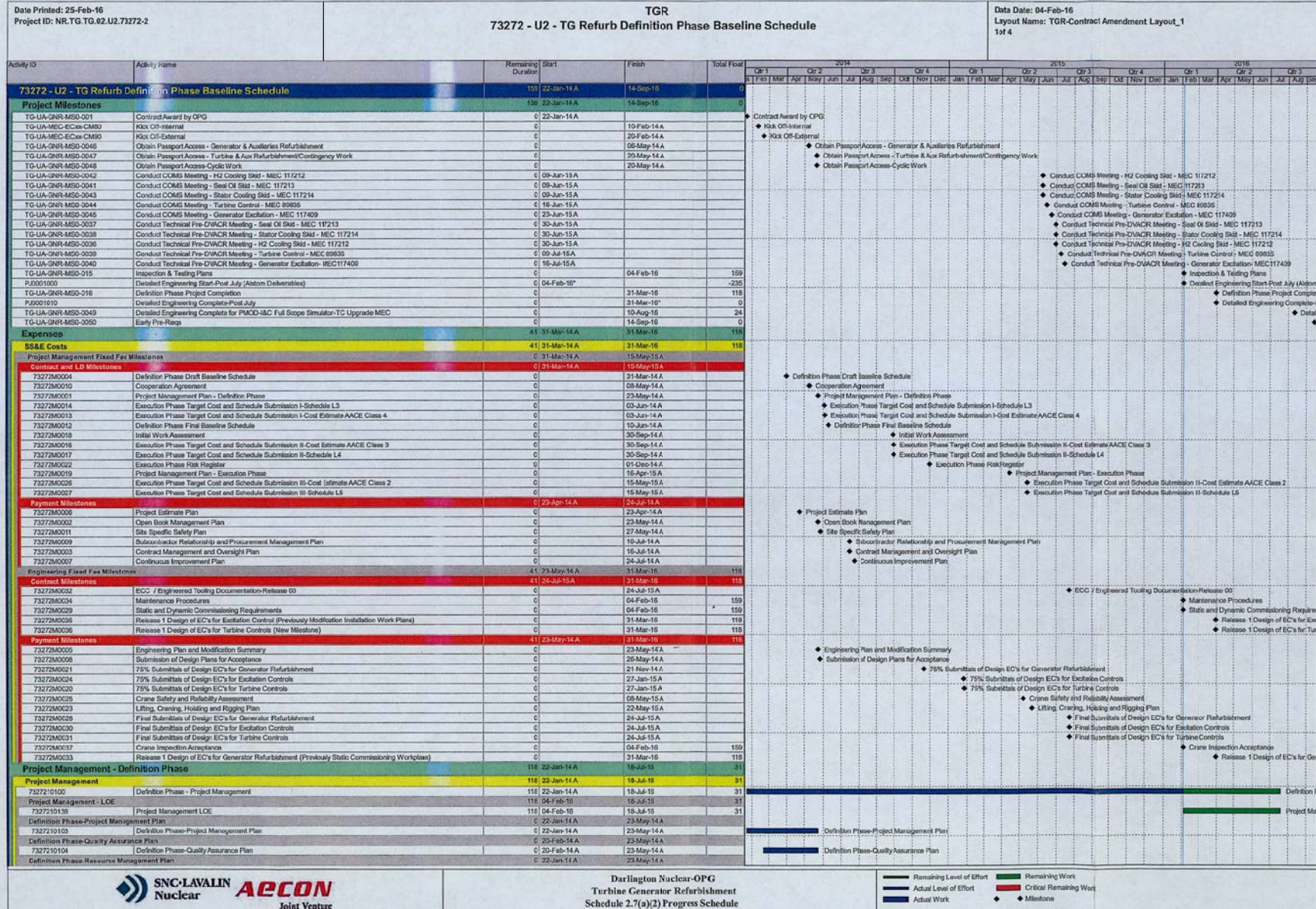
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ATTACHMENT C

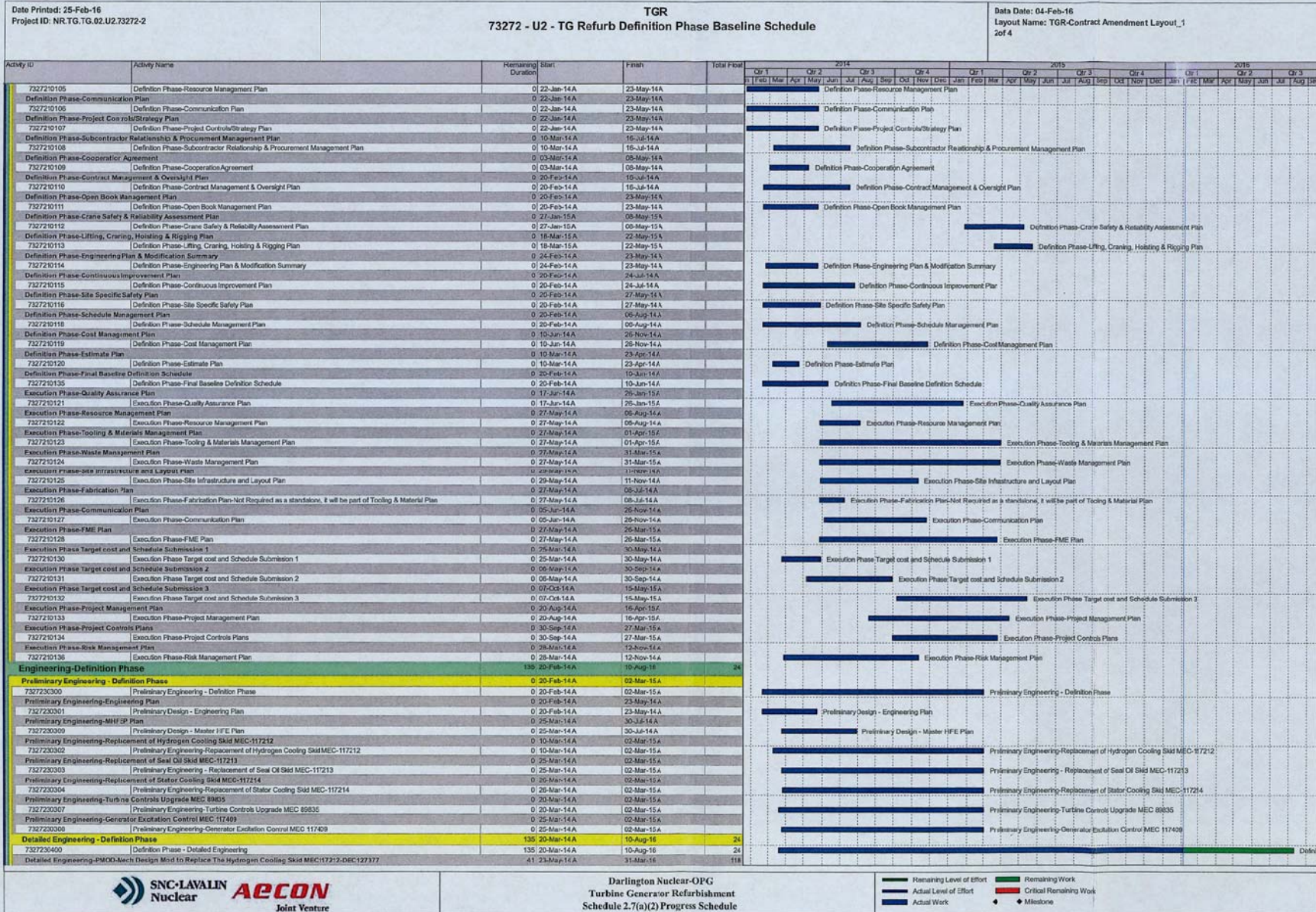
Schedule 2.7(a)(2) – Progress Schedule

See attached

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Data Date: 04-Feb-16
Layout Name: TGR-Contract Amendment Layout_1
3 of 4



Data Date: 04-Feb-16
Layout Name: TGR-Contract Amendment Layout_1
4 of 4

 Remaining Level of Effort  Remaining Work
 Actual Level of Effort Critical Remaining Work
 Actual Work ♦ ♦ Milestone

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SCHEDULE 2.7 (d)

ATTACHMENT D**Schedule 2.7(d) – Development of the Execution Phase Plan****1. Requirements for All Execution Phase Schedules**

The Contractor will develop a schedule management plan ("**Schedule Management Plan**") as part of the project management plan ("**Project Management Plan**") for the Definition Phase for the preparation of all Execution Phase schedules prepared pursuant to this Agreement (each an "**Execution Phase Schedule**"). The Schedule Management Plan will be submitted to OPG as a Submittal in accordance with the Definition Phase Submittal Schedule. The Schedule Management Plan will identify the successive development of a Level 3 Execution Phase Progress Schedule, a Level 4 Execution Phase Progress Schedule and a Level 5 Execution Phase Progress Schedule in accordance with the *Association for the Advancement of Cost Engineering International ("AACE") Recommended Practice No. 37R-06*, each of which will build upon and be reflective of the predecessor schedule. The Schedule Management Plan will comply with the requirements of this Agreement, including the Specifications, and will require review and acceptance by OPG. The development of any Execution Phase Schedule will not commence until the Schedule Management Plan has been approved in writing by OPG.

Every Execution Phase Schedule prepared pursuant to this Agreement, including those interim and final schedules identified in the Definition Phase Submittal Schedule, will reflect as a minimum:

- (a) the key dates in the preliminary Execution Phase Contract Schedule;
- (b) the Execution Phase Submittal Schedule;
- (c) the Execution Phase Work as set out in the Specifications;
- (d) the Project Management Plan for the Execution Phase;
- (e) long lead items and required activities;
- (f) supply of Goods, including ESES Goods, and associated activities, and deadlines by Unit; and
- (g) how Definition Phase activities will support the critical path and activities for the Execution Phase.

The development of the first Execution Phase Schedules prepared pursuant to this

Agreement will include an interactive planning session involving the Contractor and OPG to obtain Project team feedback and information for development of the schedule. OPG will work cooperatively with the Contractor during schedule development. The Contractor will, prior to the development of each Execution Phase Schedule, identify all activities which are to be carried out by OPG and obtain OPG's assessment of OPG's time requirements for each OPG activity.

Every Execution Phase Schedule prepared pursuant to this Agreement will be prepared and submitted in Primavera P6 Planning and Scheduling software using critical path methodology and will be prepared in accordance with the Specifications and applicable sections of AACE's total cost management framework (Chapter 7 -Schedule Planning and Development). The Contractor will provide every Execution Phase Schedule to OPG in hardcopy, PDF and native Primavera files. The Execution Phase Schedules will not include any contingency or float.

For each Execution Phase Schedule prepared pursuant to this Agreement, the Contractor will submit a schedule basis which will include a record of any interactive planning conclusions, any schedule benchmarks used and the approach and assumptions used in the development of the relevant Execution Phase Schedule.

The Contractor will facilitate a peer review of each Execution Phase Schedule prepared pursuant to this Agreement with the Contractor's relevant project departments to ensure quality and understanding and will incorporate any required adjustments to the relevant Execution Phase Schedule.

2. OPG Review of All Execution Phase Schedules

Every Execution Phase Schedule prepared pursuant to this Agreement is a Submittal and will be treated in accordance with the Submittals section of this Agreement.

Prior to the submission of each such Submittal, during the preparation of the relevant Execution Phase Schedule, the Contractor and OPG will work cooperatively to achieve OPG acceptance of the relevant Execution Phase Schedule. Any identified issues will be discussed by OPG and the Contractor and, when agreed to, incorporated as adjustments to the relevant Execution Phase Schedule. The review by OPG (and its independent third party expert) will include:

- (a) review to ensure compliance with this Agreement and the Schedule Management Plan;
- (b) review to ensure compliance with OPG procedures;
- (c) review against the schedule basis and Project Management Plan for the

Execution Phase; and

- (d) review against the relevant cost estimate.

If OPG elects to engage an independent third party expert to review any Execution Phase Schedule, the Contractor will provide information and support to the independent expert including:

- (a) the Execution Phase Schedule in electronic (Primavera) file format;
- (b) supporting Project documentation;
- (c) the schedule basis with the record of decisions in developing the schedule;
- (d) attendance at regular meetings with the independent third party;
- (e) responding to requests for information from the independent third party; and
- (f) reviewing a report from the independent third party and incorporating any required adjustments in the relevant Execution Phase Schedule.

3. Requirements for Level 4 and 5 Execution Phase Progress Schedules

The Level 5 Execution Phase Progress Schedule for Unit 2 and Level 4 Execution Phase Progress Schedule for Units 3, 1 and 4 will, as a minimum:

- (a) contain all items listed above under "Requirements for All Execution Phase Schedules";
- (b) reflect the assumptions used in the Definition Phase Progress Schedule;
- (c) reflect the Work Breakdown Structure and Unit allocation;
- (d) contain the resources and hours included in the detailed breakdown of the Execution Phase Cost Estimate (as defined below);
- (e) show integration with OPG responsibilities and activities;
- (f) include all required deliverables and all required progressable stages of each deliverable;
- (g) show a maximum duration limit of 10-15 days for each activity (requirement applicable for Level 5 Execution Phase Progress Schedule only);
- (h) show separate activities for all required operations (overhaul, disassembly,

reassembly, lifting, rigging, hoisting, removal, installation, loading, unloading, inspections, etc.);

- (i) show the critical path for all activities within 20 days of being on the critical path;
- (j) show resources allocated to task level activities, not summary activities; and
- (k) logically link all tasks associated with the Work (predecessor and successors tasks).

For the Level 5 Execution Phase Progress Schedule for Unit 2 and Level 4 Execution Phase Progress Schedule for Units 3, 1 and 4, the Contractor will provide resource profiles for each type of resource, summarized by department and overall project, required to support the proposed Level 5 Execution Phase Progress Schedule for Unit 2 and Level 4 Execution Phase Progress Schedule for Units 3, 1 and 4, which will be equivalent to the resources included in the Class 2 Execution Phase Cost Estimate for Unit 2 and Class 3 Execution Phase Cost Estimate for Units 3, 1 and 4 (all as defined below).

At the time of submission of the Level 5 Execution Phase Progress Schedule for Unit 2 and Level 4 Execution Phase Progress Schedule for Units 3, 1 and 4, the Contractor will also submit an overall Project Level 4 Execution Phase Progress Schedule representative of the submitted Level 5 Execution Phase Progress Schedule for Unit 2 and Level 4 Execution Phase Progress Schedule for Units 3, 1 and 4, which will be suitable for the application of a schedule risk analysis using Primavera Pertmaster software and therefore will not contain:

- (a) constraints;
- (b) open ended activities;
- (c) negative float;
- (d) positive or negative lags; or
- (e) logic links or relationships other than "finish to start".

4. Review of Level 4 and 5 Execution Phase Progress Schedules

All of the provisions described above in the section titled "OPG Review of All Execution Phase Schedules" will apply to the review of the Level 5 Execution Phase Progress Schedule for Unit 2 and Level 4 Execution Phase Progress Schedule for Units 3, 1 and 4.

In addition, the review by OPG will include:

- (a) review against the Class 2 Execution Phase Cost Estimate for Unit 2 and Class 3 Execution Phase Cost Estimate for Units 3, 1 and 4; and
- (b) review against AACE's total cost management framework.

Prior to the Unit Breaker Open Date for each of the Units 3, 1 and 4, the Contractor will develop and deliver to OPG a Level 5 Schedule for each of such Units, using the Level 4 Execution Phase Progress Schedule for each of such Units as a baseline and taking into account lessons learned from the Unit that was completed prior to each of such Unit Breaker Open Dates.

Where the Contractor and OPG cannot agree on the content or the timeline of the Level 5 Execution Phase Progress Schedule for Unit 2 and Level 4 Execution Phase Progress Schedule for Units 3, 1 and 4, the Parties will continue the process of developing the schedule contingency via the cost and schedule risk analysis described pursuant to sections 12 to 17 of this Exhibit, but in doing so reserve their rights to not agree to Execution Phase Schedule that is the result of such cost and schedule risk analysis.

5. Execution Phase Progress Schedule

The Execution Phase Progress Schedule will be:

- (a) the Level 5 Execution Phase Progress Schedule for Unit 2 and Level 4 Execution Phase Progress Schedule for Units 3, 1 and 4, plus
- (b) the contingency amount required to be added or deducted from the Level 5 Execution Phase Progress Schedule for Unit 2 and Level 4 Execution Phase Progress Schedule for Units 3, 1 and 4 to provide the Contractor with a confidence level of 50% of achieving completion of the Execution Phase Work within the timelines set out in the Level 5 Execution Phase Progress Schedule for Unit 2 and Level 4 Execution Phase progress Schedule for Units 3, 1 and 4, as described in section 18 of this Schedule. A contingency will be applied in accordance with the relevant OPG procedure.

6. Execution Phase Progress Schedule – Continuous Improvement Plan

The Contractor will have developed the Level 5 Execution Phase Progress Schedule for Unit 2 and the Level 4 Execution Phase Progress Schedule for Units 3, 1 and 4 in accordance with the Contractor's continuous improvement plan. The Contractor will also use its continuous improvement plant for developing Level 5 Schedules for Units 3, 1 and 4.

7. Requirements for All Execution Phase Cost Estimates

The Contractor will develop an estimate plan ("**Estimate Plan**") for the preparation of all Execution Phase cost estimates prepared pursuant to this Agreement (each an "**Execution Phase Cost Estimate**"). The Estimate Plan will be submitted to OPG as a Submittal in accordance with the Submittal Schedule. The Estimate Plan will identify the successive development of a Class 4 Execution Phase Cost Estimate, a Class 3 Execution Phase Cost Estimate for Units 3, 1 and 4 and a Class 2 Execution Phase Cost Estimate for Unit 2 in accordance with AACE Recommended Practice No. 18R-97, each of which will build upon and be reflective of the predecessor Execution Phase Cost Estimate. The Estimate Plan will comply with the requirements of this Agreement, including the Specifications, and will require review and acceptance by OPG. The development of any Execution Phase Cost Estimate will not commence until the Estimate Plan has been approved in writing by OPG.

In preparing every Execution Phase Cost Estimate, the total cost for all Execution Phase Work performed by Non-Trades will be as set out in the original Attachment 7.1(7) – Execution Phase Target Cost (Non-Trades) to Schedule 7.1 and the total cost for all Execution Phase Work performed by Trades will be developed in accordance with the following:

- (a) the Contractor will estimate the costs directly associated with progressing the Execution Phase Work, using the Cost Allocation Table to determine Allowed Costs versus Disallowed Costs;
- (b) the resource requirements for the costs directly associated with progressing the Execution Phase Work will be used by the Contractor in the development of the relevant Execution Phase Schedule;
- (c) the Contractor will, wherever possible, maximize the use of resources between this Project and the Refurbishment Program's retube and feeder replacement project;
- (d) the Contractor will, whenever possible, use industry recognized publications to determine the productivity rates for resources in performing the Execution Phase Work, as a basis for establishing the Execution Phase Target Cost;
- (e) the Contractor will include the estimated costs of any Subcontractor or Affiliate used to progress the Execution Phase Work. For clarity the costs of a Subcontractor or Affiliate will not include any Execution Phase Fixed Fee. The Execution Phase Fixed Fee will be calculated in accordance with section 12 of this Schedule;
- (f) the durations developed in the relevant Execution Phase Schedule will be used by the Contractor to estimate the costs related to the time required to perform the

Work; and

- (g) the estimate of costs directly associated with the Execution Phase Work and the estimate of costs related to the time required to perform the Execution Phase Work will be combined to establish the relevant Execution Phase Cost Estimate.

Every Execution Phase Cost Estimate prepared pursuant to this Agreement, including those interim and final cost estimates identified in the Definition Phase Contract Schedule and/or the Definition Phase Submittal Schedule, will reflect as a minimum:

- (a) the Specifications;
- (b) the Project Management Plan for the Execution Phase;
- (c) the relevant Execution Phase Schedule; and
- (d) the labour rates set out in Schedule 7.1.

Every Execution Phase Cost Estimate will be developed in accordance with OPG procedures and AACE best practice guidelines. Every Execution Phase Cost Estimate prepared in accordance with this Agreement will not include any contingency amount, but will include:

- (a) the Contractor's identification of all Reimbursable Costs that the Contractor believes it will incur during the Execution Phase;
- (b) a basis of estimate in accordance with the Estimate Plan recording how the relevant Execution Phase Cost Estimate has been developed and the basis for decisions made;
- (c) an initial cash flow plan which forecasts the expenditure for each cost element being expended based on the relevant Execution Phase Schedule;
- (d) allocation of all resource requirements and costs to all elements of the Work Breakdown Structure and the code of accounts;
- (e) specification whether the Contractor or a Subcontractor will perform or be responsible for each of the elements of the Execution Phase Work;
- (f) resource requirements and costs summarized by Unit and common costs;
- (g) resource requirements and costs summarized by removal and reinstall;
- (h) resource requirements summarized by activity such as project management,

engineering, procurement, direct field removal and installation, and indirect field support costs;

- (i) allowances for issues such as Rework (per Agreement), design allowance and material wastage identified separately;
- (j) substantiation for all costs included in the Execution Phase Cost Estimate; and
- (k) the basis for the economic cost adjustment for each cost element in accordance with the provisions of this Agreement.

Every Execution Phase Cost Estimate prepared pursuant to this Agreement will be developed using OPG's estimating system or an alternative estimating system provided by the Contractor and approved in writing by OPG. The draft will be provided to OPG in an electronic format in a locked file and in an additional file that can be edited by OPG. Each Execution Phase Cost Estimate will be developed on an open book basis with OPG, and OPG will be able to access any electronic estimate system, database or information used by the Contractor in the development of the relevant Execution Phase Cost Estimate. OPG will work cooperatively with the Contractor during estimate development and provide comments and input into the estimate development which the Contractor will incorporate in the relevant Execution Phase Cost Estimate.

The Contractor will facilitate a peer review of each Execution Phase Cost Estimate prepared pursuant to this Agreement with the Contractor's relevant project departments to ensure quality and understanding and will incorporate any required adjustments to the relevant Execution Phase Cost Estimate.

8. OPG Review of All Execution Phase Cost Estimates

Every Execution Phase Cost Estimate prepared pursuant to this Agreement is a Submittal and will be treated in accordance with the Submittals section of this Agreement.

Prior to the submission of each such Submittal, during the preparation of the relevant Execution Phase Cost Estimate, the Contractor and OPG will work cooperatively to achieve OPG acceptance of the relevant Execution Phase Cost Estimate. Any issues identified will be discussed by OPG and Contractor and, when agreed to, incorporated as adjustments to the relevant Cost Estimate. The review by OPG will include:

- (a) review to ensure compliance with the requirements of this Agreement and the Estimate Plan;
- (b) review to ensure compliance with project controls;

- (c) review against the basis of estimate and the Project Management Plan for the Execution Phase;
- (d) review against the Cost Allocation Table;
- (e) review against the labour rates set out in Schedule 7.1;
- (f) review against the relevant Execution Phase Schedule; and
- (g) confirmation of issues not covered by the relevant Execution Phase Cost Estimate.

If OPG elects to engage an independent third party expert to review any Execution Phase Cost Estimate, the Contractor may be required to provide information and support to the independent third party including:

- (a) detailed breakdowns of the relevant Execution Phase Cost Estimate in electronic file format;
- (b) detailed substantiation for all elements of the relevant Execution Phase Cost Estimate;
- (c) supporting Project documentation;
- (d) the basis of estimate with the record of decisions in developing the estimate;
- (e) attendance at regular meetings with the independent third party;
- (f) responding to requests for information from the independent expert; and
- (g) reviewing a report from the independent third party and incorporating any required adjustments in the relevant Execution Phase Cost Estimate.

9. Requirements for Class 2 and 3 Execution Phase Cost Estimates

The Class 2 and 3 Execution Phase Cost Estimates will, as a minimum:

- (a) Contain all items listed above under "Requirements for All Execution Phase Cost Estimates"; and
- (b) comply with AACE Class 2 and 3 estimate requirements.

10. Review of Class 2 Execution Phase Cost Estimate

All of the provisions described above in the section titled "OPG Review of All Execution

Phase Cost Estimates" will apply to the review of the Class 2 Execution Phase Cost Estimate for Unit 2 and Class 3 Execution Phase Cost Estimate for Units 3, 1 and 4.

Where the Contractor and OPG cannot agree on the content or value of the Class 2 Execution Phase Cost Estimate for Unit 2 and Class 3 Execution Phase Cost Estimate for Units 3, 1 and 4, the Parties will continue the process of developing the cost contingency via the cost and schedule risk analysis described in sections 12 to 17 of this Exhibit, but in doing so reserve their rights to not agree to the Class 2 Execution Phase Cost Estimate for Unit 2 and Class 3 Execution Phase Cost Estimate for Units 3, 1 and 4 that is the result of such cost and schedule risk analysis.

11. Execution Phase Target Cost

The Execution Phase Target Cost will be the sum of:

- (a) the Class 2 Execution Phase Cost Estimate for Unit 2 and Class 3 Execution Phase Cost Estimate for Units 3, 1 and 4, plus
- (b) the contingency amount required to be added or deducted from the Class 2 Execution Phase Cost Estimate for Unit 2 and Class 3 Execution Phase Cost Estimate for Units 3, 1 and 4 to provide the Contractor with a confidence level of 50% of achieving completion of the Execution Phase Work at a cost within the Execution Phase Target Cost, as described in section 18 of this Schedule.

12. Calculation of Execution Phase Fixed Fee

The Execution Phase Fixed Fee will be a fixed dollar amount calculated using the Execution Phase Target Cost. The mechanism by which the Execution Phase Fixed Fee is calculated is defined in the in Attachment 7.1(9) – Execution Phase Fixed Fee to Schedule 7.1. For clarity, the portion of the Execution Phase Fixed Fee associated with the estimated cost of the Work expected to be performed by Subcontractors or Affiliates will be calculated utilizing the appropriate mark up for such estimated cost as identified in Attachment 7.1(9) – Execution Phase Fixed Fee to Schedule 7.1. If during the Work, the Contractor executes Work in a different manner than was estimated as approved in accordance with the Agreement (e.g. moves direct work to subcontract or vice versa) there will be no adjustment to the Execution Phase Fixed Fee. Once the calculation of the Execution Phase Fixed Fee is complete, the resulting dollar amount will be inserted into Attachment 7.1(9) – Execution Phase Fixed Fee to Schedule 7.1 by way of an Amendment.

13. Requirements for Risk Register Development

Every Risk Register prepared by the Contractor pursuant to this Agreement, including those draft and final Risk Registers identified in the Definition Phase Submittal Schedule and/or the Definition Phase Submittal Schedule will include at a minimum the type of risk, impact and severity, likelihood of occurrence, risk owner and mitigation plan strategy. These risks will be populated into the refurbishment risk data base for monitoring and review. OPG's Refurbishment Program requirements will be used as guidelines in the development of the Execution Phase Risk Register.

14. OPG Review and Joint Development of Risk Register

Every Risk Register prepared by the Contractor pursuant to this Agreement is a Submittal and will be treated in accordance with the Submittals section of this Agreement.

Prior to the submission of each such Submittal, during the preparation of the relevant Risk Register, OPG and the Contractor will work cooperatively towards achieving OPG approval of a final Risk Register by the date specified in the Definition Phase Submittal Schedule. Contractor will develop such Risk Register through a series of workshops that will be facilitated by OPG's authorized representative or an independent third party. The risk analysis workshops will follow the following methodology:

- (a) holistic risk analysis;
- (b) schedule risk analysis;
- (c) cost risk analysis; and
- (d) independent third party review.

15. Holistic Risk Analysis

The holistic risk analysis workshop will be a qualitative risk analysis and will involve attendees from the Contractor and OPG. The holistic risk analysis workshop will:

- (a) identify possible risks and opportunities together with mitigation measures that could impact or benefit the Project (within established parameters), including those recorded in the Risk Register;
- (b) assess the likelihood of those risks or opportunities occurring;
- (c) assess the possible impact of those risks or opportunities; and
- (d) assess the manageability of those risks or opportunities and agree the

responsible party for management of the identified risks and opportunities.

16. Schedule Risk Analysis

- (a) The schedule risk analysis workshop will be a quantitative risk analysis and will involve attendees from the Contractor and OPG. The schedule risk analysis workshop will assess the likelihood and possible impact of those risks and opportunities that are the responsibility of the Contractor to manage on the Execution Phase Progress Schedule for the Contractor's Execution Phase Work as agreed by OPG and the Contractor.
- (b) The findings of the schedule risk analysis workshop will be incorporated in a Monte Carlo model that will be managed by OPG's authorized representative or an independent third party. The output of the Monte Carlo model will be reviewed and agreed by the Contractor and OPG and will establish:
 - (1) the required contingency for a 50% confidence level in the Contractor achieving completion of the Work within the relevant Execution Phase Schedule; and
 - (2) the required contingency for a 50% confidence level in the Contractor completing the Execution Phase Work on each Unit by the Guaranteed Unit Mechanical Completion Date for that Unit.

17. Cost Risk Analysis

The cost risk analysis workshop will be a quantitative risk analysis and will involve attendees from the Contractor and OPG. The cost risk analysis workshop will assess the likelihood and possible impact of those risks and opportunities that the Contractor will be required to manage on the relevant Execution Phase Cost Estimate for the Execution Phase Work. The findings of the cost risk analysis workshop will be incorporated in a Monte Carlo model that will be managed by OPG's authorized representative or an independent third party. The output of the Monte Carlo model will be reviewed and agreed by the Contractor and OPG and will establish:

- (a) the required contingency for a 50% confidence level in the Contractor achieving completion of the Work within the relevant Execution Phase Cost Estimate;
- (b) the required contingency for a 50% confidence level in the Contractor completing the Execution Phase Work on each Unit within the Execution Phase Target Cost (including contingency) for that Unit.

18. Contingency

The amount or level of contingency to be included in the Execution Phase Target Cost (excluding the Execution Phase SS&E Target Cost for purposes of this section 18) and the Execution Phase Progress Schedule will be at a level sufficient to provide the Contractor with the following confidence levels of achieving each of the contract objectives as described:

- (1) a 50% level of confidence as to completion of Execution Phase Reimbursable Work at a cost within the Execution Phase Target Cost (including the contingency); and
- (2) a 50% level of confidence as to completion of Execution Phase Reimbursable Work for each Unit by the Guaranteed Unit Mechanical Completion Date for that Unit.

The contingency included in the Execution Phase Target Cost and the Execution Phase Progress Schedule will be deemed to allow for all risks which could affect the Contractor during the Execution Phase, whether or not such risks have been specifically identified in the relevant Risk Register, and section 2.7d(6) of this Agreement applies with respect to the effect of the agreement of the Parties on the Risk Register.

The above levels or amounts of contingency will be established in accordance with the Estimate Plan and will at a minimum follow the process outlined above titled "Requirements for Risk Register Development".

19. Execution Phase SS&E Target Cost

Contemporaneous with the development of the Class 2 Execution Phase Cost Estimate, the Contractor will prepare an estimate of the Execution Phase SS&E Target Cost. Such estimate will be supported by a separate basis of estimate (based on the Execution Phase Target Cost and Execution Phase Progress Schedule) and such other supporting information as OPG may reasonably require. For clarity, except for the contingency inherent in calculating the Execution Phase SS&E Target Cost based on the Execution Phase Target Cost and Execution Phase Progress Schedule, the Execution Phase SS&E Target Cost will not contain any additional contingency amount.

20. Calculation of Execution Phase SS&E Fixed Fee

The Execution Phase SS&E Fixed Fee will be a fixed dollar amount calculated using the Execution Phase SS&E Target Cost. The mechanism by which the Execution Phase SS&E Fixed Fee is calculated is defined in Attachment 7.1(10) – Execution Phase SS&E Target

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Cost to Schedule 7.1 and for clarity this calculation, and the percentage fee applicable, may be different to those prescribed for the calculation of the Execution Phase Fixed Fee. Once this calculation is complete, the resulting dollar amount will be inserted into Attachment 7.1(10) – Execution Phase SS&E Target Cost to Schedule 7.1 by way of an Amendment.

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ATTACHMENT E**Schedule 2.14(d) – Subcontractors**

See attached

Subcontractor	Summary of Work or Goods to be Provided
Konecranes Nuclear Equipment & Services 5300 S. Emmer Drive, New Berlin, WI 53151	Turbine Hall Crane Inspection/Refurbishment
A&C Tool Inc. 79 MEARNES COURT BOWMANVILLE, ONTARIO L1C 4N4	General Machining and Fabrication

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SCHEDULE 7.1

ATTACHMENT F**Schedule 7.1 – Contract Price**

This Schedule 7.1 includes the following attachments (collectively, the “Pricing Attachments”):

1. Attachment 7.1(1) – Contract Price;
2. Attachment 7.1(2) – Adjustable Cost Indices;
3. Attachment 7.1(3) – Labour Schedules;
4. Attachment 7.1(4) – Definition Phase Target Cost;
5. Attachment 7.1(5) – Cost Flow Definition Phase Target Cost;
6. Attachment 7.1(6) – Definition Phase Fixed Fee;
7. Attachment 7.1(7) – Execution Phase Target Cost (Non-Trades);
8. Attachment 7.1(8) – Cost Flow Execution Phase Target Cost (Non-Trades);
9. Attachment 7.1(9) – Execution Phase Fixed Fee;
10. Attachment 7.1(10) – Execution Phase SS&E Target Cost;
11. Attachment 7.1(11) – Milestone Payment Schedule for Definition Phase Fixed Fee;
12. Attachment 7.1(12) – CPP EI Contributions;
13. Attachment 7.1(13) – Cost Allocation Table; and
14. Attachment 7.1(14) – Contractor’s RFR Travel and Per Diem Policy.

Darlington Nuclear Generating Station Turbine Generator Refurbishment Project



Attachment 7.1(1) - Contract Price

Contract Price is defined in Section 1.1(r) of the Agreement.

Pricing Model/SOW/Unit	Total	Turbine and Auxiliaries NK38-SOW-41000-10003	Generator and Auxiliaries NK38-SOW-42000-10003	Moisture Separator Reheaters NK38-SOW-41800-10003	Turbine Controls Upgrade NK38-SOW-64100-10004	Generator Excitation Controls Upgrade NK38-SOW-64220-10003
Definition Phase Target Cost	\$ 21,356,230					
No specific Unit	\$ 21,356,230					
Definition Phase Fixed Fee	\$ 12,871,701					
No specific Unit	\$ 12,871,701					
Execution Phase Target Cost (Non-Trades only)	\$ -					
No specific Unit	\$ -					
Execution Phase Fixed Fee (Non-Trades only)	\$ -					
No specific Unit	\$ -					
Execution Phase Target Cost (Trades only)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
No specific Unit	Priced during Definition Phase					
1st Unit	Priced during Definition Phase	Priced during Definition Phase	Priced during Definition Phase	Priced during Definition Phase	Priced during Definition Phase	Priced during Definition Phase
2nd Unit	Priced during Definition Phase	Priced during Definition Phase	Priced during Definition Phase	Priced during Definition Phase	Priced during Definition Phase	Priced during Definition Phase
3rd Unit	Priced during Definition Phase	Priced during Definition Phase	Priced during Definition Phase	Priced during Definition Phase	Priced during Definition Phase	Priced during Definition Phase
4th Unit	Priced during Definition Phase	Priced during Definition Phase	Priced during Definition Phase	Priced during Definition Phase	Priced during Definition Phase	Priced during Definition Phase
Execution Phase Fixed Fee (Trades only)	\$ -					
No specific Unit	Priced during Definition Phase					
1st Unit	Priced during Definition Phase					
2nd Unit	Priced during Definition Phase					
3rd Unit	Priced during Definition Phase					
4th Unit	Priced during Definition Phase					
Execution Phase SS&E Target Cost & SS&E Fixed Fee	\$ -					
No specific Unit	Priced during Definition Phase					
1st Unit	Priced during Definition Phase					
2nd Unit	Priced during Definition Phase					
3rd Unit	Priced during Definition Phase					
4th Unit	Priced during Definition Phase					
The Contract Price is: \$ 34,227,931						
Dynamic Commissioning Work (Trades only) (Estimate)	\$ -					
1st Unit	Estimated during Definition Phase					
2nd Unit	Estimated during Definition Phase					
3rd Unit	Estimated during Definition Phase					
4th Unit	Estimated during Definition Phase					
Mark-Up for Dynamic Commissioning Work (Estimate)	\$ -					
1st Unit	Estimated during Definition Phase					
2nd Unit	Estimated during Definition Phase					
3rd Unit	Estimated during Definition Phase					
4th Unit	Estimated during Definition Phase					
Cost Reimbursable with Mark-Up (Estimate)	\$ 26,775.00					
Goods	\$ 25,500.00					
Turbine and Auxiliaries	Estimated during Definition Phase					
Generator and Auxiliaries	Estimated during Definition Phase					
Turbine Controls	Estimated during Definition Phase					
Excitation Controls	Estimated during Definition Phase					
Moisture Separator Reheater	Estimated during Definition Phase					
Goods Mark-up	\$ 1,275.00					
Cost Reimbursable with no Mark-Up (Estimate)	\$ -					
No Specific Unit	Estimated during Definition Phase					

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Darlington Nuclear Generating Station Turbine Generator Refurbishment Project

Attachment 7.1(2) - Adjustable Cost Indices

The following is a list of all Adjustable Costs (as that term is defined in Schedule 5.7), applicable indices, and base escalation rates to be used in the development of the escalated prices/costs for the Definition Phase Reimbursable Work and Execution Phase Reimbursable Work. The applicable indices and rates specified in this table will be used for the purposes of calculating annual Economic Cost Adjustments (as that term is defined in Schedule 5.7) for each of the Adjustable Cost categories listed below.

The Proponent is strongly encouraged to use indices for escalation that demonstrate the following characteristics:

- (a) Directly related index: The escalator should be an index that is tied to a commodity, equipment, industry, or labour type included in the relevant Adjustable Cost category.
- (b) Adequate history: The escalator should have at least 5 years of annual historical data.
- (c) Publicly available: Data should be publicly available from a government or other respected industry source.
- (d) Adequate liquidity: The Index should be sufficiently liquid so that there are not many occurrences of stale prices.

OPG recommends that the Proponent use the most recent 5-year historical compound annual growth rate to forecast escalation rates for each Adjustable Cost category listed below.

Adjustable Cost Reference #	Adjustable Cost	Applicable Index	Forecasted Year-Over-Year Escalation Rates													
			2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
Index 1a	Non-Unionised Labour - Home Office	Statistics Canada; Consulting Engineering Services Price Index (CESPI); Table 327-0007; Total Price	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%
Index 1b	Non-Unionised Labour - Home Office Subcontractor	Statistics Canada; Consulting Engineering Services Price Index (CESPI); Table 327-0007; Total Price	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%
Index 2	Unionised Labour	Union Collective Agreements														
Other Adjustable Costs (Proponent to insert additional line items if required)																
Index 3	Adjustable Cost 3	Index 3 (Proponent to specify recommended index)														
Index 4	Adjustable Cost 4	Index 4 (Proponent to specify recommended index)														
Index 5	Adjustable Cost 5	Index 5 (Proponent to specify recommended index)														
Index 6	Adjustable Cost 6	Index 6 (Proponent to specify recommended index)														
Index 7	Adjustable Cost 7	Index 7 (Proponent to specify recommended index)														
Index 8	Adjustable Cost 8	Index 8 (Proponent to specify recommended index)														
Index 9	Adjustable Cost 9	Index 9 (Proponent to specify recommended index)														
Index 10	Adjustable Cost 10	Index 10 (Proponent to specify recommended index)														
Index 11	Adjustable Cost 11	Index 11 (Proponent to specify recommended index)														
Index 12	Non-Adjustable Costs	N/A		0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%

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Attachment 1.03 - Labour Schedule										ONTARIO POWER CORPORATION									
Activity	Location	Start Date	End Date	Start Time	End Time	Duration	Resources	Equipment	Notes	Activity	Location	Start Date	End Date	Start Time	End Time	Duration	Resources	Equipment	Notes
1.03.01	Site Preparation	2023-01-01	2023-01-05	08:00	18:00	10:00	10 Workers	Excavator, Backhoe	Clearing site, removing debris	1.03.02	Foundation Work	2023-01-06	2023-01-10	08:00	18:00	10:00	15 Workers	Concrete Pump, Crane	Pouring concrete for foundation
1.03.03	Structural Steel Erection	2023-01-11	2023-01-15	08:00	18:00	10:00	20 Workers	Crane, Welding Equipment	Installing steel beams and columns	1.03.04	Roofing	2023-01-16	2023-01-20	08:00	18:00	10:00	15 Workers	Roofing Crew, Scaffolding	Installing roof panels
1.03.05	Interior Framing	2023-01-21	2023-01-25	08:00	18:00	10:00	15 Workers	Stud Upriggers, Drywall	Installing interior wall studs	1.03.06	Electrical Rough-In	2023-01-26	2023-01-30	08:00	18:00	10:00	10 Workers	Electricians, Wire	Running electrical conduits
1.03.07	Plumbing Rough-In	2023-01-31	2023-02-04	08:00	18:00	10:00	10 Workers	Plumbing Pipes, Fittings	Installing plumbing rough-in	1.03.08	HVAC Installation	2023-02-05	2023-02-09	08:00	18:00	10:00	10 Workers	HVAC Units, Ductwork	Installing HVAC units
1.03.09	Drywall Installation	2023-02-10	2023-02-14	08:00	18:00	10:00	15 Workers	Drywall Sheets, Screws	Installing drywall on walls	1.03.10	Painting	2023-02-15	2023-02-19	08:00	18:00	10:00	10 Workers	Painters, Paint	Applying primer and paint
1.03.11	Final Inspection	2023-02-20	2023-02-22	08:00	18:00	10:00	5 Workers	Inspector, Tools	Final inspection and sign-off	1.03.12	Site Cleanup	2023-02-23	2023-02-25	08:00	18:00	10:00	5 Workers	Cleanup Crew, Trucks	Removing debris and cleanup
1.03.13	Handover	2023-02-26	2023-02-28	08:00	18:00	10:00	5 Workers	Handover Team	Project handover to client	1.03.14	Post-Project Review	2023-03-01	2023-03-03	08:00	18:00	10:00	5 Workers	Review Team	Post-project review meeting

Worksheet: L20 - Labour Schedule										ONTARIO GOVERNMENT										
Line	Activity	Start Date	End Date	Start Time	End Time	Day	Week	Month	Year	Activity	Start Date	End Date	Start Time	End Time	Day	Week	Month	Year	Activity	Start Date
1	Activity 1	2023-01-01	2023-01-01	08:00	16:00	Monday	1	1	2023	Activity 1	2023-01-01	2023-01-01	08:00	16:00	Monday	1	1	2023	Activity 1	2023-01-01
2	Activity 2	2023-01-02	2023-01-02	08:00	16:00	Tuesday	2	1	2023	Activity 2	2023-01-02	2023-01-02	08:00	16:00	Tuesday	2	1	2023	Activity 2	2023-01-02
3	Activity 3	2023-01-03	2023-01-03	08:00	16:00	Wednesday	3	1	2023	Activity 3	2023-01-03	2023-01-03	08:00	16:00	Wednesday	3	1	2023	Activity 3	2023-01-03
4	Activity 4	2023-01-04	2023-01-04	08:00	16:00	Thursday	4	1	2023	Activity 4	2023-01-04	2023-01-04	08:00	16:00	Thursday	4	1	2023	Activity 4	2023-01-04
5	Activity 5	2023-01-05	2023-01-05	08:00	16:00	Friday	5	1	2023	Activity 5	2023-01-05	2023-01-05	08:00	16:00	Friday	5	1	2023	Activity 5	2023-01-05
6	Activity 6	2023-01-06	2023-01-06	08:00	16:00	Saturday	6	1	2023	Activity 6	2023-01-06	2023-01-06	08:00	16:00	Saturday	6	1	2023	Activity 6	2023-01-06
7	Activity 7	2023-01-07	2023-01-07	08:00	16:00	Sunday	7	1	2023	Activity 7	2023-01-07	2023-01-07	08:00	16:00	Sunday	7	1	2023	Activity 7	2023-01-07
8	Activity 8	2023-01-08	2023-01-08	08:00	16:00	Monday	1	2	2023	Activity 8	2023-01-08	2023-01-08	08:00	16:00	Monday	1	2	2023	Activity 8	2023-01-08
9	Activity 9	2023-01-09	2023-01-09	08:00	16:00	Tuesday	2	2	2023	Activity 9	2023-01-09	2023-01-09	08:00	16:00	Tuesday	2	2	2023	Activity 9	2023-01-09
10	Activity 10	2023-01-10	2023-01-10	08:00	16:00	Wednesday	3	2	2023	Activity 10	2023-01-10	2023-01-10	08:00	16:00	Wednesday	3	2	2023	Activity 10	2023-01-10
11	Activity 11	2023-01-11	2023-01-11	08:00	16:00	Thursday	4	2	2023	Activity 11	2023-01-11	2023-01-11	08:00	16:00	Thursday	4	2	2023	Activity 11	2023-01-11
12	Activity 12	2023-01-12	2023-01-12	08:00	16:00	Friday	5	2	2023	Activity 12	2023-01-12	2023-01-12	08:00	16:00	Friday	5	2	2023	Activity 12	2023-01-12
13	Activity 13	2023-01-13	2023-01-13	08:00	16:00	Saturday	6	2	2023	Activity 13	2023-01-13	2023-01-13	08:00	16:00	Saturday	6	2	2023	Activity 13	2023-01-13
14	Activity 14	2023-01-14	2023-01-14	08:00	16:00	Sunday	7	2	2023	Activity 14	2023-01-14	2023-01-14	08:00	16:00	Sunday	7	2	2023	Activity 14	2023-01-14
15	Activity 15	2023-01-15	2023-01-15	08:00	16:00	Monday	1	3	2023	Activity 15	2023-01-15	2023-01-15	08:00	16:00	Monday	1	3	2023	Activity 15	2023-01-15
16	Activity 16	2023-01-16	2023-01-16	08:00	16:00	Tuesday	2	3	2023	Activity 16	2023-01-16	2023-01-16	08:00	16:00	Tuesday	2	3	2023	Activity 16	2023-01-16
17	Activity 17	2023-01-17	2023-01-17	08:00	16:00	Wednesday	3	3	2023	Activity 17	2023-01-17	2023-01-17	08:00	16:00	Wednesday	3	3	2023	Activity 17	2023-01-17
18	Activity 18	2023-01-18	2023-01-18	08:00	16:00	Thursday	4	3	2023	Activity 18	2023-01-18	2023-01-18	08:00	16:00	Thursday	4	3	2023	Activity 18	2023-01-18
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PWT Engineering & Construction Inc.

Burlington Nuclear Generating Station Turbine Generator Refurbishment Project

Attachment 7.1.17 - Execution Phase Target Cost (Non-Trained)

The Execution Phase Target Cost build up is to include all Non-Trained personnel supporting the Execution Phase Work, but including the Dynamic Commissioning Work, for all 4 Units.

ONTARIOPOWER
GENERATION

Ref	Libero	Subst	Ref	Unit	Position	Resource	2017		2018		2019		2020		2021		2022		2023		2024		2025		2026		2027		2028		2029		2030		2031		2032		2033		2034		2035		2036		2037		2038		2039		2040		2041		2042		2043		2044		2045		2046		2047		2048		2049		2050		2051		2052		2053		2054		2055		2056		2057		2058		2059		2060		2061		2062		2063		2064		2065		2066		2067		2068		2069		2070		2071		2072		2073		2074		2075		2076		2077		2078		2079		2080		2081		2082		2083		2084		2085		2086		2087		2088		2089		2090		2091		2092		2093		2094		2095		2096		2097		2098		2099		2100		2101		2102		2103		2104		2105		2106		2107		2108		2109		2110		2111		2112		2113		2114		2115		2116		2117		2118		2119		2120		2121		2122		2123		2124		2125		2126		2127		2128		2129		2130		2131		2132		2133		2134		2135		2136		2137		2138		2139		2140		2141		2142		2143		2144		2145		2146		2147		2148		2149		2150		2151		2152		2153		2154		2155		2156		2157		2158		2159		2160		2161		2162		2163		2164		2165		2166		2167		2168		2169		2170		2171		2172		2173		2174		2175		2176		2177		2178		2179		2180		2181		2182		2183		2184		2185		2186		2187		2188		2189		2190		2191		2192		2193		2194		2195		2196		2197		2198		2199		2200		2201		2202		2203		2204		2205		2206		2207		2208		2209		2210		2211		2212		2213		2214		2215		2216		2217		2218		2219		2220		2221		2222		2223		2224		2225		2226		2227		2228		2229		2230		2231		2232		2233		2234		2235		2236		2237		2238		2239		2240		2241		2242		2243		2244		2245		2246		2247		2248		2249		2250		2251		2252		2253		2254		2255		2256		2257		2258		2259		2260		2261		2262		2263		2264		2265		2266		2267		2268		2269		2270		2271		2272		2273		2274		2275		2276		2277		2278		2279		2280		2281		2282		2283		2284		2285		2286		2287		2288		2289		2290		2291		2292		2293		2294		2295		2296		2297		2298		2299		2300		2301		2302		2303		2304		2305		2306		2307		2308		2309		2310		2311		2312		2313		2314		2315		2316		2317		2318		2319		2320		2321		2322		2323		2324		2325		2326		2327		2328		2329		2330		2331		2332		2333		2334		2335		2336		2337		2338		2339		2340		2341		2342		2343		2344		2345		2346		2347		2348		2349		2350		2351		2352		2353		2354		2355		2356		2357		2358		2359		2360		2361		2362		2363		2364		2365		2366		2367		2368		2369		2370		2371		2372		2373		2374		2375		2376		2377		2378		2379		2380		2381		2382		2383		2384		2385		2386		2387		2388		2389		2390		2391		2392		2393		2394		2395		2396		2397		2398		2399		2400		2401		2402		2403		2404		2405		2406		2407		2408		2409		2410		2411		2412		2413		2414		2415		2416		2417		2418		2419		2420		2421		2422		2423		2424		2425		2426		2427		2428		2429		2430		2431		2432		2433		2434		2435		2436		2437		2438		2439		2440		2441		2442		2443		2444		2445		2446		2447		2448		2449		2450		2451		2452		2453		2454		2455		2456		2457		2458		2459		2460		2461		2462		2463		2464		2465		2466		2467		2468		2469		2470		2471		2472		2473		2474		2475		2476		2477		2478		2479		2480		2481		2482		2483		2484		2485		2486		2487		2488		2489		2490		2491		2492		2493		2494		2495		2496		2497		2498		2499		2500		2501		2502		2503		2504		2505		2506		2507		2508		2509		2510		2511		2512		2513		2514		2515		2516		2517		2518		2519		2520		2521		2522		2523		2524		2525		2526		2527		2528		2529		2530		2531		2532		2533		2534		2535		2536		2537		2538		2539		2540		2541		2542		2543		2544		2545		2546		2547		2548		2549		2550		2551		2552		2553		2554		2555		2556		2557		2558		2559		2560		2561		2562		2563		2564		2565		2566		2567		2568		2569		2570		2571		2572		2573		2574		2575		2576		2577		2578		2579		2580		2581		2582		2583		2584		2585		2586		2587		2588		2589		2590		2591		2592		2593		2594		2595		2596		2597		2598		2599		2600		2601		2602		2603		2604		2605		2606		2607		2608		2609		2610		2611		2612		2613		2614		2615		2616		2617		2618		2619		2620		2621		2622		2623		2624		2625		2626		2627		2628		2629		2630		2631		2632		2633		2634		2635		2636		2637		2638		2639		2640		2641		2642		2643		2644		2645		2646		2647		2648		2649		2650		2651		2652		2653		2654		2655		2656		2657		2658		2659		2660		2661		2662		2663		2664		2665		2666		2667		2668		2669		2670		2671		2672		2673		2674		2675		2676		2677		2678		2679		2680		2681		2682		2683		2684		2685		2686		2687		2688		2689		2690		2691		2692		2693		2694		2695		2696		2697		2698		2699		2700		2701		2702		2703		2704		2705		2706		2707		2708		2709		2710		2711		2712		2713		2714		2715		2716		2717		2718		2719		2720		2721		2722		2723		2724		2725		2726		2727		2728		2729		2730		2731		2732		2733		2734		2735		2736		2737		2738		2739		2740		2741		2742		2743		2744		2745		2746		2747		2748		2749		2750		2751		2752		2753		2754		2755		2756		2757		2758		2759		2760		2761		2762		2763		2764		2765		2766		2767		2768		2769		2770		2771		2772		2773		2774		2775		2776		2777		2778		2779		2780		2781		2782		2783		2784		2785		2786		2787		2788		2789		2790		2791		2792		2793		2794		2795		2796		2797		2798		2799		2800		2801		2802		2803		2804		2805		2806		2807		2808		2809		2810		2811		2812		2813		2814		2815		2816		2817		2818		2819		2820		2821		2822		2823		2824		2825		2826		2827		2828		2829		2830		2831		2832		2833		2834		2835		2836		2837		2838		2839		2840		2841		2842		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Darlington Nuclear Generating Station Turbine Generator Refurbishment Project



Attachment 7.1(4) - Revised Definition Phase Target Cost

Ref.	Labour Schedule Ref.	Resources				Definition Phase		Applicable Adjustable Cost Index	
		Position	Grade	Effective Date	Normal / Overtime	Rate	Hours		Total
DEFINITION PHASE DELIVERABLES							274,089 hrs	\$ 20,709,085	
1	Engineering Change Control / Engineered Tooling Documentation						119,499 hrs	\$ 8,449,203	
	924	SNC - Engineering Manager	Category E - Home Office	01-Jan-2013	1x	\$ 116.88	3,396 hrs	\$ 396,959	Index 1a
	951	SNC- Design Team Lead	Category D - Home Office	01-Jan-2013	1x	\$ 96.25	3,396 hrs	\$ 326,907	Index 1a
	927	SNC - Section Manager (Mechanical)	Category D - Home Office	01-Jan-2013	1x	\$ 96.25	751 hrs	\$ 72,268	Index 1a
	933	SNC - Section Manager (Electrical)	Category D - Home Office	01-Jan-2013	1x	\$ 96.25	1,738 hrs	\$ 167,263	Index 1a
	936	SNC - Section Manager (I&C/HFE)	Category D - Home Office	01-Jan-2013	1x	\$ 96.25	1,609 hrs	\$ 154,900	Index 1a
	930	SNC - Section Manager (Civil/ Structural)	Category D - Home Office	01-Jan-2013	1x	\$ 96.25	151 hrs	\$ 14,501	Index 1a
	939	SNC - Lead Engineer (Mechanical)	Category D - Home Office	01-Jan-2013	1x	\$ 96.25	1,126 hrs	\$ 108,339	Index 1a
	945	SNC - Lead Engineer (Electrical)	Category D - Home Office	01-Jan-2013	1x	\$ 96.25	2,607 hrs	\$ 250,895	Index 1a
	948	SNC - Lead Engineer (I&C/HFE)	Category D - Home Office	01-Jan-2013	1x	\$ 96.25	2,414 hrs	\$ 232,349	Index 1a
	942	SNC - Lead Engineer (Civil/ Structural)	Category D - Home Office	01-Jan-2013	1x	\$ 96.25	226 hrs	\$ 21,752	Index 1a
	960	SNC- Consultant (Mechanical)	Category E - Home Office	01-Jan-2013	1x	\$ 116.88	1,073 hrs	\$ 125,355	Index 1a
	966	SNC- Consultant (Electrical)	Category E - Home Office	01-Jan-2013	1x	\$ 116.88	6,793 hrs	\$ 793,918	Index 1a
	969	SNC- Consultant (I&C)	Category E - Home Office	01-Jan-2013	1x	\$ 116.88	8,223 hrs	\$ 961,059	Index 1a
	975	SNC - Senior Engineer (Mechanical)	Category C - Home Office	01-Jan-2013	1x	\$ 75.63	1,876 hrs	\$ 141,873	Index 1a
	981	SNC - Senior Engineer (Electrical)	Category C - Home Office	01-Jan-2013	1x	\$ 75.63	4,345 hrs	\$ 328,553	Index 1a
	984	SNC - Senior Engineer (I&C/ HFE)	Category C - Home Office	01-Jan-2013	1x	\$ 75.63	4,023 hrs	\$ 304,267	Index 1a
	978	SNC - Senior Engineer (Civil/ Structural)	Category C - Home Office	01-Jan-2013	1x	\$ 75.63	377 hrs	\$ 28,485	Index 1a
	987	SNC - Intermediate Engineer (Mechanical)	Category C - Home Office	01-Jan-2013	1x	\$ 75.63	6,141 hrs	\$ 464,441	Index 1a
	993	SNC - Intermediate Engineer (Electrical)	Category C - Home Office	01-Jan-2013	1x	\$ 75.63	7,391 hrs	\$ 558,968	Index 1a
	996	SNC - Intermediate Engineer (I&C/ HFE)	Category C - Home Office	01-Jan-2013	1x	\$ 75.63	5,293 hrs	\$ 400,290	Index 1a
	990	SNC - Intermediate Engineer (Civil/ Structural)	Category C - Home Office	01-Jan-2013	1x	\$ 75.63	988 hrs	\$ 74,723	Index 1a
	999	SNC - Junior Engineer (Mechanical)	Category B - Home Office	01-Jan-2013	1x	\$ 45.38	4,642 hrs	\$ 210,635	Index 1a
	1005	SNC - Junior Engineer (Electrical)	Category B - Home Office	01-Jan-2013	1x	\$ 45.38	9,461 hrs	\$ 429,289	Index 1a
	1008	SNC - Junior Engineer (I&C/ HFE)	Category B - Home Office	01-Jan-2013	1x	\$ 45.38	12,510 hrs	\$ 567,653	Index 1a
	1002	SNC - Junior Engineer (Civil/ Structural)	Category B - Home Office	01-Jan-2013	1x	\$ 45.38	992 hrs	\$ 45,024	Index 1a
	1011	SNC - Designer/ Drafter (Mechanical)	Category B - Home Office	01-Jan-2013	1x	\$ 45.38	2,650 hrs	\$ 120,233	Index 1a
	1017	SNC - Designer/ Drafter (Electrical)	Category B - Home Office	01-Jan-2013	1x	\$ 45.38	9,551 hrs	\$ 433,365	Index 1a
	1020	SNC - Designer/ Drafter (I&C/ HFE)	Category B - Home Office	01-Jan-2013	1x	\$ 45.38	15,398 hrs	\$ 698,665	Index 1a
	1014	SNC - Designer/ Drafter (Civil/ Structural)	Category B - Home Office	01-Jan-2013	1x	\$ 45.38	359 hrs	\$ 16,272	Index 1a
2	Project Management Plan - Definition Phase						1,053 hrs	\$ 91,266	
	904	Project Director	0	01-Jan-2013	1x	\$ 120.41	176 hrs	\$ 21,193	Index 1a
	907	Deputy Project Manager	0	01-Jan-2013	1x	\$ 99.16	176 hrs	\$ 17,453	Index 1a
	1148	Project Controls Manager	0	01-Jan-2013	1x	\$ 99.16	44 hrs	\$ 4,363	Index 1a
	912	PD Admin Assistant	0	01-Jan-2013	1x	\$ 45.33	176 hrs	\$ 7,979	Index 1a
	1188	QA Manager	0	01-Jan-2013	1x	\$ 99.16	173 hrs	\$ 17,155	Index 1a
	1178	Project Accountant	0	01-Jan-2013	1x	\$ 58.08	132 hrs	\$ 7,667	Index 1a
	1191	QA Specialist	0	01-Jan-2013	1x	\$ 87.81	176 hrs	\$ 15,455	Index 1a
3	Project Management Plan - Execution Phase						6,170 hrs	\$ 484,720	
	904	Project Director	0	01-Jan-2013	1x	\$ 120.41	473 hrs	\$ 56,957	Index 1a
	907	Deputy Project Manager	0	01-Jan-2013	1x	\$ 99.16	473 hrs	\$ 46,906	Index 1a
	1148	Project Controls Manager	0	01-Jan-2013	1x	\$ 99.16	473 hrs	\$ 46,906	Index 1a
	912	PD Admin Assistant	0	01-Jan-2013	1x	\$ 45.33	473 hrs	\$ 21,443	Index 1a
	1188	QA Manager	0	01-Jan-2013	1x	\$ 99.16	636 hrs	\$ 63,050	Index 1a
	1257	Training Coordinator	0	01-Jan-2013	1x	\$ 59.29	473 hrs	\$ 28,045	Index 1a
	1153	Projects Coordinator	0	01-Jan-2013	1x	\$ 75.08	580 hrs	\$ 43,526	Index 1a
	1191	QA Specialist	0	01-Jan-2013	1x	\$ 87.81	440 hrs	\$ 38,638	Index 1a
	1194	QC Coordinator	0	01-Jan-2013	1x	\$ 75.08	580 hrs	\$ 43,526	Index 1a
	1178	Project Accountant	0	01-Jan-2013	1x	\$ 58.08	580 hrs	\$ 33,671	Index 1a
	1200	EHS Manager	0	01-Jan-2013	1x	\$ 99.16	88 hrs	\$ 8,727	Index 1a
	1203	EHS Coordinator	0	01-Jan-2013	1x	\$ 75.08	286 hrs	\$ 21,474	Index 1a
	1178	Project Accountant	0	01-Jan-2013	1x	\$ 58.08	308 hrs	\$ 17,890	Index 1a
	1158	Doc Control Clerk	0	01-Jan-2013	1x	\$ 45.33	308 hrs	\$ 13,963	Index 1a
4	Execution Phase Risk Register						3,243 hrs	\$ 265,205	
	904	Project Director	0	01-Jan-2013	1x	\$ 120.41	378 hrs	\$ 45,566	Index 1a
	907	Deputy Project Manager	0	01-Jan-2013	1x	\$ 99.16	378 hrs	\$ 37,525	Index 1a
	1148	Project Controls Manager	0	01-Jan-2013	1x	\$ 99.16	378 hrs	\$ 37,525	Index 1a
	912	PD Admin Assistant	0	01-Jan-2013	1x	\$ 45.33	378 hrs	\$ 17,154	Index 1a
	1254	Technical Advisor	0	01-Jan-2013	1x	\$ 80.47	378 hrs	\$ 30,453	Index 1a
	1153	Projects Coordinator	0	01-Jan-2013	1x	\$ 75.08	378 hrs	\$ 28,412	Index 1a

Darlington Nuclear Generating Station Turbine Generator Refurbishment Project



Attachment 7.1(4) - Revised Definition Phase Target Cost

Ref.	Labour Schedule Ref.	Resources					Definition Phase		Applicable Adjustable Cost Index
		Position	Grade	Effective Date	Normal / Overtime	Rate	Hours	Total	
	1178	Project Accountant	0	01-Jan-2013	1x	\$ 58.08	198 hrs	\$ 11,501	Index 1a
	1191	QA Specialist	0	01-Jan-2013	1x	\$ 87.81	378 hrs	\$ 33,228	Index 1a
	1158	Doc Control Clerk	0	01-Jan-2013	1x	\$ 45.33	198 hrs	\$ 8,976	Index 1a
	1203	EHS Coordinator	0	01-Jan-2013	1x	\$ 75.08	198 hrs	\$ 14,867	Index 1a
5	Maintenance Procedures						4,342 hrs	\$ 365,155	
	904	Project Director	0	01-Jan-2013	1x	\$ 120.41	132 hrs	\$ 15,895	Index 1a
	907	Deputy Project Manager	0	01-Jan-2013	1x	\$ 99.16	132 hrs	\$ 13,090	Index 1a
	1148	Project Controls Manager	0	01-Jan-2013	1x	\$ 99.16	132 hrs	\$ 13,090	Index 1a
	912	PD Admin Assistant	0	01-Jan-2013	1x	\$ 45.33	132 hrs	\$ 5,984	Index 1a
	1171	Scope Lead	0	01-Jan-2013	1x	\$ 99.16	624 hrs	\$ 61,850	Index 1a
	1174	Project Coordinator . / Assessor	0	01-Jan-2013	1x	\$ 75.08	568 hrs	\$ 42,617	Index 1a
	1254	Technical Advisor	0	01-Jan-2013	1x	\$ 80.47	568 hrs	\$ 45,679	Index 1a
	1153	Projects Coordinator	0	01-Jan-2013	1x	\$ 75.08	568 hrs	\$ 42,617	Index 1a
	1191	QA Specialist	0	01-Jan-2013	1x	\$ 87.81	568 hrs	\$ 49,843	Index 1a
	1178	Project Accountant	0	01-Jan-2013	1x	\$ 58.08	176 hrs	\$ 10,223	Index 1a
	1158	Doc Control Clerk	0	01-Jan-2013	1x	\$ 45.33	176 hrs	\$ 7,979	Index 1a
	1188	QA Manager	0	01-Jan-2013	1x	\$ 99.16	568 hrs	\$ 56,287	Index 1a
6	Modification Installation Workplans						30,455 hrs	\$ 2,506,155	
	904	Project Director	0	01-Jan-2013	1x	\$ 120.41	473 hrs	\$ 56,957	Index 1a
	907	Deputy Project Manager	0	01-Jan-2013	1x	\$ 99.16	473 hrs	\$ 46,906	Index 1a
	1148	Project Controls Manager	0	01-Jan-2013	1x	\$ 99.16	473 hrs	\$ 46,906	Index 1a
	912	PD Admin Assistant	0	01-Jan-2013	1x	\$ 45.33	473 hrs	\$ 21,443	Index 1a
	1171	Scope Lead	0	01-Jan-2013	1x	\$ 99.16	7,480 hrs	\$ 741,768	Index 1a
	1174	Project Coordinator . / Assessor	0	01-Jan-2013	1x	\$ 75.08	7,480 hrs	\$ 561,625	Index 1a
	1254	Technical Advisor	0	01-Jan-2013	1x	\$ 80.47	5,339 hrs	\$ 429,616	Index 1a
	1153	Projects Coordinator	0	01-Jan-2013	1x	\$ 75.08	5,060 hrs	\$ 379,922	Index 1a
	1191	QA Specialist	0	01-Jan-2013	1x	\$ 87.81	473 hrs	\$ 41,536	Index 1a
	1178	Project Accountant	0	01-Jan-2013	1x	\$ 58.08	519 hrs	\$ 30,157	Index 1a
	1158	Doc Control Clerk	0	01-Jan-2013	1x	\$ 45.33	935 hrs	\$ 42,387	Index 1a
	1203	EHS Coordinator	0	01-Jan-2013	1x	\$ 75.08	814 hrs	\$ 61,118	Index 1a
	1188	QA Manager	0	01-Jan-2013	1x	\$ 99.16	462 hrs	\$ 45,815	Index 1a
7	Commissioning Requirements						9,111 hrs	\$ 781,406	
	904	Project Director	0	01-Jan-2013	1x	\$ 120.41	473 hrs	\$ 56,957	Index 1a
	907	Deputy Project Manager	0	01-Jan-2013	1x	\$ 99.16	473 hrs	\$ 46,906	Index 1a
	1148	Project Controls Manager	0	01-Jan-2013	1x	\$ 99.16	473 hrs	\$ 46,906	Index 1a
	912	PD Admin Assistant	0	01-Jan-2013	1x	\$ 45.33	473 hrs	\$ 21,443	Index 1a
	1260	Commissioning Manager	0	01-Jan-2013	1x	\$ 101.07	3,242 hrs	\$ 327,653	Index 1a
	1263	Commissioning Leads	0	01-Jan-2013	1x	\$ 76.98	1,334 hrs	\$ 102,714	Index 1a
	1191	QA Specialist	0	01-Jan-2013	1x	\$ 87.81	473 hrs	\$ 41,536	Index 1a
	1178	Project Accountant	0	01-Jan-2013	1x	\$ 58.08	519 hrs	\$ 30,157	Index 1a
	1158	Doc Control Clerk	0	01-Jan-2013	1x	\$ 45.33	946 hrs	\$ 42,885	Index 1a
	1203	EHS Coordinator	0	01-Jan-2013	1x	\$ 75.08	231 hrs	\$ 17,344	Index 1a
	1188	QA Manager	0	01-Jan-2013	1x	\$ 99.16	473 hrs	\$ 46,906	Index 1a
8	Initial Work Assessment(s)						19,569 hrs	\$ 1,503,707	
	904	Project Director	0	01-Jan-2013	1x	\$ 120.41	378 hrs	\$ 45,566	Index 1a
	907	Deputy Project Manager	0	01-Jan-2013	1x	\$ 99.16	378 hrs	\$ 37,525	Index 1a
	1148	Project Controls Manager	0	01-Jan-2013	1x	\$ 99.16	264 hrs	\$ 26,180	Index 1a
	912	PD Admin Assistant	0	01-Jan-2013	1x	\$ 45.33	378 hrs	\$ 17,154	Index 1a
	1174	Project Coordinator . / Assessor	0	01-Jan-2013	1x	\$ 75.08	3,784 hrs	\$ 284,116	Index 1a
	1138	Estimating Manager	0	01-Jan-2013	1x	\$ 99.16	264 hrs	\$ 26,180	Index 1a
	1254	Technical Advisor	0	01-Jan-2013	1x	\$ 80.47	1,135 hrs	\$ 91,359	Index 1a
	1266	Subject Matter Experts	0	01-Jan-2013	1x	\$ 97.84	1,135 hrs	\$ 111,075	Index 1a
	1200	EHS Manager	0	01-Jan-2013	1x	\$ 99.16	568 hrs	\$ 56,287	Index 1a
	1188	QA Manager	0	01-Jan-2013	1x	\$ 99.16	704 hrs	\$ 69,813	Index 1a
	1194	QC Coordinator	0	01-Jan-2013	1x	\$ 75.08	568 hrs	\$ 42,617	Index 1a
	1171	Scope Lead	0	01-Jan-2013	1x	\$ 99.16	1,135 hrs	\$ 112,574	Index 1a
	1153	Projects Coordinator	0	01-Jan-2013	1x	\$ 75.08	3,410 hrs	\$ 256,035	Index 1a
	1150	P-6 Planner	0	01-Jan-2013	1x	\$ 75.08	1,135 hrs	\$ 85,235	Index 1a
	1191	QA Specialist	0	01-Jan-2013	1x	\$ 87.81	704 hrs	\$ 61,820	Index 1a
	1178	Project Accountant	0	01-Jan-2013	1x	\$ 58.08	415 hrs	\$ 24,087	Index 1a
	1158	Doc Control Clerk	0	01-Jan-2013	1x	\$ 45.33	2,860 hrs	\$ 129,654	Index 1a
	1203	EHS Coordinator	0	01-Jan-2013	1x	\$ 75.08	352 hrs	\$ 26,429	Index 1a
9a	Cost Estimate - AACE Class 4						3,819 hrs	\$ 305,748	
	904	Project Director	0	01-Jan-2013	1x	\$ 120.41	132 hrs	\$ 15,895	Index 1a
	907	Deputy Project Manager	0	01-Jan-2013	1x	\$ 99.16	132 hrs	\$ 13,090	Index 1a
	1148	Project Controls Manager	0	01-Jan-2013	1x	\$ 99.16	132 hrs	\$ 13,090	Index 1a

Darlington Nuclear Generating Station Turbine Generator Refurbishment Project



Attachment 7.1(4) - Revised Definition Phase Target Cost

Ref.	Labour Schedule Ref.	Resources					Definition Phase		Applicable Adjustable Cost Index
		Position	Grade	Effective Date	Normal / Overtime	Rate	Hours	Total	
	912	PD Admin Assistant	0	01-Jan-2013	1x	\$ 45.33	88 hrs	\$ 3,989	Index 1a
	916	Procurement Manager	0	01-Jan-2013	2x	\$ 91.33	66 hrs	\$ 6,028	Index 1a
	917	Buyer / Materials Coordinator	0	01-Jan-2013	1x	\$ 58.08	132 hrs	\$ 7,667	Index 1a
	1138	Estimating Manager	0	01-Jan-2013	1x	\$ 99.16	520 hrs	\$ 51,597	Index 1a
	1141	M or E Estimators or risk coordinator	0	01-Jan-2013	1x	\$ 75.08	1,561 hrs	\$ 117,198	Index 1a
	1158	Doc Control Clerk	0	01-Jan-2013	1x	\$ 45.33	352 hrs	\$ 15,957	Index 1a
	1254	Technical Advisor	0	01-Jan-2013	1x	\$ 80.47	352 hrs	\$ 28,328	Index 1a
	1188	QA Manager	0	01-Jan-2013	1x	\$ 99.16	176 hrs	\$ 17,453	Index 1a
	1191	QA Specialist	0	01-Jan-2013	1x	\$ 87.81	176 hrs	\$ 15,455	Index 1a
9b	Cost Estimate - AACE Class 3						5,704 hrs	\$ 459,643	
	904	Project Director	0	01-Jan-2013	1x	\$ 120.41	189 hrs	\$ 22,783	Index 1a
	907	Deputy Project Manager	0	01-Jan-2013	1x	\$ 99.16	199 hrs	\$ 19,744	Index 1a
	1148	Project Controls Manager	0	01-Jan-2013	1x	\$ 99.16	88 hrs	\$ 8,727	Index 1a
	912	PD Admin Assistant	0	01-Jan-2013	1x	\$ 45.33	132 hrs	\$ 5,984	Index 1a
	916	Procurement Manager	0	01-Jan-2013	2x	\$ 91.33	132 hrs	\$ 12,056	Index 1a
	917	Buyer / Materials Coordinator	0	01-Jan-2013	1x	\$ 58.08	264 hrs	\$ 15,334	Index 1a
	1138	Estimating Manager	0	01-Jan-2013	1x	\$ 99.16	757 hrs	\$ 75,049	Index 1a
	1141	M or E Estimators or risk coordinator	0	01-Jan-2013	1x	\$ 75.08	2,271 hrs	\$ 170,470	Index 1a
	1158	Doc Control Clerk	0	01-Jan-2013	1x	\$ 45.33	352 hrs	\$ 15,957	Index 1a
	1254	Technical Advisor	0	01-Jan-2013	1x	\$ 80.47	528 hrs	\$ 42,492	Index 1a
	1188	QA Manager	0	01-Jan-2013	1x	\$ 99.16	132 hrs	\$ 13,090	Index 1a
	1191	QA Specialist	0	01-Jan-2013	1x	\$ 87.81	660 hrs	\$ 57,957	Index 1a
9c	Cost Estimate - AACE Class 2						9,249 hrs	\$ 751,124	
	904	Project Director	0	01-Jan-2013	1x	\$ 120.41	264 hrs	\$ 31,790	Index 1a
	907	Deputy Project Manager	0	01-Jan-2013	1x	\$ 99.16	264 hrs	\$ 26,180	Index 1a
	1148	Project Controls Manager	0	01-Jan-2013	1x	\$ 99.16	264 hrs	\$ 26,180	Index 1a
	912	PD Admin Assistant	0	01-Jan-2013	1x	\$ 45.33	264 hrs	\$ 11,968	Index 1a
	916	Procurement Manager	0	01-Jan-2013	2x	\$ 91.33	264 hrs	\$ 24,112	Index 1a
	917	Buyer / Materials Coordinator	0	01-Jan-2013	1x	\$ 58.08	352 hrs	\$ 20,445	Index 1a
	1138	Estimating Manager	0	01-Jan-2013	1x	\$ 99.16	1,135 hrs	\$ 112,574	Index 1a
	1141	M or E Estimators or risk coordinator	0	01-Jan-2013	1x	\$ 75.08	3,406 hrs	\$ 255,704	Index 1a
	1158	Doc Control Clerk	0	01-Jan-2013	1x	\$ 45.33	528 hrs	\$ 23,936	Index 1a
	1254	Technical Advisor	0	01-Jan-2013	1x	\$ 80.47	1,056 hrs	\$ 84,985	Index 1a
	1188	QA Manager	0	01-Jan-2013	1x	\$ 99.16	506 hrs	\$ 50,178	Index 1a
	1191	QA Specialist	0	01-Jan-2013	1x	\$ 87.81	946 hrs	\$ 83,071	Index 1a
9d	Execution Phase Target Cost and Schedule						12,895 hrs	\$ 1,070,647	
	904	Project Director	0	01-Jan-2013	1x	\$ 120.41	662 hrs	\$ 79,740	Index 1a
	909	Deputy Project Manager	0	01-Jan-2013	2x	\$ 120.62	662 hrs	\$ 79,879	Index 1a
	1148	Project Controls Manager	0	01-Jan-2013	1x	\$ 99.16	1,324 hrs	\$ 131,337	Index 1a
	912	PD Admin Assistant	0	01-Jan-2013	1x	\$ 45.33	662 hrs	\$ 30,020	Index 1a
	916	Procurement Manager	0	01-Jan-2013	2x	\$ 91.33	286 hrs	\$ 26,121	Index 1a
	917	Buyer / Materials Coordinator	0	01-Jan-2013	1x	\$ 58.08	286 hrs	\$ 16,612	Index 1a
	1138	Estimating Manager	0	01-Jan-2013	1x	\$ 99.16	757 hrs	\$ 75,049	Index 1a
	1254	Technical Advisor	0	01-Jan-2013	1x	\$ 80.47	1,514 hrs	\$ 121,812	Index 1a
	1266	Subject Matter Experts	0	01-Jan-2013	1x	\$ 97.84	757 hrs	\$ 74,050	Index 1a
	1200	EHS Manager	0	01-Jan-2013	1x	\$ 99.16	352 hrs	\$ 34,907	Index 1a
	1188	QA Manager	0	01-Jan-2013	1x	\$ 99.16	352 hrs	\$ 34,907	Index 1a
	1171	Scope Lead	0	01-Jan-2013	1x	\$ 99.16	757 hrs	\$ 75,049	Index 1a
	1153	Projects Coordinator	0	01-Jan-2013	1x	\$ 75.08	757 hrs	\$ 56,823	Index 1a
	1150	P-6 Planner	0	01-Jan-2013	1x	\$ 75.08	946 hrs	\$ 71,029	Index 1a
	1257	Training Coordinator	0	01-Jan-2013	1x	\$ 59.29	176 hrs	\$ 10,435	Index 1a
	1191	QA Specialist	0	01-Jan-2013	1x	\$ 87.81	378 hrs	\$ 33,228	Index 1a
	1178	Project Accountant	0	01-Jan-2013	1x	\$ 58.08	660 hrs	\$ 38,335	Index 1a
	1158	Doc Control Clerk	0	01-Jan-2013	1x	\$ 45.33	1,320 hrs	\$ 59,840	Index 1a
	1203	EHS Coordinator	0	01-Jan-2013	1x	\$ 75.08	286 hrs	\$ 21,474	Index 1a
9e	NEW - Staff to prepare Crane Safety and Reliability Assessment Plan						1,387 hrs	\$ 177,883	
	1273	Crane Specialist	Category D - Home Office	01-Jan-2013	1x	\$ 103.13	347 hrs	\$ 35,750	Index 1a
	1274	Crane Technician - Subcontractor	Subcontractor	01-Jan-2013	1x	\$ 110.00	347 hrs	\$ 38,133	Index 1b
	1275	Crane Engineer - Subcontractor	Subcontractor	01-Jan-2013	1x	\$ 150.00	693 hrs	\$ 104,000	Index 1b
PCD 001	Condenser Struts						700 hrs	\$ 53,989	
	1174	Project Coordinator - / Assessor	0	01-Jan-2013	1x	\$ 75.08	336 hrs	\$ 25,227	Index 1a
	1171	Scope Lead	0	01-Jan-2013	1x	\$ 99.16	40 hrs	\$ 3,966	Index 1a
	1194	QC Coordinator	0	01-Jan-2013	1x	\$ 75.08	96 hrs	\$ 7,208	Index 1a
	1191	QA Specialist	0	01-Jan-2013	1x	\$ 87.81	40 hrs	\$ 3,512	Index 1a
	1188	QA Manager	0	01-Jan-2013	1x	\$ 99.16	20 hrs	\$ 1,983	Index 1a

Darlington Nuclear Generating Station Turbine Generator Refurbishment Project



Attachment 7.1(4) - Revised Definition Phase Target Cost

Ref.	Labour Schedule Ref.	Resources					Definition Phase		Applicable Adjustable Cost Index
		Position	Grade	Effective Date	Normal / Overtime	Rate	Hours	Total	
	1203	EHS Coordinator	0	01-Jan-2013	1x	\$ 75.08	48 hrs	\$ 3,604	Index 1a
	1210	AECOM - Boilermaker - GF	0	01-Jan-2013	1x	\$ 62.06	40 hrs	\$ 2,482	Index 1a
	1141	M or E Estimators or risk coordinator	0	01-Jan-2013	1x	\$ 75.08	40 hrs	\$ 3,003	Index 1a
	1150	P-6 Planner	0	01-Jan-2013	1x	\$ 75.08	40 hrs	\$ 3,003	Index 1a
PCD 003	U2 Deferral						18,015 hrs	\$ 1,451,143	
	924	SNC - Engineering Manager	Category E - Home Office	01-Jan-2013	1x	\$ 116.88	57 hrs	\$ 6,620	Index 1a
	951	SNC- Design Team Lead	Category D - Home Office	01-Jan-2013	1x	\$ 96.25	100 hrs	\$ 9,658	Index 1a
	975	SNC - Senior Engineer (Mechanical)	Category C - Home Office	01-Jan-2013	1x	\$ 75.63	626 hrs	\$ 47,366	Index 1a
	981	SNC - Senior Engineer (Electrical)	Category C - Home Office	01-Jan-2013	1x	\$ 75.63	942 hrs	\$ 71,233	Index 1a
	984	SNC - Senior Engineer (I&C/ HFE)	Category C - Home Office	01-Jan-2013	1x	\$ 75.63	709 hrs	\$ 53,608	Index 1a
	978	SNC - Senior Engineer (Civil/ Structural)	Category C - Home Office	01-Jan-2013	1x	\$ 75.63	105 hrs	\$ 7,956	Index 1a
	987	SNC - Intermediate Engineer (Mechanical)	Category C - Home Office	01-Jan-2013	1x	\$ 75.63	78 hrs	\$ 5,875	Index 1a
	924	SNC - Engineering Manager	Category E - Home Office	01-Jan-2013	1x	\$ 116.88	1,317 hrs	\$ 153,885	Index 1a
	951	SNC- Design Team Lead	Category D - Home Office	01-Jan-2013	1x	\$ 96.25	1,317 hrs	\$ 126,729	Index 1a
	1188	QA Manager	0	01-Jan-2013	1x	\$ 99.16	329 hrs	\$ 32,641	Index 1a
	1200	EHS Manager	0	01-Jan-2013	1x	\$ 99.16	132 hrs	\$ 13,056	Index 1a
	1174	Project Coordinator . / Assessor	0	01-Jan-2013	1x	\$ 75.08	329 hrs	\$ 24,714	Index 1a
	904	Project Director	0	01-Jan-2013	1x	\$ 120.41	1,317 hrs	\$ 158,540	Index 1a
	1148	Project Controls Manager	0	01-Jan-2013	1x	\$ 99.16	1,317 hrs	\$ 130,562	Index 1a
	912	PD Admin Assistant	0	01-Jan-2013	1x	\$ 45.33	1,317 hrs	\$ 59,686	Index 1a
	1153	Projects Coordinator	0	01-Jan-2013	1x	\$ 75.08	1,317 hrs	\$ 98,854	Index 1a
	1150	P-6 Planner	0	01-Jan-2013	1x	\$ 75.08	1,317 hrs	\$ 98,854	Index 1a
	1178	Project Accountant	0	01-Jan-2013	1x	\$ 58.08	1,564 hrs	\$ 90,811	Index 1a
	1158	Doc Control Clerk	0	01-Jan-2013	1x	\$ 45.33	1,317 hrs	\$ 59,686	Index 1a
	924	SNC - Engineering Manager	Category E - Home Office	01-Jan-2013	1x	\$ 116.88	106 hrs	\$ 12,389	Index 1a
	975	SNC - Senior Engineer (Mechanical)	Category C - Home Office	01-Jan-2013	1x	\$ 75.63	170 hrs	\$ 12,856	Index 1a
	984	SNC - Senior Engineer (I&C/ HFE)	Category C - Home Office	01-Jan-2013	1x	\$ 75.63	80 hrs	\$ 6,050	Index 1a
	987	SNC - Intermediate Engineer (Mechanical)	Category C - Home Office	01-Jan-2013	1x	\$ 75.63	170 hrs	\$ 12,856	Index 1a
	981	SNC - Senior Engineer (Electrical)	Category C - Home Office	01-Jan-2013	1x	\$ 75.63	16 hrs	\$ 1,210	Index 1a
	984	SNC - Senior Engineer (I&C/ HFE)	Category C - Home Office	01-Jan-2013	1x	\$ 75.63	451 hrs	\$ 34,107	Index 1a
	978	SNC - Senior Engineer (Civil/ Structural)	Category C - Home Office	01-Jan-2013	1x	\$ 75.63	38 hrs	\$ 2,874	Index 1a
	1153	Projects Coordinator	0	01-Jan-2013	1x	\$ 75.08	160 hrs	\$ 12,013	Index 1a
	1175	Project Coordinator . / Assessor	0	01-Jan-2013	1.5x	\$ 91.33	40 hrs	\$ 3,653	Index 1a
	1191	QA Specialist	0	01-Jan-2013	1x	\$ 87.81	40 hrs	\$ 3,512	Index 1a
	1153	Projects Coordinator	0	01-Jan-2013	1x	\$ 75.08	160 hrs	\$ 12,013	Index 1a
	1175	Project Coordinator . / Assessor	0	01-Jan-2013	1.5x	\$ 91.33	40 hrs	\$ 3,653	Index 1a
	1191	QA Specialist	0	01-Jan-2013	1x	\$ 87.81	40 hrs	\$ 3,512	Index 1a
	1153	Projects Coordinator	0	01-Jan-2013	1x	\$ 75.08	460 hrs	\$ 34,536	Index 1a
	1191	QA Specialist	0	01-Jan-2013	1x	\$ 87.81	80 hrs	\$ 7,025	Index 1a
	1175	Project Coordinator . / Assessor	0	01-Jan-2013	1.5x	\$ 91.33	140 hrs	\$ 12,786	Index 1a
	1153	Projects Coordinator	0	01-Jan-2013	1x	\$ 75.08	200 hrs	\$ 15,016	Index 1a
	1191	QA Specialist	0	01-Jan-2013	1x	\$ 87.81	60 hrs	\$ 5,268	Index 1a
	1175	Project Coordinator . / Assessor	0	01-Jan-2013	1.5x	\$ 91.33	60 hrs	\$ 5,480	Index 1a
PCD 007	Turbine Hall Crane Inspection						1,025 hrs	\$ 70,909	
	904	Project Director	0	01-Jan-2013	1x	\$ 120.41	10 hrs	\$ 1,204	Index 1a
	907	Deputy Project Manager	0	01-Jan-2013	1x	\$ 99.16	10 hrs	\$ 992	Index 1a
	1148	Project Controls Manager	0	01-Jan-2013	1x	\$ 99.16	10 hrs	\$ 992	Index 1a
	912	PD Admin Assistant	0	01-Jan-2013	1x	\$ 45.33	10 hrs	\$ 453	Index 1a
	1151	P-6 Planner	0	01-Jan-2013	1.5x	\$ 91.33	10 hrs	\$ 913	Index 1a
	1174	Project Coordinator . / Assessor	0	01-Jan-2013	1x	\$ 75.08	40 hrs	\$ 3,003	Index 1a
	1257	Training Coordinator	0	01-Jan-2013	1x	\$ 59.29	10 hrs	\$ 593	Index 1a
	1178	Project Accountant	0	01-Jan-2013	1x	\$ 58.08	10 hrs	\$ 581	Index 1a
	1158	Doc Control Clerk	0	01-Jan-2013	1x	\$ 45.33	10 hrs	\$ 453	Index 1a
	1203	EHS Coordinator	0	01-Jan-2013	1x	\$ 75.08	5 hrs	\$ 375	Index 1a
		Electrical Workers	Journeyman	01-May-2012	Blended	\$ 70.48	48 hrs	\$ 3,383	Index 3
		Carpenters	Journeyman	01-May-2012	Blended	\$ 60.61	114 hrs	\$ 6,910	Index 3
		Millwrights	Journeyman	01-May-2012	Blended	\$ 75.81	108 hrs	\$ 8,187	Index 3
		Millwrights	Foreman	01-May-2012	Blended	\$ 67.45	108 hrs	\$ 7,285	Index 3
		AECOM - Millwright - GF	0	01-Jan-2013	Blended	\$ 78.88	158 hrs	\$ 12,463	Index 3
		Laborers	Laborer - Group I	01-May-2012	Blended	\$ 53.72	76 hrs	\$ 4,083	Index 3
		Operating Engineers	Operating Engineer Group 1 (A)	01-May-2012	Blended	\$ 66.57	108 hrs	\$ 7,190	Index 3
		Ironworkers	Journeyman Ironworker, Rigger	01-May-2012	Blended	\$ 65.83	180 hrs	\$ 11,849	Index 3

Darlington Nuclear Generating Station Turbine Generator Refurbishment Project



Attachment 7.1(4) - Revised Definition Phase Target Cost

Ref.	Labour Schedule Ref.	Resources					Definition Phase		Applicable Adjustable Cost Index
		Position	Grade	Effective Date	Normal / Overtime	Rate	Hours	Total	
PCD 008	Pre-Reqs						2,961 hrs	\$ 199,094	
		Civil Engineers	0	01-Jan-2013	1x	\$ 73.00	220 hrs	\$ 16,060	Index 3
		PCN-0014						\$ -	Index 3
		Electrical Workers	Journeyman	01-May-2012	Blended	\$ 68.84	30 hrs	\$ 2,065	Index 3
		Pipefitters	Journeyman	01-May-2012	Blended	\$ 66.46	10 hrs	\$ 665	Index 3
		Millwrights	Journeyman	01-May-2012	Blended	\$ 67.29	1,280 hrs	\$ 86,133	Index 3
		Operating Engineers	Operating Engineer Group 1 (A)	01-May-2012	Blended	\$ 67.20	70 hrs	\$ 4,704	Index 3
		Ironworkers	Journeyman Ironworker, Rigger	01-May-2012	Blended	\$ 64.91	15 hrs	\$ 974	Index 3
		PCN-0016						\$ -	Index 3
		Electrical Workers	Journeyman	01-May-2012	Blended	\$ 68.84	20 hrs	\$ 1,377	Index 3
		Ironworkers	Journeyman Ironworker, Rigger	01-May-2012	Blended	\$ 64.91	553 hrs	\$ 35,895	Index 3
		PCN-0017						\$ -	Index 3
		Millwrights	Journeyman	01-May-2012	Blended	\$ 67.29	23 hrs	\$ 1,548	Index 3
		PCN-0018						\$ -	Index 3
		Millwrights	Journeyman	01-May-2012	Blended	\$ 67.29	31 hrs	\$ 2,086	Index 3
		PCN-0020						\$ -	Index 3
		Millwrights	Journeyman	01-May-2012	Blended	\$ 67.29	48 hrs	\$ 3,230	Index 3
		PCN-0021						\$ -	Index 3
		Millwrights	Journeyman	01-May-2012	Blended	\$ 67.29	187 hrs	\$ 12,583	Index 3
		Operating Engineers	Operating Engineer Group 1 (A)	01-May-2012	Blended	\$ 67.20	30 hrs	\$ 2,016	Index 3
		Ironworkers	Journeyman Ironworker, Rigger	01-May-2012	Blended	\$ 64.94	50 hrs	\$ 3,247	Index 3
		PCN-0022						\$ -	Index 3
		Millwrights	Journeyman	01-May-2012	Blended	\$ 67.29	70 hrs	\$ 4,710	Index 3
		PCN-0027						\$ -	Index 3
		Millwrights	Journeyman	01-May-2012	Blended	\$ 67.29	278 hrs	\$ 18,707	Index 3
		PCN-H2 Fan Stand						\$ -	Index 3
		Millwrights	Journeyman	01-May-2012	Blended	\$ 67.29	46 hrs	\$ 3,095	Index 3
PCD 009	Additional Maintenance Work						7,592 hrs	\$ 595,841	
	1153	Projects Coordinator	0	01-Jan-2013	1x	\$ 75.08	3,058 hrs	\$ 229,592	Index 1a
	1191	QA Specialist	0	01-Jan-2013	1x	\$ 87.81	2,030 hrs	\$ 178,250	Index 1a
	1174	Project Coordinator - / Assessor	0	01-Jan-2013	1x	\$ 75.08	2,504 hrs	\$ 187,998	Index 1a
Revised U2 Lay-up Scope Definition Activities as per NK38-SOW-09701-10041 & Clarification Sessions							14,705 hrs	\$ 1,202,206	
	951	SNC- Design Team Lead	Category D - Home Office	01-Jan-2013	1x	\$ 96.25	1,105 hrs	\$ 106,356	Index 1a
	960	SNC- Consultant (Mechanical)	Category E - Home Office	01-Jan-2013	1x	\$ 116.88	1,105 hrs	\$ 129,147	Index 1a
	975	SNC - Senior Engineer (Mechanical)	Category C - Home Office	01-Jan-2013	1x	\$ 75.63	1,292 hrs	\$ 97,708	Index 1a
	981	SNC - Senior Engineer (Electrical)	Category C - Home Office	01-Jan-2013	1x	\$ 75.63	204 hrs	\$ 15,428	Index 1a
	984	SNC - Senior Engineer (I&C/ HFE)	Category C - Home Office	01-Jan-2013	1x	\$ 75.63	391 hrs	\$ 29,569	Index 1a
	987	SNC - Intermediate Engineer (Mechanical)	Category C - Home Office	01-Jan-2013	1x	\$ 75.63	697 hrs	\$ 52,711	Index 1a
	993	SNC - Intermediate Engineer (Electrical)	Category C - Home Office	01-Jan-2013	1x	\$ 75.63	357 hrs	\$ 26,998	Index 1a
	996	SNC - Intermediate Engineer (I&C/ HFE)	Category C - Home Office	01-Jan-2013	1x	\$ 75.63	697 hrs	\$ 52,711	Index 1a
	999	SNC - Junior Engineer (Mechanical)	Category B - Home Office	01-Jan-2013	1x	\$ 45.38	493 hrs	\$ 22,370	Index 1a
	1011	SNC - Designer/ Drafter (Mechanical)	Category B- Home Office	01-Jan-2013	1x	\$ 45.38	255 hrs	\$ 11,571	Index 1a
	1017	SNC - Designer/ Drafter (Electrical)	Category B- Home Office	01-Jan-2013	1x	\$ 45.38	43 hrs	\$ 1,928	Index 1a
	1020	SNC - Designer/ Drafter (I&C/ HFE)	Category B- Home Office	01-Jan-2013	1x	\$ 45.38	77 hrs	\$ 3,471	Index 1a
	1203	EHS Coordinator	0	01-Jan-2013	1x	\$ 75.08	85 hrs	\$ 6,382	Index 1a
	1158	Doc Control Clerk	0	01-Jan-2013	1x	\$ 45.33	85 hrs	\$ 3,853	Index 1a
	1178	Project Accountant	0	01-Jan-2013	1x	\$ 58.08	85 hrs	\$ 4,937	Index 1a
	917	Buyer / Materials Coordinator	0	01-Jan-2013	1x	\$ 58.08	85 hrs	\$ 4,937	Index 1a
	1188	QA Manager	0	01-Jan-2013	1x	\$ 99.16	85 hrs	\$ 8,429	Index 1a
	1194	QC. Coordinator	0	01-Jan-2013	1x	\$ 75.08	85 hrs	\$ 6,382	Index 1a
	1148	Project Controls Manager	0	01-Jan-2013	1x	\$ 99.16	170 hrs	\$ 16,857	Index 1a
	1168	Construction or Risk Manager	0	01-Jan-2013	1x	\$ 99.16	85 hrs	\$ 8,429	Index 1a
	1150	P-6 Planner	0	01-Jan-2013	1x	\$ 75.08	2,040 hrs	\$ 153,162	Index 1a
	1171	Scope Lead	0	01-Jan-2013	1x	\$ 99.16	2,040 hrs	\$ 202,289	Index 1a
	1254	Technical Advisor	0	01-Jan-2013	1x	\$ 80.47	85 hrs	\$ 6,840	Index 1a
	1174	Project Coordinator - / Assessor	0	01-Jan-2013	1x	\$ 75.08	3,060 hrs	\$ 229,743	Index 1a
Lay-up: Nitrogen Gas Modification to LPSW as per NK38-SOW-09701-10041 Table 3, Item 20							2,595 hrs	\$ 212,154	
	951	SNC- Design Team Lead	Category D - Home Office	01-Jan-2013	1x	\$ 96.25	195 hrs	\$ 18,769	Index 1a
	960	SNC- Consultant (Mechanical)	Category E - Home Office	01-Jan-2013	1x	\$ 116.88	195 hrs	\$ 22,791	Index 1a

Darlington Nuclear Generating Station Turbine Generator Refurbishment Project



Attachment 7.1(4) - Revised Definition Phase Target Cost

Ref.	Labour Schedule Ref.	Position	Resources				Definition Phase		Applicable Adjustable Cost Index
			Grade	Effective Date	Normal / Overtime	Rate	Hours	Total	
	975	SNC - Senior Engineer (Mechanical)	Category C - Home Office	01-Jan-2013	1x	\$ 75.63	228 hrs	\$ 17,243	Index 1a
	981	SNC - Senior Engineer (Electrical)	Category C - Home Office	01-Jan-2013	1x	\$ 75.63	36 hrs	\$ 2,723	Index 1a
	984	SNC - Senior Engineer (I&C/ HFE)	Category C - Home Office	01-Jan-2013	1x	\$ 75.63	69 hrs	\$ 5,218	Index 1a
	987	SNC - Intermediate Engineer (Mechanical)	Category C - Home Office	01-Jan-2013	1x	\$ 75.63	123 hrs	\$ 9,302	Index 1a
	993	SNC - Intermediate Engineer (Electrical)	Category C - Home Office	01-Jan-2013	1x	\$ 75.63	63 hrs	\$ 4,764	Index 1a
	996	SNC - Intermediate Engineer (I&C/ HFE)	Category C - Home Office	01-Jan-2013	1x	\$ 75.63	123 hrs	\$ 9,302	Index 1a
	999	SNC - Junior Engineer (Mechanical)	Category B - Home Office	01-Jan-2013	1x	\$ 45.38	87 hrs	\$ 3,948	Index 1a
	1011	SNC - Designer/ Drafter (Mechanical)	Category B- Home Office	01-Jan-2013	1x	\$ 45.38	45 hrs	\$ 2,042	Index 1a
	1017	SNC - Designer/ Drafter (Electrical)	Category B- Home Office	01-Jan-2013	1x	\$ 45.38	8 hrs	\$ 340	Index 1a
	1020	SNC - Designer/ Drafter (I&C/ HFE)	Category B- Home Office	01-Jan-2013	1x	\$ 45.38	14 hrs	\$ 613	Index 1a
	1203	EHS Coordinator	0	01-Jan-2013	1x	\$ 75.08	15 hrs	\$ 1,126	Index 1a
	1158	Doc Control Clerk	0	01-Jan-2013	1x	\$ 45.33	15 hrs	\$ 680	Index 1a
	1178	Project Accountant	0	01-Jan-2013	1x	\$ 58.08	15 hrs	\$ 871	Index 1a
	917	Buyer / Materials Coordinator	0	01-Jan-2013	1x	\$ 58.08	15 hrs	\$ 871	Index 1a
	1188	QA Manager	0	01-Jan-2013	1x	\$ 99.16	15 hrs	\$ 1,487	Index 1a
	1194	QC. Coordinator	0	01-Jan-2013	1x	\$ 75.08	15 hrs	\$ 1,126	Index 1a
	1148	Project Controls Manager	0	01-Jan-2013	1x	\$ 99.16	30 hrs	\$ 2,975	Index 1a
	1168	Construction or Risk Manager	0	01-Jan-2013	1x	\$ 99.16	15 hrs	\$ 1,487	Index 1a
	1150	P-6 Planner	0	01-Jan-2013	1x	\$ 75.08	360 hrs	\$ 27,029	Index 1a
	1171	Scope Lead	0	01-Jan-2013	1x	\$ 99.16	360 hrs	\$ 35,698	Index 1a
	1254	Technical Advisor	0	01-Jan-2013	1x	\$ 80.47	15 hrs	\$ 1,207	Index 1a
	1174	Project Coordinator . / Assessor	0	01-Jan-2013	1x	\$ 75.08	540 hrs	\$ 40,543	Index 1a
10	Other items [Proponent to insert additional line items below if required]							\$ (288,113)	
	3% Contingency							\$ 553,197	Index 12
	3% Contingency (for NEW 9e)							\$ 5,337	Index 12
	PCD 001 - Contingency							\$ 1,620	Index 1a
	PCD 003 - Credit For Commissioning Work							\$ (957,539)	Index 1a
	PCD 003 - Credit For Modification Installation Work Packages							\$ (375,137)	Index 1a
	PCD 007 - LOA							\$ 10,705	Index 3
	PCD 007 - Kone Cranes							\$ 101,013	Index 3
	PCD 007 - Small Tools & Consumables							\$ 3,681	Index 3
	PCD 007 - 80' Manlift							\$ 7,500	Index 3
	PCD 007 - 3% Contingency							\$ 287	Index 12
	PCD 008 - LOA							\$ 31,933	Index 3
	PCD 008 - Subcontracts (With OH & Profit)							\$ 521,444	Index 3
	PCD 008 - Subcontracts (Without OH & Profit)							\$ (129,529)	Index 3
	PCD 008 - Small Tools & Consumables (SS&E)							\$ 10,982	Index 3
	PCD 008 - Other SS&E							\$ 2,465	Index 3
	PCD 008 - PMT - Direct Non-Trade Labour (Site)							\$ 77,664	Index 3
	PCD 009 - 3% Contingency							\$ 17,875	Index 12
	Removal of Layup Scope Elements							\$ (131,300)	Index 1a
	Adjustment for Class 2 Estimate(Hybrid Binding Submisison) and Level 5 Schedule for Modification Work on Units 3, 1 and 4							\$ (40,311)	Index 1a
The unescalated Definition Phase Target Cost is:								\$ 20,709,085	

Darlington Nuclear Generating Station Turbine Generator Refurbishment Project



Attachment 7.1 (5) - Cost Flow Definition Phase Target Cost

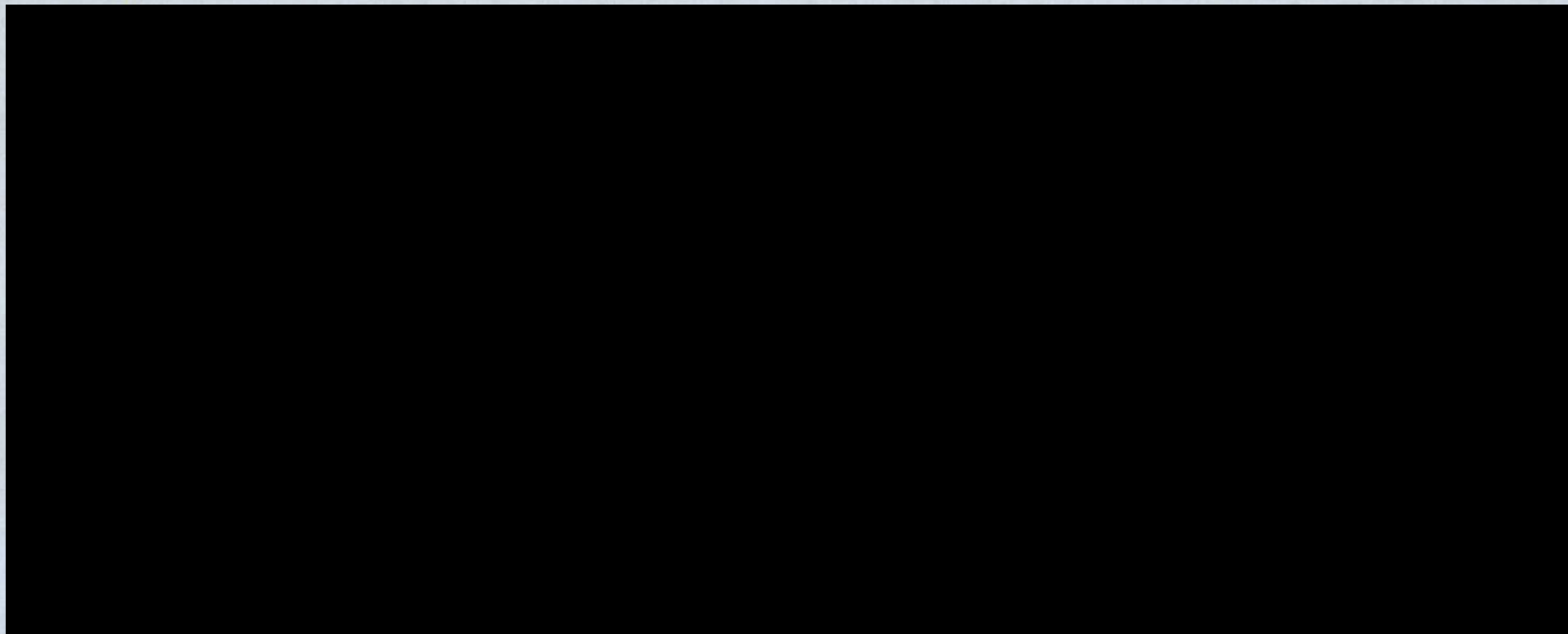
The Proponent is to provide forecasted annual expenditures for the purposes of applying Economic Cost Adjustments to Adjustable Costs.

Pricing Mechanism/Scope	Escalation Base Year	Base Cost (from Definition Phase Target Cost Worksheet)	Contract Year				Total
			2013	2014	2015	2016	
COSTS (at base year, i.e. unescalated)							Costs
Definition Phase Target Cost							
Index 1a	2013	\$ 19,091,954		\$ 6,620,906	\$ 12,173,127	\$ 297,921	\$ 19,091,954
Index 1b	2013	\$ 142,133		\$ 51,168	\$ 90,965	\$ -	\$ 142,133
Index 12	2013	\$ 576,696		\$ -	\$ 760,943	\$ -	\$ 760,943
Index 3		\$ 898,302			\$ 714,054		\$ 714,054
		\$ -					\$ -
		\$ -					\$ -
Definition Phase Target Cost (Unescalated)		\$ 20,709,085	\$ -	\$ 6,672,074	\$ 13,739,090	\$ 297,921	\$ 20,709,084
ESCALATION RATES	Escalation Base Year		2013	2014	2015	2016	
Year Over Year Escalation Rates							
Index 1a			2.00%	2.00%	2.00%	2.00%	
Index 1b			2.00%	2.00%	2.00%	2.00%	
Index 12			0.00%	0.00%	0.00%	0.00%	
Index 3			0.00%	0.00%	0.00%	0.00%	
Compounded Escalation Rates							
Index 1a	2013		100.00%	102.00%	104.04%	106.12%	
Index 1b	2013		100.00%	102.00%	104.04%	106.12%	
Index 12	2013		100.00%	100.00%	100.00%	100.00%	
Index 3				100.00%	100.00%	100.00%	
ESCALATED COSTS							Total
Definition Phase Target Cost							
Index 1a			\$ -	\$ 6,753,324	\$ 12,664,922	\$ 316,156	\$ 19,734,401
Index 1b			\$ -	\$ 52,191	\$ 94,640	\$ -	\$ 146,832
Index 12			\$ -	\$ -	\$ 760,943	\$ -	\$ 760,943
Index 3				\$ -	\$ 714,054	\$ -	\$ 714,054
							\$ -
							\$ -
Definition Phase Target Cost (Escalated)			\$ -	\$ 6,805,516	\$ 14,234,559	\$ 316,156	\$ 21,356,230
The Definition Phase Target Cost is: \$ 21,356,230							

Darlington Nuclear Generating Station Turbine Generator Refurbishment Project

Attachment 7.1(6) - Definition Phase Fixed Fee

ONTARIO**POWER**
GENERATION



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Darlington Nuclear Generating Station Turbine Generator Refurbishment Project

Attachment 7.1 (8) - Cost Flow Execution Phase Target Cost (Non-Trades)

The Proponent is to select the applicable Adjustable Cost Indices identified in Attachment 7.1(7) and the associated escalation base year.



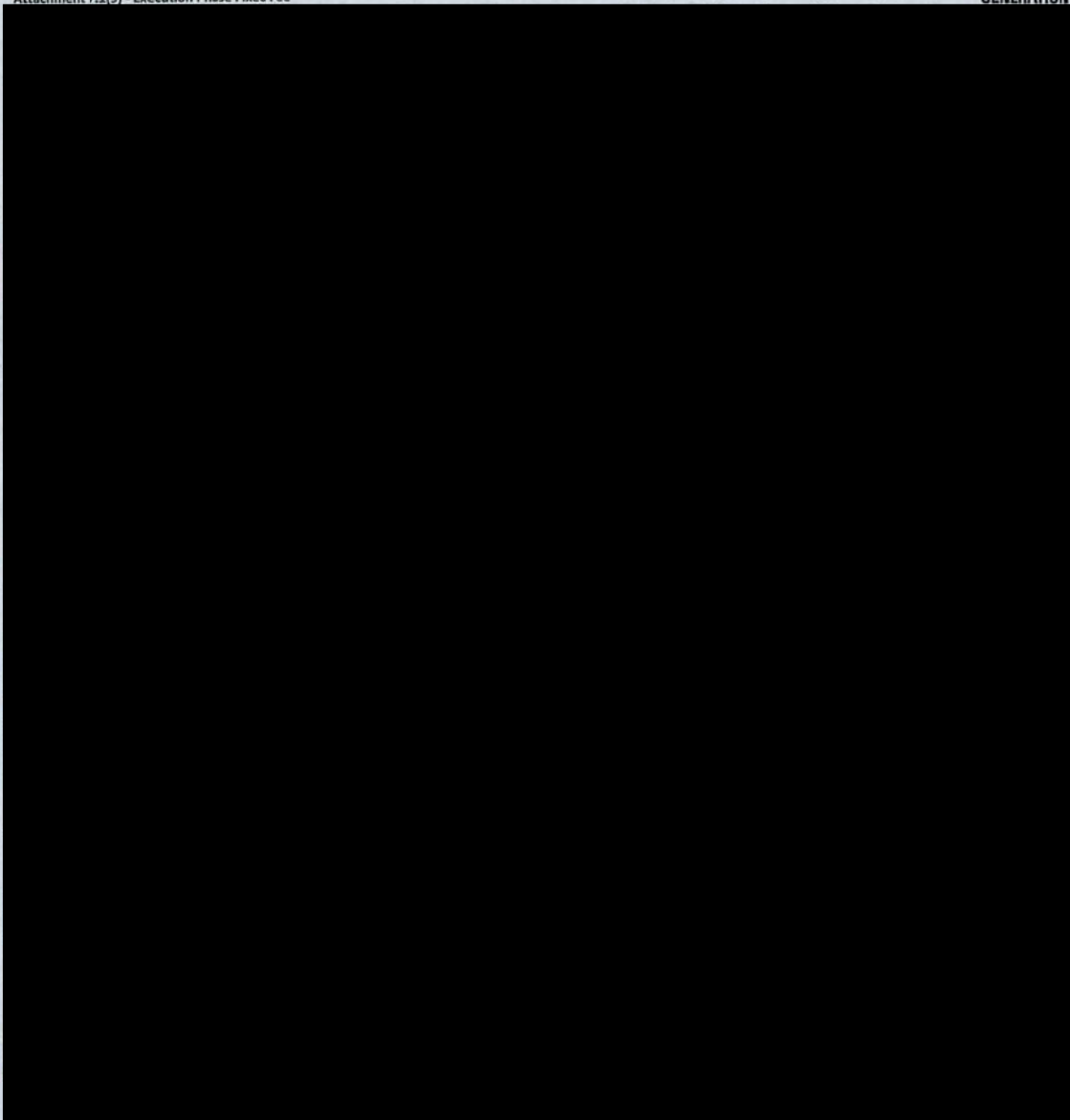
Pricing Mechanism/Scope	Escalation Base Year	Base Cost (from Execution Phase Target Cost Worksheet)	Contract Year														Total	
			2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026		
COSTS (at base year, i.e. unescalated)																		Costs
Execution Phase Target Cost (Non-Trades only)																		
1st Unit																		
Index 1a	2013	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
Index 1b	2013	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
Index 12	2013	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
		\$ -															\$ -	
		\$ -															\$ -	
		\$ -															\$ -	
1st Unit - Sub Total		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
ESCALATION RATES																		
	Escalation Base Year		2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026		
Year Over Year Escalation Rates																		
Index 1a			2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	
Index 1b			2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	
Index 12			0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	
Compounded Escalation Rates																		
Index 1a	2013		100.00%	102.00%	104.04%	106.12%	108.24%	110.41%	112.62%	114.87%	117.17%	119.51%	121.90%	124.34%	126.82%	129.36%		
Index 1b	2013		100.00%	102.00%	104.04%	106.12%	108.24%	110.41%	112.62%	114.87%	117.17%	119.51%	121.90%	124.34%	126.82%	129.36%		
Index 12	2013		100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%		
ESCALATED COSTS																		Total
Execution Phase Target Cost (Non-Trades only)																		
Index 1a		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
Index 1b		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
Index 12		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
		\$ -															\$ -	
		\$ -															\$ -	
		\$ -															\$ -	
Total Cost - Execution Phase Target Cost (Non-Trades only)																		\$ -
The total for the Execution Phase Target Cost (Non-Trades only) is:																		\$ -

OPG Darlington Refurbishment Program

Darlington Nuclear Generating Station Turbine Generator Refurbishment Project

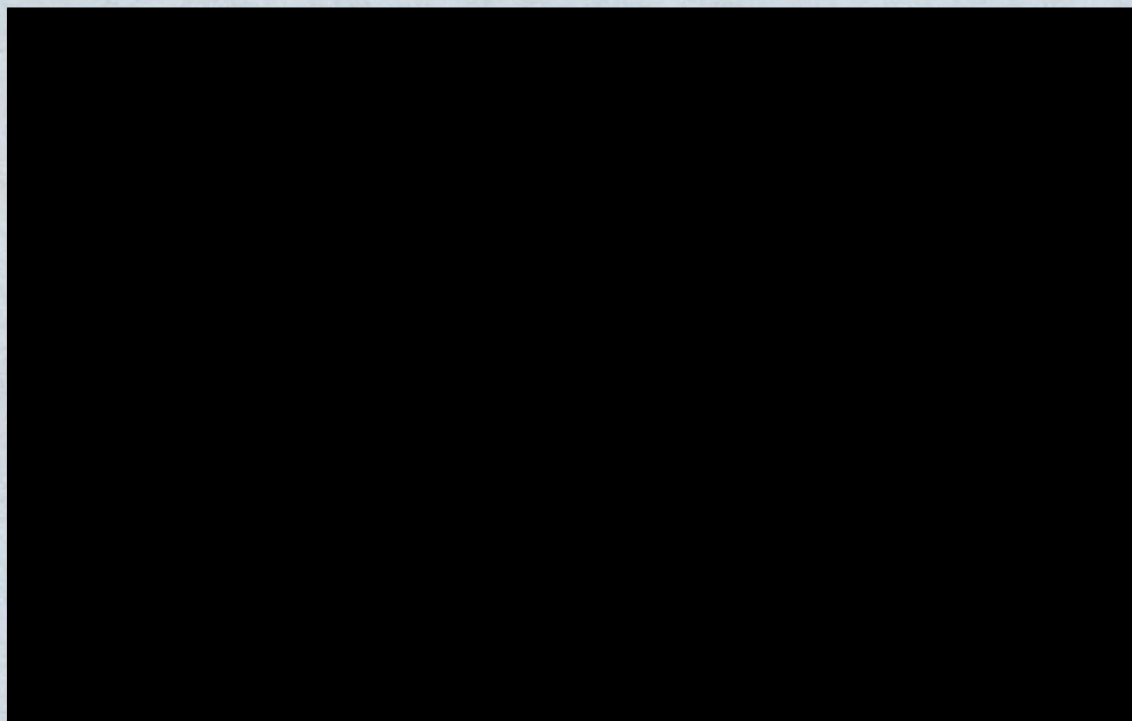
ONTARIO POWER
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Attachment 7.1(9) - Execution Phase Fixed Fee



SV

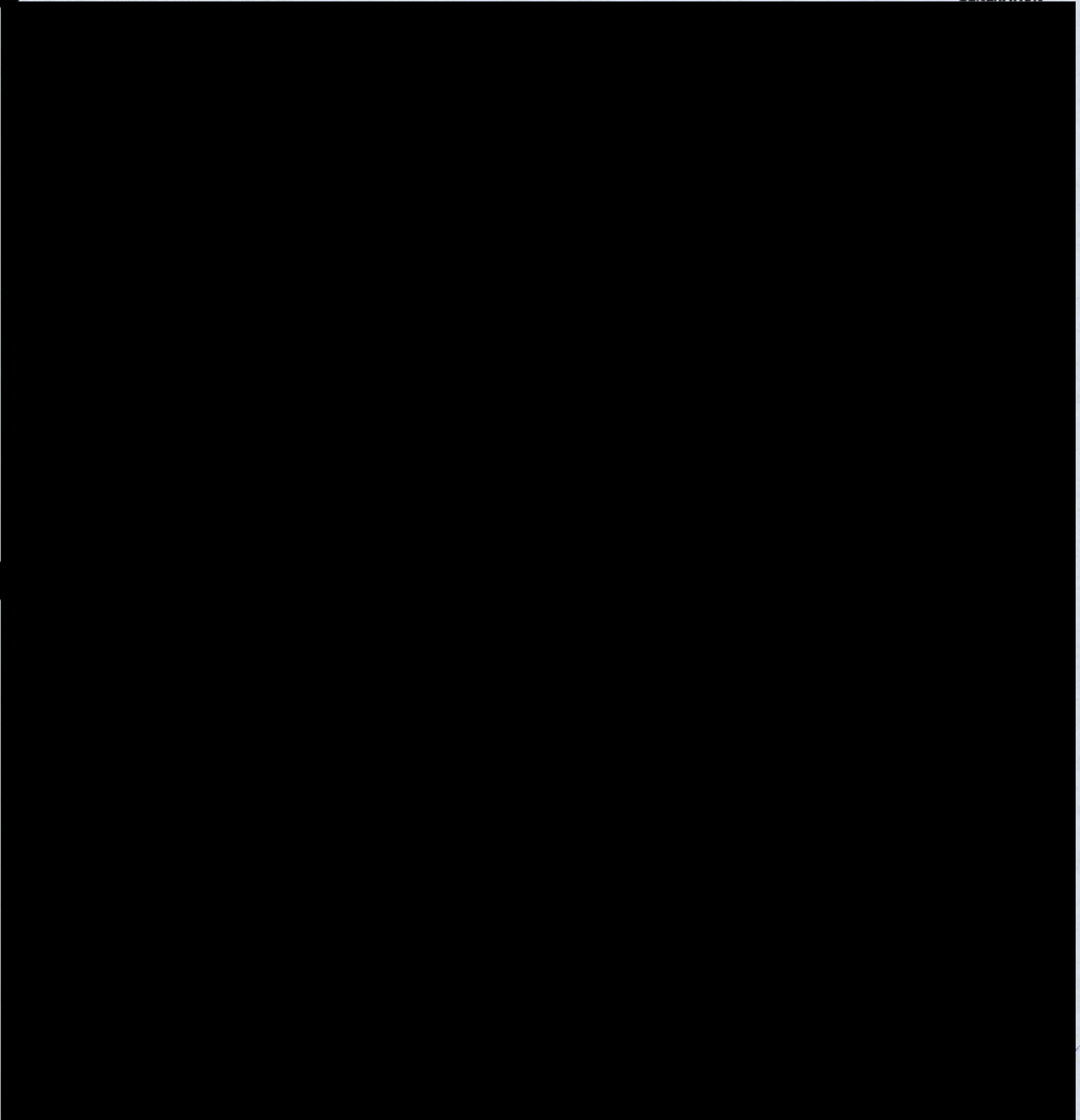
DPG Darlington Refurbishment Program

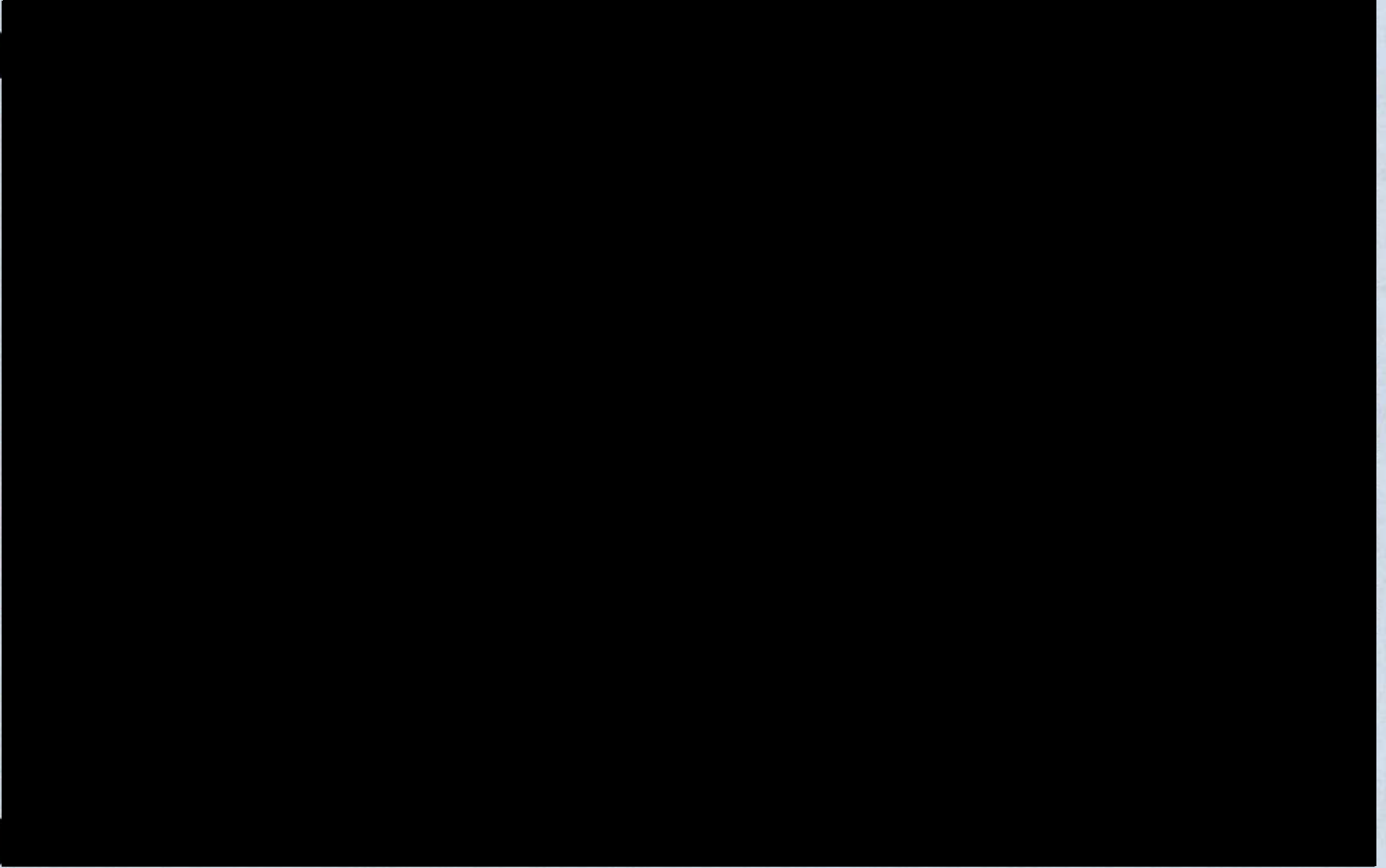


Darlington Nuclear Generating Station Turbine Generator Refurbishment Project

Attachment 7.1(9) - Execution Phase Fixed Fee

ONTARIO
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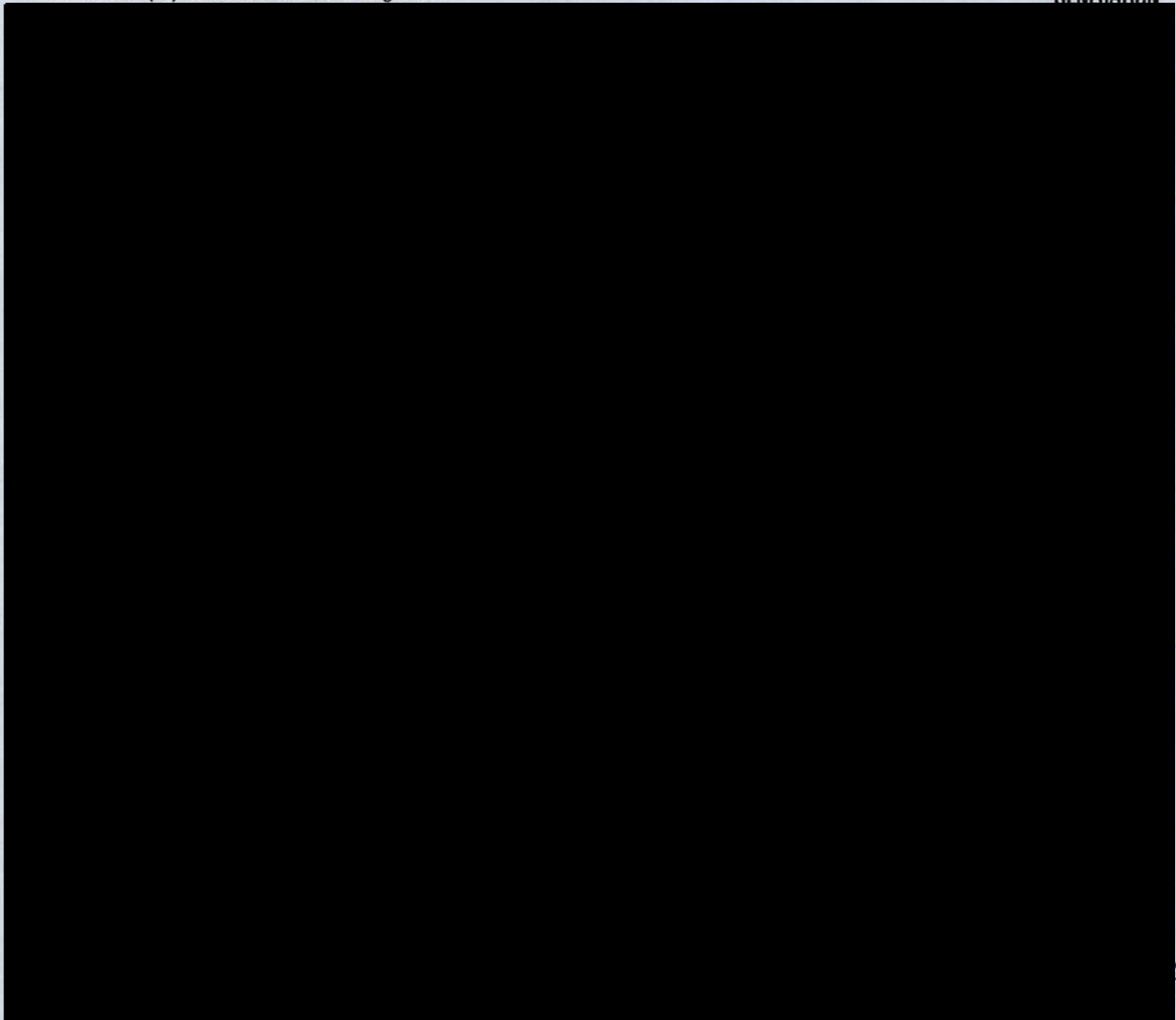


Darlington Nuclear Generating Station Turbine Generator Refurbishment Project

OPG Darlington Refurbishment Program

ONTARIO
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GENERATION

Attachment 7.1(10) - Execution Phase SS&E Target Cost



Darlington Nuclear Generating Station Turbine Generator Refurbishment Project

Attachment 7.1(11) - Milestone Payment Schedule for Definition Phase Fixed Fee



TGR Milestone Table

Reference	Element of Work	Definition Phase Fixed Fee Payment Breakdown by Milestone	Payment Milestone Completion Criteria	Contract Schedule/ Milestone Date
	Definition Phase Deliverables/Milestones	\$ 12,020,783		
Milestone 1	Definition Phase - Project Management Plan (All Units)	\$ 339,496	Milestone is declared complete upon OPG acceptance.	28-Feb-14
Milestone 2	Open Book Management Plan (All Units)	\$ 226,331	Milestone is declared complete upon OPG acceptance.	31-Mar-14
Milestone 3	Contract Management and Oversight Plan (All Units)	\$ 226,331	Milestone is declared complete upon OPG acceptance.	31-Mar-14
Milestone 4	Definition Phase - Draft Baseline Schedule - Level 3 (Unit 2)	\$ 226,331	Milestone is declared complete upon OPG acceptance.	31-Mar-14
Milestone 5	Engineering Plan and Modifications Summary (All Units)	\$ 339,496	Milestone is declared complete upon OPG acceptance.	1-Apr-14
Milestone 6	Project Estimate Plan (All Units)	\$ 339,496	Milestone is declared complete upon OPG acceptance.	11-Apr-14
Milestone 7	Continuous Improvement Plan (All Units)	\$ 226,331	Milestone is declared complete upon OPG acceptance.	11-Apr-14
Milestone 8	Submission of Design Plans for Acceptance (Unit 2)	\$ 339,496	Milestone is declared complete upon OPG acceptance.	28-Apr-14
Milestone 9	Subcontractor Relationship and Procurement Management Plan (All Units)	\$ 226,331	Milestone is declared complete upon OPG acceptance.	28-Apr-14
Milestone 10	Cooperation Agreement (All Units)	\$ 339,496	Milestone is declared complete upon OPG acceptance.	28-Apr-14
Milestone 11	Site Specific Safety Plan (All Units)	\$ 226,331	Milestone is declared complete upon OPG acceptance.	28-Apr-14
Milestone 12	Definition Phase - Final Baseline Schedule - Level 3 (Unit 2)	\$ 339,496	Milestone is declared complete upon OPG acceptance.	30-Apr-14
Milestone 13	Execution Phase - Cost Estimate - AACE Class 4 (All Units)	\$ 339,496	Milestone is declared complete upon OPG acceptance.	31-May-14
Milestone 14	Execution Phase - Schedule - Level 3 (All Units)	\$ 339,496	Milestone is declared complete upon OPG acceptance.	31-May-14
Milestone 15	Submission of Master EC's for Acceptance (All Units)	\$ 226,331	Milestone is declared complete upon OPG acceptance.	17-Sep-14
Milestone 16	Execution Phase - Cost Estimate - AACE Class 3 (All Units)	\$ 339,496	Milestone is declared complete upon OPG acceptance.	30-Sep-14
Milestone 17	Execution Phase - Schedule - Level 4 (All Units)	\$ 339,496	Milestone is declared complete upon OPG acceptance.	30-Sep-14
Milestone 18	Initial Work Assessment(s) (Unit 2)	\$ 339,496	Milestone is declared complete upon entering the information in the required OPG work management system.	30-Sep-14
Milestone 19	Execution Phase - Project Management Plan (All Units)	\$ 452,661	Milestone is declared complete upon OPG acceptance.	31-Oct-14
Milestone 20	75% Submittals of Design EC's for Turbine Controls (Unit 2)	\$ 339,496	Milestone is declared complete upon OPG acceptance.	20-Nov-14
Milestone 21	75% Submittals of Design EC's for Generator Refurbishment (Unit 2)	\$ 339,496	Milestone is declared complete upon OPG acceptance.	20-Nov-14
Milestone 22	Execution Phase - Risk Register (All Units)	\$ 339,496	The Execution Phase Joint Risk Register is complete and has been agreed to and accepted by OPG.	30-Nov-14
Milestone 23	Lifting, Craning, Hoisting and Rigging Plan (All Units)	\$ 226,331	Milestone is declared complete upon OPG acceptance.	30-Jan-15
Milestone 24	75% Submittals of Design EC's for Excitation Controls (Unit 2)	\$ 339,496	Milestone is declared complete upon OPG acceptance.	11-Feb-15
Milestone 25	Crane Safety and Reliability Assessment Plan (All Units)	\$ 226,331	Milestone is declared complete upon OPG acceptance.	28-Feb-15
Milestone 26	Execution Phase - Cost Estimate - AACE Class 2 (HYBRID-All Units)	\$ 439,617	Milestone is declared complete upon OPG acceptance.	31-Mar-15
Milestone 27	Execution Phase - Schedule - Level 5 (Unit 2)	\$ 439,617	Milestone is declared complete upon OPG acceptance.	31-Mar-15
Milestone 28	Final Submittals of Design EC's for Generator Refurbishment (Unit 2)	\$ 339,496	Milestone is declared complete upon OPG acceptance.	31-Mar-16
Milestone 29	Static and Dynamic Commissioning Requirements (Unit 2)	\$ 226,331	Milestone is declared complete upon OPG acceptance.	31-Jul-16

Milestone 30	Final Submittals of Design EC's for Excitation Controls (Unit 2)	\$	339,496	Milestone is declared complete upon OPG acceptance.	31-Mar-16
Milestone 31	Final Submittals of Design EC's for Turbine Controls (Unit 2)	\$	339,496	Milestone is declared complete upon OPG acceptance.	31-Mar-16
Milestone 32	Engineering Change Control / Engineered Tooling Documentation (Unit 2)	\$	226,331	The milestone is declared complete upon OPG acceptance of all design packages and related documentation / information to be ready for issuance of notice-to-proceed with field installation pre-requisites.	31-Mar-16
Milestone 33	Release 1 Design of EC's for Generator Refurbishment (Unit 2)	\$	339,496	Milestone is declared complete upon OPG acceptance.	31-Mar-16
Milestone 34	Maintenance Procedures (Unit 2)	\$	339,496	Milestone is declared complete upon OPG acceptance.	15-Jul-15
Milestone 35	Release 1 Design of EC's for Excitation Controls (Unit 2)	\$	339,496	Milestone is declared complete upon OPG acceptance.	31-Jul-15
Milestone 36	Release 1 Design of EC's for Turbine Controls (Unit 2)	\$	339,496	Milestone is declared complete upon OPG acceptance.	31-Jul-15
Milestone 37	Report for July 2015 Turbine Hall Crane Inspection (All Units)	\$	38,560	Milestone is declared complete upon OPG acceptance.	30-Sep-15
Milestone 38	Jib Crane Installation Complete (Unit 2)	\$	50,321	Milestone is declared complete upon OPG acceptance.	31-Jul-16
Milestone 39	Refurbished Rotor Stands Delivered to Site (All Units)	\$	55,466	Milestone is declared complete upon OPG acceptance.	31-Jul-16
Milestone 40	Static Commissioning Work Plans (Unit 2)	\$	76,671	Milestone is declared complete upon OPG acceptance.	31-Jul-16
Milestone 41	PCD 0009 Final Work Assessments Complete (Unit 2)	\$	100,150	Milestone is declared complete upon OPG acceptance.	16-Feb-16
Milestone 42	D3 Rotor Removed from Site (All Units)	\$	72,911	Milestone is declared complete upon OPG acceptance.	31-Jul-16
Milestone 43	PCD 0009 CWP's Accepted (Unit 2)	\$	300,449	Milestone is declared complete upon OPG acceptance.	31-Mar-16
Milestone 44	Condenser Struts - Initial Work Assessments (Unit 2)	\$	7,163	Milestone is declared complete upon OPG acceptance.	27-Nov-14
Milestone 45	Condenser Struts - Opex Review and Report (All Units)	\$	1,791	Milestone is declared complete upon OPG acceptance.	27-Feb-15
Milestone 46	Condenser Struts - Inspection Procedure for UT (Unit 2)	\$	1,791	Milestone is declared complete upon OPG acceptance.	17-Apr-15
Milestone 47	Condenser Struts - Weld Procedure for A285C to SA106B (All Units)	\$	1,791	Milestone is declared complete upon OPG acceptance.	17-Apr-15
Milestone 48	Condenser Struts - Comprehensive Work Packages (Unit 2)	\$	10,744	Milestone is declared complete upon OPG acceptance.	15-Jul-15
Milestone 49	Condenser Struts - Inspection and Test Plans (Unit 2)	\$	5,372	Milestone is declared complete upon OPG acceptance.	15-Jul-15
Milestone 50	Condenser Struts - Release Quality Estimate - Resource Loaded Level 4 Schedule (All Units)	\$	7,163	Milestone is declared complete upon OPG acceptance.	15-Sep-15

Layup Milestone Table

Reference	Element of Work	Definition Phase Fixed Fee Payment	Payment Milestone Completion Criteria	Contract Schedule/
	Definition Phase Deliverables/Milestones	\$ 850,918		
Milestone 1	Definition Phase - Draft Baseline Schedule - Level 3	\$ 46,765	Milestone is declared complete upon OPG acceptance.	28-Jul-14
Milestone 2	Engineering Plan and Modifications Summary	\$ 93,529	Milestone is declared complete upon OPG acceptance.	10-Sep-14
Milestone 3	Definition Phase - Final Baseline Schedule - Level 3	\$ 46,765	Milestone is declared complete upon OPG acceptance.	22-Sep-14
Milestone 4	Submission of Design Plans for Acceptance	\$ 46,765	Milestone is declared complete upon OPG acceptance.	30-Sep-14
Milestone 5	Execution Phase - Project Management Plan	\$ 79,467	Milestone is declared complete upon OPG acceptance.	31-Oct-14
Milestone 6	Initial Work Assessment(s)	\$ 46,765	Milestone is declared complete upon entering the information in the required OPG work management system.	15-Nov-14
Milestone 7	Rev PB (80%) Submittals of Design EC's for Turbine, Generator and Aux Systems Lay-Up	\$ 93,529	Milestone is declared complete upon OPG acceptance.	21-Jan-15
Milestone 8	Design COMS for Turbine, Generator and Aux Systems Lay-up	\$ 39,733	Milestone is declared complete upon OPG stakeholder signoff of the COMS declaration.	18-Mar-15
Milestone 9	Commissioning Requirements	\$ 39,733	Milestone is declared complete upon OPG acceptance.	30-Jun-15
Milestone 10	Final Submittals of Design EC's Turbine System Lay-Up	\$ 79,467	The milestone is declared complete upon OPG acceptance of all design packages and related documentation / information to be ready for issuance of notice-to-proceed with field installation pre-requisites.	15-Jul-15
Milestone 11	Commissioning Workplans	\$ 39,733	Milestone is declared complete upon OPG acceptance.	15-Sep-15
Milestone 12	Maintenance Procedures	\$ 39,733	Milestone is declared complete upon OPG acceptance.	15-Sep-15
Milestone 13	Modification Installation Workplans/Comprehensive Work Packages	\$ 79,467	Milestone is declared complete upon OPG acceptance.	15-Sep-15
Milestone 14	Release Quality Estimate - Resource Loaded Level 4 Schedule	\$ 79,467	Milestone is declared complete upon OPG acceptance.	15-Sep-15

Darlington Nuclear Generating Station Turbine Generator Refurbishment Project



Attachment 7.1(12) - CPP / EI Contributions

Canada Pension Plan (CPP)						
Year	Max. Annual Pensionable Earnings	Basic Exemption	Maximum Contributory Earnings	Employee Contribution Rate	Max. Annual Employee Contribution	Max. Annual Self - Employed Contribution
	\$	\$	\$	%	\$	\$
2015 (estimated)	53,900	3,500	50,400	4.95	2,494.80	4,989.60
2014 (estimated)	52,500	3,500	49,000	4.95	2,425.50	4,851.00
2013	51,100	3,500	47,600	4.95	2,356.20	4,712.40
2012	50,100	3,500	46,600	4.95	2,306.70	4,613.40
2011	48,300	3,500	44,800	4.95	2,217.60	4,435.20
2010	47,200	3,500	43,700	4.95	2,163.15	4,326.30
2009	46,300	3,500	42,800	4.95	2,118.60	4,237.20
2008	44,900	3,500	41,400	4.95	2,049.30	4,098.60
2007	43,700	3,500	40,200	4.95	1,989.90	3,979.80
2006	42,100	3,500	38,600	4.95	1,910.70	3,821.40
2005	41,100	3,500	37,600	4.95	1,861.20	3,722.40
2004	40,500	3,500	37,000	4.95	1,831.50	3,663.00
2003	39,900	3,500	36,400	4.95	1,801.80	3,603.60
2002	39,100	3,500	35,600	4.70	1,673.20	3,346.40
2001	38,300	3,500	34,800	4.30	1,496.40	2,992.80
2000	37,600	3,500	34,100	3.90	1,329.90	2,659.80
1999	37,400	3,500	33,900	3.50	1,186.50	2,373.00
1998	36,900	3,500	33,400	3.20	1,068.80	2,137.60
1997	35,800	3,500	32,300	2.93	944.78	1,889.55
Source: http://www.cra-arc.gc.ca/tx/bsnss/tpcs/pyrll/clcltng/cpp-rpc/cnt-chrt-pf-eng.html						

Employment Insurance (EI)							
Year	Max. Annual Insurable Earnings	Rate		Max. Annual Employee Premium		Max. Annual Employer Premium (1.4 x Employee Premium)	
		Federal	Quebec (not used)	Federal	Quebec (not used)	Federal	Quebec (not used)
	\$	%	%	\$	\$	\$	\$
2015 (estimated)	50,000	1.88	1.52	940.00	760.00	1,316.00	1,064.00
2014 (estimated)	48,700	1.88	1.52	915.56	740.24	1,281.78	1,036.34
2013	47,400	1.88	1.52	891.12	720.48	1,247.57	1,008.67
2012	45,900	1.83	1.47	839.97	674.73	1,175.96	944.62
2011	44,200	1.78	1.41	786.76	623.22	1,101.46	872.51
2010	43,200	1.73	1.36	747.36	587.52	1,046.30	822.53
2009	42,300	1.73	1.38	731.79	583.74	1,024.51	817.24
2008	41,100	1.73	1.39	711.03	571.29	995.44	799.81
2007	40,000	1.80	1.46	720.00	584.00	1,008.00	817.60
2006	39,000	1.87	1.53	729.30	596.70	1,021.02	835.38
2005	39,000	1.95	N/A	760.50	N/A	1,064.70	N/A
2004	39,000	1.98	N/A	772.20	N/A	1,081.08	N/A
2003	39,000	2.10	N/A	819.00	N/A	1,146.60	N/A
2002	39,000	2.20	N/A	858.00	N/A	1,201.20	N/A
2001	39,000	2.25	N/A	877.50	N/A	1,228.50	N/A
2000	39,000	2.40	N/A	936.00	N/A	1,310.40	N/A
1999	39,000	2.55	N/A	994.50	N/A	1,392.30	N/A
1998	39,000	2.70	N/A	1,053.00	N/A	1,474.20	N/A
1997	39,000	2.90	N/A	1,131.00	N/A	1,583.40	N/A
Source: http://www.cra-arc.gc.ca/tx/bsnss/tpcs/pyrll/clcltng/ei/cnt-chrt-pf-eng.html							

Attachment 7.1(13) – Cost Allocation Table

- A. This Cost Allocation Table sets out the Allowed Costs and Disallowed Costs. It does not apply to any Fixed Price Work or Firm Price Work not included in the Reimbursable Work Target Cost or Goods (other than those in Support Services & Equipment).
- B. If, during the course of the Project an element of cost is encountered which is not specifically identified in this Cost Allocation Table, the table below will be used as a reference to determine whether such cost will be an Allowed Cost or Disallowed Cost. Such determination will be conducted in collaboration between the Parties having regard to the following factors (in order of precedence):
1. closest analogous category of cost;
 2. application of the principle that Allowed Costs are costs that would not have been incurred by the Contractor but for the Project, that represent added value to OPG, and that have no residual value to the Contractor; and
 3. the purpose of allocating costs as Allowed Costs or Disallowed Costs is to incent the Contractor to be as efficient as possible in carrying out the Work throughout the course of the Project.
- C. The Parties acknowledge that during the Definition Phase, the Contractor intends to work primarily from the Oakville Home Office of SNC-Lavalin Nuclear Inc., as such there are costs at the Home Office identified under the heading "Allowed Cost in Support Services & Equipment" that will be treated as Allowed Costs (and not SS&E) during Definition Phase and Disallowed Costs during Execution Phase, as noted in the comments, notwithstanding that they are identified under the heading "Allowed Cost in Support Services & Equipment" in the table below.
- D. It is the intent of this Cost Allocation Table that costs incurred by the Contractor with respect to Subcontractors be Reimbursable Costs to the extent that they fall within one of the categories of Allowed Costs below.
- E. The total cumulative cost of any item charged on a rental basis in excess of the depreciated capital cost of the item as of the date of its first use in respect of the Work will be a Disallowed Cost.
- F. Defined terms used in this Cost Allocation Table have the same meaning given to those terms in the Agreement.
- G. If there is a conflict between any term of this Cost Allocation Table and any term of the Contractor's RFR Travel and Per Diem Policy, the term in this Cost Allocation Table shall prevail.

Ref.	Cost Element	Allowed Cost (i.e., allowed Reimbursable Cost)	Disallowed Cost (i.e., included within Reimbursable Work Fixed Fee)	Allowed Cost In Support Services & Equipment	Comments
1	Business Services				
1.1	Corporate and business unit accounting		✓		
1.2	Project-dedicated accounting (labour costs only)	✓			
1.3	Corporate and business unit auditing		✓		
1.4	Project-dedicated auditing requested by OPG or on a schedule mutually agreed between OPG and the Contractor (labour costs only)	✓			See section 2.19(b)(4) of the Agreement.
1.4.1	Audit Cost Reimbursement to OPG		✓		See section 2.19(b)(4) of the Agreement.
1.5	Project-dedicated human resources and payroll management and administration (labour costs only)	✓			
1.6	IT management, support services and helpdesks related to Contractor's IT and systems (including services provided by third parties)		✓		
1.6.1	Incremental dedicated IT personnel (labour costs only)			✓	Incremental, Project-dedicated personnel at: (i) the Project Office; or (ii) the Home Office during the Definition Phase only.
1.7	Research and development		✓		
1.8	Business development		✓		
1.9	Tendering of unrelated projects		✓		
1.10	Procurement of subcontracts for Work under this Agreement (labour costs only)	✓			See Schedule 2.11 of the Agreement.
1.11	Pre-contract costs associated with this Agreement		✓		
1.12	Marketing, sales, exhibitions		✓		
1.13	Legal costs for general legal advice and services		✓		
1.14	Legal costs incurred by the Contractor for any claims, actions or proceedings against, or negotiations with, OPG		✓		See section 11.2(f) of the Agreement.
1.14.1	Legal costs incurred by the Contractor for assisting with any claim, actions or legal issues as requested by OPG	✓			
1.15	Advertising, including agency fees and publication costs		✓		

Ref.	Cost Element	Allowed Cost (i.e., allowed Reimbursable Cost)	Disallowed Cost (i.e., included within Reimbursable Work Fixed Fee)	Allowed Cost In Support Services & Equipment	Comments
2	Offices and Facilities				
2.1	<i>Project Office and Site Establishment</i>				"Project Office" means the Contractor's Project-dedicated offices and workshops, which are supplementary to Contractor's current facilities, located on or near the Sites which the Contractor may be required to or decides to use or establish solely for the purpose of performing the Work under this Agreement, including any space occupied by the Contractor's Personnel within OPG provided facilities.
2.1.1	With the prior written approval of OPG, offices, warehouse facilities, stores, workshops, cafeterias, change rooms, showers and similar facilities, including all partitioning, racking and fit-out, temporary foundations and drainage, and temporary utilities (other than facilities provided by OPG)	✓			
2.1.2	Furniture, fixtures and fittings including office and technical equipment			✓	
2.1.3	Mobilise, maintain and demobilise Project Office	✓			
2.1.4	Office cleaning services	✓			
2.1.5	Temporary roads, site preparation and lay-down areas	✓			
2.1.6	Temporary fencing/hoardings, etc.	✓			
2.1.7	Security on Site	see comments	see comments		Security services on Site to be provided by OPG (respecting security services off Site, see cost element 2.1.1).
2.1.8	Snow removal on Site	see comments	see comments		Snow removal on Site to be performed by OPG (respecting snow removal off Site, see cost element 2.1.1).
2.1.9	Landscaping, etc. on Site	see comments	see comments		Landscaping and similar services to on Site be performed by OPG (respecting landscaping and similar services off Site, see cost element 2.1.1).
2.1.10	Waste disposal (ordinary waste stream) on Site	see comments	see comments		Collection and disposal of ordinary waste on Site to be performed by OPG (respecting collection and disposal of ordinary waste off Site, see cost element 2.1.1).
2.1.11	Road sweepers, graders and similar equipment on Site	see comments	see comments		Roadways maintenance on Site to be performed by OPG (respecting roadways maintenance off Site, see cost element 2.1.1).
2.2	<i>Home Office Establishment</i>				"Home Office" means any of the Contractor's offices and workshops, or space within the same, that the Contractor may be required to or decides to use or establish for performing the Work, but which is not used solely for the Work to be performed under this Agreement.

B

Ref.	Cost Element	Allowed Cost (i.e., allowed Reimbursable Cost)	Disallowed Cost (i.e., included within Reimbursable Work Fixed Fee)	Allowed Cost In Support Services & Equipment	Comments
2.2.1	Offices, warehouse facilities, stores, workshops, cafeterias, change rooms, showers and similar facilities, including all fit-out, partitioning, racking, temporary foundations and drainage, and temporary utilities (other than facilities provided by OPG)		✓		
2.2.2	Furniture, fixtures and fittings including office and technical equipment			✓	Incremental, project-specific items to be an Allowed Cost during Definition Phase, Disallowed Cost during Execution Phase.
2.2.3	Mobilise, maintain and demobilise Home Office			✓	Incremental, project-specific items to be an Allowed Cost during Definition Phase, Disallowed Cost during Execution Phase.
2.2.4	Office cleaning services		✓		
2.2.5	Security guards		✓		
2.3	Corporate Office Establishment				"Corporate Office" means any of the Contractor's corporate offices and workshops, or space within the same, but which is not used solely for the Work to be performed under this Agreement.
2.3.1	Offices, warehouse facilities, stores, workshops, cafeterias, change rooms, showers and similar facilities, including all fit-out, partitioning, racking, temporary foundations and drainage, and temporary utilities (other than facilities provided by OPG)		✓		
2.3.2	Furniture, fixtures and fittings including office and technical equipment		✓		
2.3.3	Mobilise, maintain and demobilise Corporate Office		✓		
2.3.4	Office cleaning services		✓		
2.3.5	Security guards		✓		
2.4	Office Consumables				
2.4.1	Project Office stationery and office equipment			✓	
2.4.2	Home Office stationery and office equipment			✓	Allowed Cost during Definition Phase, Disallowed Cost during Execution Phase.
2.4.3	Corporate Office stationery and office equipment		✓		
2.4.4	Consumables for electronic equipment including but not limited to printer cartridges, toner, removable storage media, backup devices and media, flash drives			✓	Incremental, Project-dedicated items at: (i) the Project Office; or (ii) the Home Office during the Definition Phase only.

Ref.	Cost Element	Allowed Cost (i.e., allowed Reimbursable Cost)	Disallowed Cost (i.e., included within Reimbursable Work Fixed Fee)	Allowed Cost In Support Services & Equipment	Comments
2.5	Electronic Equipment				
2.5.1	Computer hardware, firmware and software, including but not limited to workstations, desktop computers, CAD workstations, laptop or handheld or portable computers and similar equipment, network infrastructure, printers, plotters, photocopiers, scanners, projectors, communication devices, video conferencing, telephones, cell phones, smartphones Blackberrys and the similar items, radios, cameras, answer machines, switchboards, routers, including all associated licenses, carriage bags, cables and cabling, etc.			✓	Incremental, Project-dedicated equipment at: (i) the Project Office; or (ii) the Home Office during the Definition Phase only. Not to exceed the depreciated capital cost of such equipment as of the day of its first use in respect of the Work.
2.5.2	All enterprise and project management systems, document management systems, accounting systems, staff and payroll systems, business administration systems and similar systems		✓		
2.5.3	All costs associated with telephone, telex, telefax, facsimile, cell phone, radios and internet connections, including set-up costs, rentals, call/usage costs, etc.			✓	Incremental, Project-dedicated services at: (i) the Project Office; or (ii) the Home Office during the Definition Phase only.
2.5.4	Photocopying, photography, scanning, drawing reproduction, micro filming, etc., including all consumables			✓	Incremental, Project-dedicated personnel and services at: (i) the Project Office; or (ii) the Home Office during the Definition Phase only.
2.5.5	All miscellaneous cleaning, maintenance and other running costs of electronic devices and infrastructure			✓	Incremental, Project-dedicated items at the Project Office only.
3	Construction Tools and Equipment				
3.1	Construction equipment including maintenance costs			✓	Construction equipment maintenance and repair to be included in and limited to the allowance within the construction equipment schedule rental rates and OPSS Adjustment Percentage.
3.2	Maintenance of Contractor-owned construction equipment	see comments	see comments		Included in and limited to the allowance within the construction equipment schedule rental rates. See cost element 3.1.
3.3	Maintenance of hired/rented construction equipment	see comments	see comments		Included in and limited to the allowance within the construction equipment schedule rental rates and OPSS Adjustment Percentage. See cost element 3.1.
3.4	Repairs to Contractor-owned or hired/rented construction equipment (other than equipment provided by OPG)	see comments	see comments		Included in and limited to the allowance within the construction equipment schedule rental rates and OPSS Adjustment Percentage. See cost element 3.1.
3.5	Mobilisation and demobilisation of construction equipment		✓		

Ref.	Cost Element	Allowed Cost (i.e., allowed Reimbursable Cost)	Disallowed Cost (i.e., included within Reimbursable Work Fixed Fee)	Allowed Cost In Support Services & Equipment	Comments
3.6	Non-productive or standing time of construction equipment (including rented equipment)		✓		
3.7	Cumulative rental amounts for Contractor owned construction equipment in excess of the depreciated capital cost of the equipment as of the day of its first use in respect of the Work		✓		Rental rates for new Contractor owned construction equipment will be separately determined and agreed to as part of the Execution Phase SS&E Target Cost.
3.8	Construction equipment rental charges in excess of, the lesser of: (1) the rate applicable in the OPSS 127 schedule (after application of the Contractor's OPSS Adjustment Percentage), and (2) current market value		✓		
3.9	Construction equipment operators	✓			
3.10	Site transport for the Contractor, including but not limited to, pick-ups, cars, buses and coaches			✓	Not to exceed the depreciated capital cost of such site transport as of the day of its first use in respect of the Work.
3.11	Waste disposal bins (for non-routine disposal on ordinary wastes)	✓			
3.12	With the prior written approval of OPG, modifications to all construction equipment, whether Contractor-owned, hired/rented or otherwise	✓			
3.13	With the prior written approval of OPG, special equipment (not included in the construction equipment schedule or OPSS 127 schedule)	✓			
3.14	Small tools and consumables with value per item of less than \$2,000 before tax			✓	
3.15	Scaffolding materials			✓	
3.16	Scaffolding labour	✓			
3.17	Personal protective equipment and safety clothing and equipment, e.g., safety glasses, gloves, hard hats, safety boots			✓	
3.18	Laundrying of personal protective equipment and safety clothing and equipment (OPG issued items only)	see comments	see comments		OPG to provide laundrying services for OPG issued items.
3.19	Nuclear industry specific safety equipment, e.g. radiation personal protective equipment (RPPE), radiation suits and personal protective equipment	see comments	see comments		OPG to provide radiation personal protective equipment (RPPE).
3.20	Laundrying of radiation personal protective equipment (OPG issued items only)	see comments	see comments		OPG to provide laundrying services for OPG issued items.

Ref.	Cost Element	Allowed Cost (i.e., allowed Reimbursable Cost)	Disallowed Cost (i.e., included within Reimbursable Work Fixed Fee)	Allowed Cost In Support Services & Equipment	Comments
3.21	Construction equipment provided by OPG		✓		See section 3.5 of the Agreement.
3.22	With prior written approval of OPG, maintenance or repairs to construction equipment provided by OPG	✓			See section 3.5 of the Agreement
4	Providing the Work				
4.1	Work that results from a breach of prudent practices, a failure of the Contractor to follow its quality assurance plan, Work that is not in conformance with this Agreement, and Work that is Defective		✓		
4.2	Costs not justified by the Contractor's accounts and records		✓		
4.3	Costs which should not have been paid to a Subcontractor in accordance with its subcontract and this Agreement		✓		
4.4	Charges by Contractor for any payments made directly to a Subcontractor by OPG due to Contractor failing to make payment in a timely manner	see comments	see comments		See section 2.14(j) of the Agreement.
4.5	Costs of implementing a Project Change Directive agreed to by OPG	✓			
4.6	Resources, including labour, not used to perform the Work (after allowing for reasonable availability and utilisation) or not taken away from the Site when OPG's Representative has so requested		✓		
4.7	Except with the prior written approval of OPG, contingency equipment		✓		
4.8	Costs not arising from carrying out the Work specified in this Agreement		✓		
4.9	All costs associated with carrying out Fixed Price Work or Firm Price Work, including Fixed Price Work or Firm Price Work carried out by Subcontractors (in accordance with the applicable contract terms)		✓		
4.10	Except with the prior written approval of OPG, costs to change Subcontractors		✓		
4.11	Any costs associated with services provided before the date of this Agreement		✓		
4.12	Except with the prior written approval of OPG, any costs associated with accessing areas outside the Designated Areas		✓		See section 2.15(b) and (c) of the Agreement.

Ref.	Cost Element	Allowed Cost (i.e., allowed Reimbursable Cost)	Disallowed Cost (i.e., Included within Reimbursable Work Fixed Fee)	Allowed Cost In Support Services & Equipment	Comments
4.13	Costs of Contractor satisfying itself before relying on the accuracy or completeness of any drawings, information, assumptions, representations or estimates provided or made available by any member of the OPG Group	✓			See section 2.1(h) of the Agreement.
4.14	Costs of Contractor for modification or re-submittal of Submittals unless such Work is Defective	✓			See section 2.8 of the Agreement.
4.15	Rework and Defective Work				
4.15.1	Costs respecting Rework	✓			See section 7.1(b) of the Agreement.
4.16	Warranty Work				
4.16.1	Correcting, repairing or replacing a Defective part of the Work or Goods, of a part of the Work which is determined to be Defective or fails because of any defect		✓		See section 9.7(b) of the Agreement.
4.16.2	Correcting or replacing other damage		✓		See section 9.8(b) of the Agreement.
4.16.3	Acceleration costs	✓			
5	Goods				
5.1	All Goods, including transportation and insurance in storage and transit, procured in compliance with the Contractor's materials management plan	see comments	see comments		See section 7.1(g) of the Agreement.
5.2	All Goods for temporary works construction, including incidental protection of the Work	see comments	see comments		See section 7.1(g) of the Agreement.
5.3	Discounts, rebates and salvages	see comments	see comments	see comments	All discounts, rebates and salvages will be deducted from the actual costs paid to the Contractor. i.e. OPG will receive the full benefit of all discounts, rebates and salvages.
6	Staff				
6.1	Project resources (all grades up to and including Project Director)	✓			
6.2	Project resources (all grades above Project Director)		✓		
6.3	Non-project staff		✓		
6.4	Legal staff		✓		

Ref.	Cost Element	Allowed Cost (i.e., allowed Reimbursable Cost)	Disallowed Cost (i.e., included within Reimbursable Work Fixed Fee)	Allowed Cost In Support Services & Equipment	Comments
6.5	Recruitment costs (including costs of obtaining work permits or additional documentation to support security clearances), signing and retention bonuses, incentive payment and similar payments to key Contractor and Subcontractor personnel (all grades above Project Director)		✓		
6.6	Recruitment costs (including costs of obtaining work permits or additional documentation to support security clearances), signing and retention bonuses, incentive payment and similar payments to key Contractor and Subcontractor personnel (professional staff)		✓		
6.7	Recruitment costs (including costs of obtaining work permits or additional documentation to support security clearances), signing and retention bonuses, incentive payment and similar payments to key Contractor and Subcontractor personnel (unionized labour only as per applicable collective agreement)	✓			
6.8	Termination, severance and layoff costs (all grades above Project Director)		✓		
6.8.1	Termination, severance and layoff costs (professional staff)		✓		
6.9	Termination, severance and layoff costs (unionized labour only as per applicable collective agreement)	✓			
6.10	Company vehicles, including all related costs and expenses			✓	Marked and unmarked company vehicles assigned to an employee or to a car pool will be considered part of this cost elements. Not to exceed the depreciated capital cost of such transport as of the day of its first use in respect of the Work. Allowed Cost during Execution Phase, Disallowed Cost during Definition Phase
6.10.1	Company vehicles as part of a personal compensation package		✓		
6.11	Except with the prior written approval of OPG, independent consultants and inspectors		✓		
6.12	Site specific staff training required in accordance with the Agreement, or to satisfy the requirements of OPG safety standards and policies	✓			
6.13	Payroll burdens (included within Attachment 7.1(3) – Labour Schedules to Schedule 7.1)	✓			Note: All payroll burdens are to be included within the rate build-up for each resource in Attachment 7.1(3) – Labour Schedules to Schedule 7.1. Payment for labour burdens will not be made separately. Total payments for EI, CPP, etc. will not exceed statutory caps for each worker.

Ref.	Cost Element	Allowed Cost (i.e., allowed Reimbursable Cost)	Disallowed Cost (i.e., included within Reimbursable Work Fixed Fee)	Allowed Cost In Support Services & Equipment	Comments
6.14	Payroll burdens (not included within Attachment 7.1(3) – Labour Schedules to Schedule 7.1)		✓		
6.15	Employee benefits (included within the Attachment 7.1(3) – Labour Schedules to Schedule 7.1)	✓			
6.16	Employee benefits (not included within Attachment 7.1(3) – Labour Schedules to Schedule 7.1)		✓		
6.17	Prudently incurred travel, accommodation and subsistence costs for unionised resources, in accordance with the collective agreement	✓			Travel, accommodation and subsistence costs will not be subject to mark-up and will not be used for purposes of determining the Reimbursable Work Fixed Fee. Marked and unmarked company vehicles assigned to an employee or to a car pool will be considered part of cost element 6.9 and related costs and expenses for mileage, gas, maintenance, etc. will be recoverable under cost element 6.9 and not this cost element.
6.17.1	Prudently incurred travel, accommodation and subsistence costs for unionised supervision including Foreman, General Foreman and Superintendents, in accordance with the Contractor's RFR Travel and Per Diem Policy	✓			Travel, accommodation and subsistence costs will not be subject to mark-up and will not be used for purposes of determining the Reimbursable Work Fixed Fee.
6.18	Prudently incurred travel, accommodation and subsistence costs for non-unionised Project staff (all grades up to and including Project Director), in accordance with the Contractor's RFR Travel and Per Diem Policy	✓			Travel, accommodation and subsistence costs will not be subject to mark-up and will not be used for purposes of determining the Reimbursable Work Fixed Fee.
6.19	All travel, accommodation and subsistence costs for non-unionised Project staff (all grades above Project Director)		✓		
6.20	All travel, accommodation and subsistence costs for non-project staff		✓		
6.21	All travel, accommodation and subsistence costs in excess of those allowed in the relevant collective agreement or the Contractor's RFR Travel and Per Diem Policy		✓		
6.22	Relocation costs (unionized labour only; if required under applicable collective agreement only)	✓			
6.22.1	Relocation costs for non-unionized staff in accordance with the Contractor's RFR Travel and Per Diem Policy	✓			

Ref.	Cost Element	Allowed Cost (i.e., allowed Reimbursable Cost)	Disallowed Cost (i.e., included within Reimbursable Work Fixed Fee)	Allowed Cost In Support Services & Equipment	Comments
6.23	Salary or burden adjustments for unionised resources	✓			All salary and burden adjustments made by a recognised union with respect to work carried out for OPG at the Site for applicable trades, will be made to Attachment 7.1(3) – Labour Schedules to Schedule 7.1 at the applicable date. Adjustment to dependent burdens will be made in the same proportions as was included in the original Attachment 7.1(3) – Labour Schedules to Schedule 7.1.
6.24	Safety and first aid provision required to satisfy applicable OPG policies and government regulations	✓			
6.25	Indemnity payments for grievance-related costs if the Contractor or applicable Subcontractor is in breach of its obligations		✓		If the Contractor or applicable Subcontractor is not in breach of its obligations and a grievance is put forward, the costs to defend the grievance are allowed costs.
7	Business Expenses and Entertainment				
7.1	Any costs for food, beverages, lunches, entertainment, refreshments and similar items		✓		Other than as permitted by cost elements 6.17-6.21 above.
7.2	Cost of social events		✓		
7.3	Safety events, rewards and recognitions		✓		
8	Financial				
8.1	Franchises, royalties and licenses		✓		
8.2	General fees paid on a regular basis		✓		
8.3	Interest, financing charges, banking charges	see comments	see comments	see comments	Disallowed Cost other than as permitted by cost element 8.12 and section 7.12 of the Agreement
8.4	Profit for this Project		✓		
8.5	Parent entity and other affiliate guarantees		✓		
8.6	Licenses payable for specialist processes	✓			
8.7	Local and statutory authority charges as a result of Contractor non-compliance		✓		
8.8	Delay damages or disincentives deducted from the Contractor's applications for payment in accordance with this Agreement		✓		
8.9	Costs arising from any breach of this Agreement by the Contractor		✓		

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Ref.	Cost Element	Allowed Cost (i.e., allowed Reimbursable Cost)	Disallowed Cost (i.e., included within Reimbursable Work Fixed Fee)	Allowed Cost In Support Services & Equipment	Comments
8.10	Interest payments as a result of the Contractor or Subcontractor making late payment		✓		
8.11	Taxes	see comments	see comments	see comments	See section 7.6 of the Agreement.
8.12	Cost of the Interim Project LC, the Project LC and the Warranty LC	✓			See section 7.1 of the Agreement. The cost of the Interim Project LC, the Project LC and the Warranty LC will not be subject to mark-up and will not be used for purposes of determining the Reimbursable Work Fixed Fee.
8.13	Costs to vacate Liens attributed to the Contractor or its Subcontractors		✓		
8.14	Costs arising from any breach of Applicable Law by the Contractor or its Subcontractors, or by any Person for whom the Contractor or its Subcontractors are responsible at law, including any fines or charges arising from a breach of Applicable Law		✓		
8.15	Any costs in respect of any indemnity in favour of any member of OPG Group payable by the Contractor under this Agreement		✓		
8.16	Any items, costs or expenses referred to in this Agreement as "at the Contractor's expenses/cost" or as being the Contractor's responsibility to pay for, or to the Contractor's account, or similar language indicating payment for portions of the services as the responsibility of the Contractor, and any related costs.		✓		Costs, charges or expenses referred to in the Agreement as being at the Contractor's "own cost" or the "Contractor's cost" will, to the extent referable to the performance of Reimbursable Work (but not, for clarity, Fixed Price Work or Firm Price Work), be Reimbursable Costs if such costs, charges and expenses are Allowed Costs and not Disallowed Costs. See section 1.12 of the Agreement.
8.17	Costs associated with SR&ED credit applications	✓			See section 7.6(f) of the Agreement.
8.18	Costs incurred by Contractor that are attributable to an excusable delay or force majeure delay	see comments	see comments	see comments	Disallowed Cost other than as permitted by section 6.2 of the Agreement.
8.19	Fees for regulatory approvals which the Contractor is responsible for obtaining	✓			
9	Insurance				

Ref.	Cost Element	Allowed Cost (i.e., allowed Reimbursable Cost)	Disallowed Cost (i.e., included within Reimbursable Work Fixed Fee)	Allowed Cost In Support Services & Equipment	Comments
9.1	All costs associated with the Contractor procuring and maintaining in full force and effect with financially responsible insurance carriers (with A.M. Best ratings of at least A- or a Standard & Poor's rating of at least BBB) of recognized standing acceptable to OPG, or with the appropriate Governmental Authorities, all coverages referred to in section 4.2	✓			See section 4.2 of the Agreement. The cost of insurance will not be subject to mark-up and will not be used for purposes of determining the Reimbursable Work Fixed Fee.
9.2	All costs associated with the Contractor procuring and maintaining in full force and effect with financially responsible insurance carriers (with A.M. Best ratings of at least A- or a Standard & Poor's rating of at least BBB) of recognized standing acceptable to OPG, or with the appropriate Governmental Authorities, all coverages referred to in section 4.2(e)		✓		Allowance to be made within construction equipment schedule rental rates and OPSS Adjustment Percentage for cost associated with Construction Equipment Insurance provided in accordance with section 4.2(e) of the Agreement.
9.3	Any costs associated with OPG being required to purchase insurance due to the Contractor failing to maintain any insurance required under section 4.4(e) or any such insurance is inadequate in its scope		✓		OPG may set off the costs thereof against any monies then or thereafter due, owing or payable to the Contractor and may set off and retain, in addition, and in consideration for its services in procuring such insurance, an amount equal to the cost thereof, in addition to the cost of such insurance.
9.4	Deductibles payable as a result of an insurable event under section 4.4(f) of the Agreement to the extent of the Contractor's responsibility		✓		See section 4.4(f) of the Agreement
9.5	Any costs associated with carrying out the Work, including rework, covered by an accepted insurance claim		✓		
10	Miscellaneous				
10.1	Hazardous and non-hazardous waste disposal charges where not provided for by an OPG waste disposal programme	✓			
10.2	Any other items specified in this Agreement to be a Disallowed Cost		✓		
10.3	Costs of additional inspections, tests or approvals required by OPG	✓			

Attachment 1 to Exhibit 6.3(a)

**SNC-LAVALIN**
Nuclear**AECON**
Joint Venture

Document Identification

509407-00-RFR-30WI-0001

Revision

0

Title: **Travel and Per Diem Policy – Darlington RFR**

Date Effective: 03-Feb-2012

Retain Until: 2024

Prepared By: Aaron Johnson
Project Manager
SLN-AECON JV

Date: _____

Reviewed By: Rob Frasca
Project Manager
SLN-AECON JV

Date: _____

Approved By: Brian Savage
Project Director
SLN-AECON JV

Date: _____

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RECORD OF REVISION					
Revision Number	Date	Description	Authorizing Signatures		
			Prepared By:	Reviewed By:	Approved By:

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Title: **Travel and Per Diem Policy – Darlington RFR**

1 Application

This Travel and Per Diem Policy (Policy) sets out how employees assigned to work on the Ontario Power Generation Inc. Darlington Retube and Feeder Replacement (RFR) Project will be reimbursed for their expenses incurred in respect of the Project. Depending on the Project requirements, employees may be required to travel between Joint Venture Home Offices and the Project Site Offices intermittently or be assigned to the Project Site for an extended duration.

This Policy applies to all non-EPSCA paid employees, including but not limited to professional staff, management, and trade supervision.

This Policy is effective for the period of the employee's assignment as stated in the employee's Letter of Understanding (LOU). Adherence to this Policy is mandatory and any deviation may result in non-payment or reimbursement of the expenses incurred.

2 Definitions

2.1 Assignment

Assignment means a posting to an assignment location for the Project, for the purpose of taking a direct part in assigned work for a defined period.

2.2 Assignment Location

The normal place of work to which an employee reports while on assignment. The Assignment Location may be a Joint Venture Home Office or the Project Site Office.

2.3 Employer

Employer refers to the specific Joint Venture Party, SNC-Lavalin Nuclear Inc. (SLN) or Aecon Construction Group Inc. (Aecon), by which an employee is directly paid.

2.4 Joint Venture Home Offices

Joint Venture Home Offices are as follows: SLN Oakville – 2275 Upper Middle Road, Oakville

- Aecon Cambridge – 150 Sheldon Drive, Cambridge
- ES Fox St. Catharines – 9127 Montrose Rd, Niagara Falls
- SLN Pickering – 1053 Brock Road, Pickering
- Aecon Pickering – 890 Brock Road, Pickering
- Candu Energy Mississauga – 2285 Speakman Drive, Mississauga

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2.5 Immediate Family Member

Immediate Family member means spouse, common-law spouse, parent, sibling, or child.

2.6 Mileage Rate

Mileage Rate means an all-inclusive rate per kilometer that is used to calculate personal vehicle business travel amounts. The Mileage Rate shall be the sole payment for use of personal vehicle, and shall cover all costs to operate the vehicle, as defined by the Employer's Corporate Policy of any employee entitled to personal vehicle travel. Any such Mileage Rate shall not exceed the recommended rate of the Canadian Revenue Agency.

2.7 Project

The Project means the Ontario Power Generation Inc. Darlington RFR Project.

2.8 Site Offices

Site Offices refer to offices/trailers at the Darlington Energy Complex, the GM Oshawa building, and the Darlington Nuclear Generating Station.

2.9 Temporary Work Location

Temporary Work Location means a location to which an employee is required to travel to/from their Assignment Location.



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3 Per Diem Allowance

3.1 Eligibility

Where an employee is assigned to an Assignment Location other than their own Employer's home office for a period that exceeds 1 month, they may be eligible for a per diem allowance based on meeting all of the following requirements:

- The Assignment Location is greater than 90 km from employee's principal residence by the most direct route normally travelled in the circumstances
- The employee must not lease his/her principal residence to any one else while on assignment.
- The employee must not lease his/her principal residence from an Immediate Family member.
- The employee must not return to his/her permanent residence at the end of each day, and must keep a temporary residence within 50 km of the assignment location. (Proof of temporary residence is required.)
- The employee must not lease his/her temporary residence from an Immediate Family member while on assignment.
- The employee must fill out a TD4 – Declaration of Exemption "Employment at a Special Work Site" form and remit to their Employer.
- The employee's eligibility for a per diem allowance will be at the approval and reasonable discretion of the Project Director. For greater certainty, where possible, employees who live near the Site Offices will be hired specifically for the Project.

3.2 Per Diem Allowance

At the approval of the Project Director based on the above criteria, staff eligible for a per diem allowance will receive a per diem rate of \$600 per week (inclusive of weekends and statutory holidays) which is an all-inclusive allowance for accommodation, breakfast, lunch, dinner, return trips to the employee's principal place of residence and for misc. expenses (laundry, phone calls, etc). This allowance will be paid on the employee's regular pay schedule. Employees on approved vacation or short term disability may be eligible for a reduced per diem allowance as described in section 3.3. Any additional business travel will be covered as described below.

3.3 Vacation and Time Away from the Project

Employees eligible for a per diem allowance shall be entitled to receive a reduced Per Diem allowance amount during a vacation (up to 4 weeks) or short term disability/leave, if



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the employee incurs costs to keep their temporary residence. Receipts to support the incurred cost shall be submitted and approved by the Project Director. The reduced per diem rate while on vacation or short term leave shall be 70% of the employee's eligible per diem allowance.

3.4 Spouses Eligible for Per Diem Allowance

If spouse or common law couples are both on assignment and eligible for a per diem allowance, the first cohabitant will be eligible for the full per diem allowance while the second will be eligible for a reduced per diem allowance reflective of the incremental cost of living. As a guideline, the second cohabitant shall receive 60% of the full per diem allowance. This eligibility will be at the approval and reasonable discretion of the Project Director.

3.5 Termination of Employment or Per Diem Allowance

Should the assignment be terminated for any reason other than cause the employee will be provided with one month of written notice. If the notification period is shorter than 1 month, the employee will be reimbursed for up to two weeks of per diem expenses. Should proper notification for termination not be given by the Employer to the employee, Ontario Power Generation, Inc. shall not bear the incremental cost of improper notification.

4 Wrap-Around/Turn-Around

Where an employee is receiving a per diem allowance, there shall be no further payment for return trips to and from their principal residence (commonly referred to as wraparound, wrap, turnaround, or home leave).

5 Business Travel

Where an employee is required to travel from his/her Assignment Location to a Temporary Work Location for business purposes, they may be entitled to receive travel amounts in accordance with this policy. However, if the assignment location is less than 50km from the employee's principal residence by the most direct route normally travelled than the employee does not qualify for business travel expenses. An employee may use his/her own vehicle for business purposes if this proves to be less expensive and more practical than renting a car, or using a leased pool vehicle. The final decision to use an employee's personal vehicle or a pool vehicle shall be at the discretion of the Project Director.



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5.1 Personal Vehicle Travel

This section applies only to employees using their personal vehicle for business travel. Employees driving their own vehicles on company business are not insured for collision or third party liability under the SLN or Aecon insurance policies. In the event of an accident the employee's personal auto insurance policy provides sole coverage for both collision and liability, and the employee must pay the deductibles required by his/her personal auto insurance policy.

SLN and/or Aecon accepts no liability for any loss, damage, nor injury that may result from utilization of a personal vehicle for business purposes.

Personal vehicle mileage will be reimbursed through a mileage rate which is applied to the number of kilometers recorded for business travel. The mileage rate is to cover all costs related to operation of the vehicle.

5.1.1 Eligibility

Where travel to/from the Temporary Location is categorized by the pre-defined section below, the mileage reimbursement will be calculated using the distance from the employee's principal residence or the distances shown in 5.1.2, whichever is lower. Where the Temporary Location is not categorized by 5.1.2, the mileage will be calculated using the closer of the employee's principal residence and their assignment location. All calculations shall use the mileage reimbursement rate in effect at the time of travel.

5.1.2 Lump Sum Travel (Pre-defined)

- SLN Oakville to Site Office – 103km x Mileage Rate (each way)
- Aecon Cambridge to Site Office – 150km x Mileage Rate (each way)
- ES Fox St. Catharines to Site Office – 198km x Mileage Rate (each way)
- Aecon Cambridge to SLN Oakville – 65km x Mileage Rate (each way)
- ES Fox St. Catharines to SLN Oakville – 101km x Mileage Rate (each way)
- Candu Energy Mississauga to Site Office – 98km x Mileage Rate (each way)
- Aecon or SLN Pickering to SLN Oakville – 80km x Mileage Rate (each way)

5.2 Air Travel

All air travel arrangements must be made through the Employer's travel agent and will be economy fare based except for where a non-stop flight is greater than five hours and pre-approved by the Project Director. In no event shall the fare exceed Business Class.

5.3 Expenses While Travelling

If an employee incurs expenses while travelling, they are to be reimbursed in accordance with their Employer's expense policy. All expenses for personal or business meals must



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be reasonable and justified by receipts in the proper (detailed) form. As a guideline, \$10 for breakfast, \$15 for lunch, and \$35 for dinner is reasonable.

Alcohol shall not be a permissible expense. Hotel reservations must be at the lowest rate available for reasonable accommodation at the destination. All expenses must be approved by the Project Director.

Examples of acceptable expenses:

- Meals during business hours
- Meals outside of business hours if overnight stay required
- Hotel accommodation costs (if multiple days required at Temporary Location)
- Toll road fees (if required during rush hour periods)

5.4 Cap on Expenses

In the event the employee meets the criteria for the Per Diem Allowance per 3.1, but elects to receive Business Expenses in lieu of the Per Diem Allowance, no employee shall be entitled to claim for total monthly Business Expenses an amount greater than the equivalent per diem rate less 10%. The intent of this provision is to encourage employees on assignments exceeding 30 days, to not spend excessive durations travelling to/from their assignment.

6 Relocation Allowance

Should the employee decide to permanently relocate to the assignment location he/she will be eligible for relocation assistance as approved by the Project Director and OPG jointly. The basis for relocation assistance shall be in accordance with Aecon Policy 7.3.4.

7 Company Vehicles

SLN or Aecon staff or supervision who utilize a (unmarked) company vehicle are not eligible for any personal vehicle travel amounts.

8 Taxation

All remuneration paid to the employee is subject to the prevailing income tax laws and regulations. The employee is solely responsible for complying with all income tax regulations and for establishing his personal status with regard to residence and taxation with the taxation authorities prior to departure for the assignment location and for final tax status following return.

It remains the responsibility of the employee to provide satisfactory documentation to the Human Resources Department to allow the Employer to adequately assess the taxability of any of the above-mentioned benefits.

AECON GROUP INC. CORPORATE POLICIES	DATE: April 2006	POLICY NUMBER 7.3.4
	SUPERSEDES: 7.3.5 Jan. 2003	Page 1 of 5
SUBJECT: Relocation		
DISTRIBUTION: All locations	ISSUED AND APPROVED BY: Vice President Human Resources	

POLICY

1 General Policy

- Aecon is committed to their employees. In doing so, Aecon wants to ensure that during relocation the move can be made as comfortable as possible. This policy addresses individual employee relocation needs.
- Relocation will be at the discretion of the employee and an employee's performance or career opportunity will not be negatively impacted as a result of choosing not to take a position that requires them to relocate.

2 Eligibility

- This policy applies to Aecon's permanent full-time employees and does not apply to employees working under specific employment contracts or employees with specified termination dates, e.g. employees on field or project assignments, or employees on expatriate projects.
- Employees under collective agreements are treated according to the provisions of the applicable collective agreement.

3 Policy Implementation

There are numerous circumstances that might arise with respect to relocations and this policy is not intended to address each and every situation. Rather it provides guidelines, which allow for some latitude and discretion for the local senior management in partnership with human resources and the relocating employee to agree on the appropriate relocation provision that will be applied depending upon the type and circumstances of the relocation.

When questions or disputes arise with respect to either the intent of the policy or guidelines, the Division President, in consultation with Human Resources will make a final decision.

Guidelines:

- Both the receiving and originating departments (where applicable) must agree that there is a business need and justification for the relocation and that the best interests of the employee have been considered.
- Human Resources must be advised of a relocation situation in advance of it being finalized and any relocation provision being communicated to the impacted employee.
- When Aecon accommodates an employee who initiated a transfer request to another region, any payment for moving and relocation expenses will be at the discretion of the business group bearing the cost and subject to final approval of that Division President.

Relocation Provisions

Relocation assistance will be comprised of two areas, with specific allocations agreed as outlined in the policy guidelines provided:

Relocation Allowance

Employees may be eligible for reimbursement for the following costs incurred, per the limits indicated and subject to the approval of the Division President and HR Manager. Reimbursement of these costs will be

AECON GROUP INC.	CORPORATE POLICIES	DATE: April 2006	POLICY NUMBER 7.3.4
		SUPERSEDES: 7.3.5 Jan. 2003	Page 2 of 5
SUBJECT:	Relocation		

based on a lump sum payment calculated on the Aecon relocation worksheet (worksheet provided with this policy and available through Human Resources). This lump sum will be processed through accounts payable or payroll, net deductions, per applicable provincial legislation based on what items are taxable and what are not. Employees should submit their allowance receipts to their governing tax body in order to claim for eligible reimbursement of expenses.

Maximum covered costs include:

- Legal and house sale fees (e.g. real estate commission on sale of former house and legal fees associated with sale of former house and purchase of new house). Reimbursement limit is 10% of the value of the house or \$50,000, whichever is less.
- Property purchase taxes; mortgage penalty or break lease costs. This excludes GST on the purchase of a new home.
- Assistance will be granted for personal and household effects. Eligible expenses include packing, moving, storage costs (maximum 30 days), unpacking and insuring at replacement value, shipping of two automobiles, temporary accommodation and food allowance (if required for up to 30 days).
- Cargo Protection: The company will pay the mover's premium for Full Replacement Protection for your personal/household effects and automobiles based on a declared value not to exceed \$150,000 without special approval. Any coverage above this amount will be at the expense of the employee. The employee is responsible for the cost of appraisals for any high value items.
- Travel costs for two people to the new location (additional people must be approved) will be reimbursed to a maximum of economy air fare by the most direct route, for each member of the family, when supported by fare receipts. When private motor vehicle is used in lieu of public conveyances, a vehicle allowance per kilometre by the most direct route will be reimbursed up to the maximum airfare that would have been paid.
- Expenses related to immigration, work permits, border related fees etc.
- Personal tax advice if relocating to a different country
- Registering vehicles (maximum two)
- Replacing curtains
- Cable and appliance disconnection and reconnection costs (this does not include the price of a new appliance).
- Dogs and cats may be transported as extra baggage on the airline with the employee. The company will reimburse for the rental of up to a maximum of 2 pet carriers. The employee is responsible for any boarding, veterinary or other fees associated with the animals.
- Swing sets and playground equipment will be moved provided the dismantling and reassembly are done by the employee.
- Incidental travel costs not normally covered under moving household effects (e.g. travel expenses for a familiarization trip, travel and accommodation expenses to the new location for the employee's family). See relocation reimbursement worksheet for limits
- The Human Resources Department will support employees in co-ordinating move arrangements where applicable.
- This relocation assistance will be provided to only one employee per family per move.

AECON GROUP INC.	CORPORATE POLICIES	DATE: April 2006	POLICY NUMBER 7.3.4
		SUPERSEDES: 7.3.5 Jan. 2003	Page 3 of 5
SUBJECT: Relocation			

The employee must receive three quotes for shipment of their possessions and must accept the one that is most reasonable and customary.

Loss of Equity Assistance

In exceptional circumstances, loss of equity assistance may be approved in instances where an employee is relocated from a significantly lower cost housing location to a significantly higher cost housing location. This assistance requires the approval of the Divisional President and the Vice President Human Resources.

List of Restricted Items

The following are considered restricted items and are not normally shipped or stored at Company expense:

- barbeques made from brick, cement or stone
- patio stones
- building materials (lumber, cement blocks, etc.)
- portable buildings such as tool sheds
- boats, trailers and snowmobiles
- motors
- aircraft, parts of aircraft
- perishable goods
- fuel, both liquid and solid
- explosives, corrosives, flammable liquids, cooking oil
- livestock, farm animals, fish or birds
- liquor or wines
- firearms, ammunition
- goods requiring climatically controlled conditions
- coin or other collections
- plants
- art work
- large musical instruments (e.g. piano)

When reviewing eligibility the accountable Manager and Human Resources Manager will decide eligibility of these items for reimbursement.

Termination of Employment

If an employee terminates their employment with Aecon by resigning, they will be required to refund Aecon a portion of the relocation expenses on the following basis:

- Termination within 6 months of relocation 100% of the relocation costs must be reimbursed
- Termination within 6-12 months of relocation 50% of the relocation costs must be reimbursed;

Aecon reserves the right to set-off any required repayments against any amounts that Aecon may owe the employee at the time of the resignation.

4 Role of Management:

- Contact Human Resources whenever a relocation situation arises.
- Ensure appropriate approvals, as outlined in this policy, are obtained before communicating the relocation provisions to an employee.

AECON GROUP INC.	CORPORATE POLICIES	DATE: April 2006	POLICY NUMBER 7.3.4
		SUPERSEDES: 7.3.5 Jan. 2003	Page 4 of 5
SUBJECT: Relocation			

5 Role of Human Resources

- Train, coach and support managers and employees in implementing the relocation policy.
- The Human Resources Department will support employees in co-ordinating move arrangements where applicable.

6 Role of Employee

- All non-taxable moving costs (as outlined by CRA) will be reimbursed by the Finance Department. Any miscellaneous moving cost receipts that do not qualify as non-taxable must be recorded as a taxable benefit by the payroll department.

AECON GROUP INC.	CORPORATE POLICIES	DATE: April 2006	POLICY NUMBER 7.3.4
		SUPERSEDES: 7.3.5 Jan. 2003	Page 5 of 5
SUBJECT: Relocation			

Worksheet for Relocation Estimates

Prepared by:		Date:	
Employee:			
Family Members:			
Conditions/Dates:			
From:	To:	WORK ORDER #:	
Real Estate/Legal: 10% of the value of the house	Estimated	Lump Sum	
Real Estate Fees:			
Legal Fees:			
Personal Tax Advice			
Current Year:			
Move of Personal Effects (list of restricted items attached)			
Shipping: (within reasonable limits)			
Storage:			
Move-in Allowance:			
House Hunting			
Duration: (one trip, 4 days max.)			
Airfare:			
Accommodation/Meals:			
Arrival Expenses (following family move)			
Duration:			
Temporary Accommodations:			
a) Hotel			
b) Relative/Friends (@ \$100/week)			
Per diem: \$40/day			
Car Rental			
Duration:			
Transitional Allowance (prior to Relocation)			
Duration:			
Temporary Accommodations:			
a) Hotel			
b) Relative/Friends (@ \$100/week)			
Per diem: \$40/day			
Other Items:			
GRAND TOTAL:			

S180-0001

OPTIONAL NTP

ONTARIO POWER GENERATION INC.**Re: Optional Work Notice to Proceed**

Date: 26 June, 2014

Attn: Project Director, Turbine Generator Refurbishment Project
 Darlington Nuclear Refurbishment Program

Dear Sirs:

This Optional Work Notice to Proceed ("NTP") is delivered to you pursuant to sections 2.10(a) and 5.2 of the Engineering, Procurement, and Construction Agreement between Ontario Power Generation Inc. ("OPG") and AECON Construction Group Inc. and SNC-Lavalin Nuclear Inc. (collectively, the "Contractor") dated as of January 22, 2014 (the "Agreement"). Capitalized terms used in this NTP have the same meanings given to those terms in the Agreement, unless such terms are defined in this NTP.

OPG hereby instructs the Contractor to commence performance of the Optional Work pertaining to lay-up scope (the "Lay-up Work") identified as Optional Work package in Schedule 1.1(E) (Specifications) to the Agreement, all in accordance with the terms of the Agreement and the following new or revised attachments to Schedule 7.1 (Contract Price) to the Agreement (the "Revised Attachments"), the agreed forms of which are attached as Exhibit A to Exhibit E to this NTP:

- A. Attachment 7.1(1) – Revised Contract Price for Optional Lay-up Scope (NK38-SOW-09701-10041-R000), which will replace Attachment 7.1(1) – Contract Price for Optional Lay-up Scope;
- B. Attachment 7.1(4) – Definition Phase Target Cost (Optional Lay-up Scope) (Revised), which will replace Attachment 7.1(4) – Definition Phase Target Cost (Optional Lay-up Scope);
- C. Attachment 7.1(5) – Cost Flow Definition Phase Target Cost (Optional Lay-up Scope), which is a new Attachment;
- D. Attachment 7.1(6) – Definition Phase Fixed Fee (Optional Lay-up Scope), which is a new Attachment; and
- E. Attachment 7.1(11) – Milestone Payment Schedule for Definition Phase Fixed Fee (Optional Lay-up Scope) (Revised), which will replace Attachment 7.1(11) – Milestone Payment Schedule for Definition Phase Fixed Fee (Optional Lay-up Scope) – PRELIMINARY.

Subject to OPG/SC Clarification to TGR lay-up
 Scope NK38-SOW-09701-10041-
 R000 and JV
 Lay-up Scope
 Assumptions
 Rev. 00, I-T.

OPG and the Contractor agree that the Revised Attachments will be formalized pursuant to an Amendment as soon as practicable. OPG and the Contractor agree that the scope of the Lay-up Work set out in NK38-SOW-09701-10041-R00 (the "**Lay-up Scope of Work**") may need to be clarified to reflect the Parties' scope clarification discussions documented in "OPG/JV Clarification to TGR Lay-up Scope NK38 -SOW-09701-10041-R000" and "JV Lay-up Scope Assumptions Rev. 00" dated May 08, 2014, provided that such clarifications do not: (i) alter the functional nature of the Lay-up Scope of Work; and (ii) contradict any terms of the Agreement or the COIR. OPG and the Contractor agree that the revised Lay-up Scope of Work, if required, will be formalized pursuant to an Amendment as soon as practicable. Notwithstanding any other provision of the Agreement, OPG and the Contractor agree that the Contractor will proceed with the Lay-up Work in accordance with the terms of the Agreement and the Revised Attachments pending completion of the applicable Amendment.

OPG and the Contractor agree that pursuant to the Amendment, the Contract Price and the Definition Phase Target Cost for the Lay-up Work will be reduced as follows:

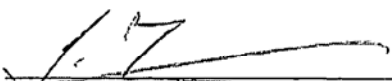
- (a) the Contract Price for the Lay-up Work by \$1,339,125;
- (b) the Definition Phase Target Cost for the Lay-up Work by \$825,570; and
- (c) the Definition Phase Fixed Fee for the Lay-up Work by \$513,555.


OPG expects that proceeding with the Lay-up Work as specified in this NTP will have no effect on the Contract Schedule.

Kindly acknowledge your acceptance of the terms in this NTP by signing a copy of this NTP and sending it to the undersigned.

Sincerely,

ONTARIO POWER GENERATION INC.

By: 
Name: Todd Josifovski
Title: Project Director

By:  3-July-2014
Name: Ken Graham
Title: Project Manager

3

Accepted and agreed on this 14 day of July 2014,
by

AECON CONSTRUCTION GROUP INC.By: Name: Ian TurnbullTitle: President, Aecon Industrial**SNC-LAVALIN NUCLEAR INC.**By: Name: ROBERT STEWARTTitle: SE VICE PRESIDENT & GENERAL MGR.

S180-0001

PCD's

Project Change Directive #001 Revision 01**Condenser Struts****PROJECT CHANGE DIRECTIVE**

<p>To: AECON Construction Group Inc. and SNC-Lavalin Nuclear Inc.</p> <p>SNC-Lavalin Nuclear Inc. 2275 Upper Middle Road East Oakville, Ontario L6H 0C3</p> <p>Attn: Project Director, Turbine Generator Refurbishment Darlington Nuclear Refurbishment Program</p>	<p>Contract: Engineering, Procurement and Construction Agreement for the Turbine Generator Refurbishment Project between Ontario Power Generation Inc. and AECON Construction Group Inc. and SNC-Lavalin Nuclear Inc. dated as of January 22, 2014 (the "Agreement")</p> <p>Contract No.: PO# 232344 Project Change Directive No. 001 Revision 01 Date: December 11, 2015</p>
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Defined terms used in this Project Change Directive have the same meanings given to those terms in the Agreement.

A. Purpose of Revision to Project Change Directive

1. There is no change to Work contemplated under this revision 01 to Project Change Directive #001 (this "**PCD #001 Revision 01**"). The purpose of this PCD #001 Revision 01 is to provide supplementary information to the previously issued Project Change Directive #001 dated as of December 15, 2014 (the "**Original PCD #001**") that was not made part of the Original PCD #001 when it was issued.
2. The supplementary information provides clarity and has no material impact on the Original PCD #001. The supplementary information consists of: (i) changes to the Milestone Payment Schedule for Definition Phase Fixed Fee resulting from changes to the Work contemplated under the Original PCD #001, which is more particularly described in section B below; and (ii) additional scope related information, which is more particularly described in section C below.

B. Change to Milestone Payment Schedule for Definition Phase Fixed Fee

The Original PCD #001 is hereby supplemented by adding the following information respecting changes to the Milestone Payment Schedule for Definition Phase Fixed Fee:

OPG expects that as a result of changes to the Work described in section A of the Original PCD #001, the Milestone Payment Schedule for Definition Phase Fixed Fee, which is set out in Attachment 7.1(11) to Schedule 7.1 (Contract Price) to the Agreement, will include the following new milestones:

Reference	Element of Work	% of Total	Definition Phase Fixed Fee Payment Breakdown by Milestone	Payment Milestone Completion Criteria	Contract Schedule/Milestone Date
Milestone 44	Initial Work Assessments (for Condenser Struts Scope)	TBD	\$7,163	Milestone is declared complete upon OPG acceptance.	27-Nov-14
Milestone 45	Open Review and Report (for Condenser Struts Scope)	TBD	\$1,791	Milestone is declared complete upon OPG acceptance.	27-Feb-15
Milestone 46	Inspection Procedure for UT (for Condenser Struts Scope)	TBD	\$1,791	Milestone is declared complete upon OPG acceptance.	17-Apr-15
Milestone 47	Weld Procedure for A285C to SA106B (for Condenser Scope)	TBD	\$1,791	Milestone is declared complete upon OPG acceptance.	17-Apr-15
Milestone 48	Comprehensive Work Packages (for Condenser Scope)	TBD	\$10,744	Milestone is declared complete upon OPG acceptance.	15-Jul-15
Milestone 49	Inspection and Test Plans (for Condenser Scope)	TBD	\$5,372	Milestone is declared complete upon OPG acceptance.	15-Jul-15
Milestone 50	Release Quality Estimate – Resource Loaded Level 4 Schedule (for Condenser Scope)	TBD	\$7,163	Milestone is declared complete upon OPG acceptance.	15-Sep-15

For more information on the expected changes to the Milestone Payment Schedule for Definition Phase Fixed Fee, refer to Appendix A to this PCD #001 Revision 01. The information included in Appendix A to this PCD #001 Revision 01 will replace the information currently included in Attachment B to the Original PCD #001. The above changes to the Milestone Payment Schedule for Definition Phase Fixed Fee will be reflected in the revised version of Attachment 7.1(11) to Schedule 7.1 (Contract Price) to the Agreement which will be revised by an Amendment.

C. Change to Attachment A to the Original PCD #001

The Original PCD #001 is hereby supplemented by the following scope related information:

The document entitled "NK38-SOW-44000-10001 SCOPE OF WORK: DARLINGTON CONDENSER STRUTS MAINTENANCE AND INSPECTION", a copy of which is attached to this PCD #001 Revision 01 in Appendix B to this PCD #001 Revision 01, is added to Attachment A to the Original PCD #001 for reference.

D. No Other Changes to Original PCD #001


Apart from supplementing the information contained in the Original PCD #001 as described in this PCD #001 Revision 01, there are no other changes in the Original PCD #001.

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PE

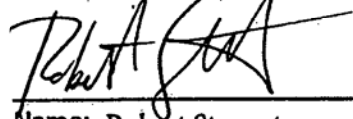
ONTARIO POWER GENERATION INC.

By: 
Name: Todd Josifovski
Title: Project Director

AECON CONSTRUCTION GROUP INC.

By: 
Name: Ian Turnbull
Title: President

SNC-LAVALIN NUCLEAR INC.

By: 
Name: Robert Stewart
Title: Senior Vice President, Operations

The Original PCD #001 is hereby supplemented by adding the following information respecting changes to the Milestone Payment Schedule for Definition Phase Fixed Fee:

OPG expects that as a result of changes to the Work described in section A of the Original PCD #001, the Milestone Payment Schedule for Definition Phase Fixed Fee, which is set out in Attachment 7.1(11) to Schedule 7.1 (Contract Price) to the Agreement, will include the following new milestones:

Reference	Element of Work	% of Total	Definition Phase Fixed Fee Payment Breakdown by Milestone	Payment Milestone Completion Criteria	Contract Schedule/Milestone Date
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Milestone 47	Weld Procedure for A285C to SA106B (for Condenser Scope)	TBD	\$1,791	Milestone is declared complete upon OPG acceptance.	17-Apr-15
Milestone 48	Comprehensive Work Packages (for Condenser Scope)	TBD	\$10,744	Milestone is declared complete upon OPG acceptance.	15-Jul-15
Milestone 49	Inspection and Test Plans (for Condenser Scope)	TBD	\$5,372	Milestone is declared complete upon OPG acceptance.	15-Jul-15
Milestone 50	Release Quality Estimate -- Resource Loaded Level 4 Schedule (for Condenser Scope)	TBD	\$7,163	Milestone is declared complete upon OPG acceptance.	15-Sep-15

Project Change Directive #001 Revision 01**Condenser Struts****PROJECT CHANGE DIRECTIVE**

<p>To: AECON Construction Group Inc. and SNC-Lavalin Nuclear Inc.</p> <p>SNC-Lavalin Nuclear Inc. 2275 Upper Middle Road East Oakville, Ontario L6H 0C3</p> <p>Attn: Project Director, Turbine Generator Refurbishment Darlington Nuclear Refurbishment Program</p>	<p>Contract: Engineering, Procurement and Construction Agreement for the Turbine Generator Refurbishment Project between Ontario Power Generation Inc. and AECON Construction Group Inc. and SNC-Lavalin Nuclear Inc. dated as of January 22, 2014 (the "Agreement")</p> <p>Contract No.: PO# 232344 Project Change Directive No. 001 Revision 01 Date: December 11, 2015</p>
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Defined terms used in this Project Change Directive have the same meanings given to those terms in the Agreement.

A. Purpose of Revision to Project Change Directive

1. There is no change to Work contemplated under this revision 01 to Project Change Directive #001 (this "PCD #001 Revision 01"). The purpose of this PCD #001 Revision 01 is to provide supplementary Information to the previously issued Project Change Directive #001 dated as of December 15, 2014 (the "Original PCD #001") that was not made part of the Original PCD #001 when it was Issued.
2. The supplementary information provides clarity and has no material impact on the Original PCD #001. The supplementary information consists of: (i) changes to the Milestone Payment Schedule for Definition Phase Fixed Fee resulting from changes to the Work contemplated under the Original PCD #001, which is more particularly described in section B below; and (ii) additional scope related information, which is more particularly described in section C below.

B. Change to Milestone Payment Schedule for Definition Phase Fixed Fee

APPENDIX A



2014 08 12 - SNC
Aecon- Pricing Worksl

Darlington Nuclear Generating Station Turbine Generator Refurbishment Project

ONTARIOPOWER
GENERATION**Attachment 7.1(1) - Contract Price for Condenser Scope (NK38-SOW-44000-10001-R000)**

Contract Price is defined in Section 1.1(r) of the Agreement.

***** Execution Phase Pricing is Estimated only and to be validated during the definition phase *****

Pricing Model/SOW/Unit	Total Condenser Struts Maintenance and Inspection					
Definition Phase Target Cost (Estimate Only)	\$ 57,571					
Unit 2	\$ 57,571					
Definition Phase Fixed Fee (Estimate Only)	\$ 35,813					
Execution Phase Target Cost (Estimate Only)	\$ 35,813					
***** Execution Phase Target Cost Estimate (Non-Trades only) *****	\$ 35,813					
Unit 2	\$ 35,813					
***** Execution Phase Fixed Fee Estimate (All Staff) *****	\$ 35,813					
Unit 2	\$ 35,813					
***** Execution Phase Target Cost Estimate (Trades only) *****	\$ 35,813					
Unit 2	\$ 35,813					
1st Unit	Price during Definition Phase	Price during Definition Phase	Price during Definition Phase	Price during Definition Phase	Price during Definition Phase	Price during Definition Phase
2nd Unit	Price during Definition Phase	Price during Definition Phase	Price during Definition Phase	Price during Definition Phase	Price during Definition Phase	Price during Definition Phase
3rd Unit	Price during Definition Phase	Price during Definition Phase	Price during Definition Phase	Price during Definition Phase	Price during Definition Phase	Price during Definition Phase
4th Unit	Price during Definition Phase	Price during Definition Phase	Price during Definition Phase	Price during Definition Phase	Price during Definition Phase	Price during Definition Phase
Execution Phase Fixed Fee (Trades only)	\$ 35,813					
No specific Unit	Price during Definition Phase					
1st Unit	Price during Definition Phase					
2nd Unit	Price during Definition Phase					
3rd Unit	Price during Definition Phase					
4th Unit	Price during Definition Phase					
Execution Phase S&E Target Cost & S&E Fixed Fee (Estimate Only)	\$ 35,813					
No specific Unit	Price during Definition Phase					
1st Unit	Price during Definition Phase					
2nd Unit	Price during Definition Phase					
3rd Unit	Price during Definition Phase					
4th Unit	Price during Definition Phase					
The Contract Price is: \$		93,384				
Dynamic Commissioning Work (Trades only) (Estimate)	\$ 93,384					
1st Unit	Estimated during Definition Phase					
2nd Unit	Estimated during Definition Phase					
3rd Unit	Estimated during Definition Phase					
4th Unit	Estimated during Definition Phase					
Make-Up fee Dynamic Commissioning Work (Estimate)	\$ 93,384					
1st Unit	Estimated during Definition Phase					
2nd Unit	Estimated during Definition Phase					
Execution Phase Target Cost (Estimate Only)	Estimated during Definition Phase					
4th Unit	Estimated during Definition Phase					
Cost Reimbursable with Mark-Up (Estimate)	Estimated during Definition Phase					
Turbine and Auxiliaries	Estimated during Definition Phase					
Generator and Auxiliaries	Estimated during Definition Phase					
Turbine Controls	Estimated during Definition Phase					
Excitation Controls	Estimated during Definition Phase					
Moisture Separator Reheater	Estimated during Definition Phase					
Other	Estimated during Definition Phase					
Cost Reimbursable with no Mark-Up (Estimate)	Estimated during Definition Phase					
No specific Unit	Estimated during Definition Phase					

OPG Darlington Refurbishment Program

Darlington Nuclear Generating Station Turbine Generator Refurbishment Project

Attachment 7.1(4) - Definition Phase Target Cost (Condenser Scope)

ONTARIOPOWER
GENERATION

Ref.	Labour Schedule Ref.	Resources					Definition Phase		Applicable Adjustable Cost Index
		Position	Grade	Effective Date	Normal / Overtime	Rate	Hours	Total	
DEFINITION PHASE DELIVERABLES							700 hrs	\$ 55,608	
1	Condenser Strut Scope (NK38-SOW-44000-10001-R000)						700 hrs	\$ 53,989	
	1174	Project Coordinator - / Assessor	0	01-Jan-2013	1x	\$ 75.08	336 hrs	\$ 25,227	Index 1a
	1175	Scope Lead	0	01-Jan-2013	1x	\$ 99.16	40 hrs	\$ 3,966	Index 1a
	1184	QC Coordinator	0	01-Jan-2013	1x	\$ 75.08	96 hrs	\$ 7,208	Index 1a
	1191	QA Specialist	0	01-Jan-2013	1x	\$ 87.81	40 hrs	\$ 3,512	Index 1a
	1188	QA Manager	0	01-Jan-2013	1x	\$ 99.16	20 hrs	\$ 1,983	Index 1a
	1203	EHS Coordinator	0	01-Jan-2013	1x	\$ 75.08	48 hrs	\$ 3,604	Index 1a
	1210	AECON - Boilermaker - GF	0	01-Jan-2013	1x	\$ 62.06	40 hrs	\$ 2,482	Index 1a
	1111	M or E Estimators or risk coordinator	0	01-Jan-2013	1x	\$ 75.08	40 hrs	\$ 3,003	Index 1a
	1150	P-6 Planner	0	01-Jan-2013	1x	\$ 75.08	40 hrs	\$ 3,003	Index 1a
3% Contingency								\$ 1,620	Index 1a
The unescalated Definition Phase Target Cost is:							\$	55,608	

Darlington Nuclear Generating Station Turbine Generator Refurbishment Project



Attachment 7.1 (5) - Cost Flow Definition Phase Target Cost

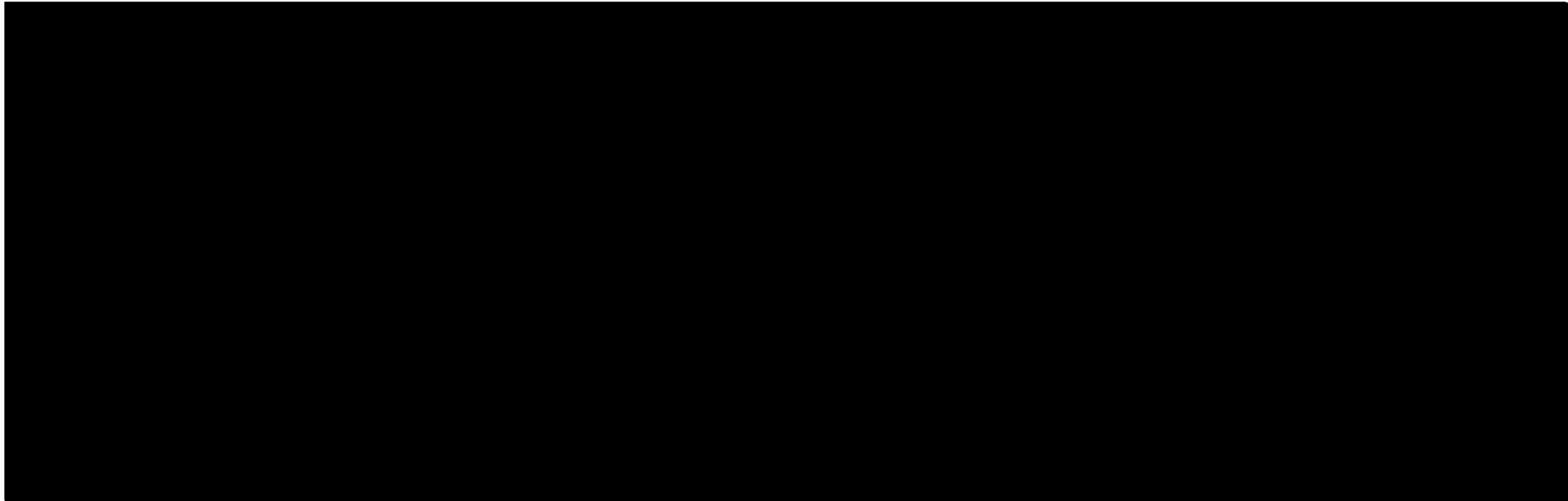
The Proponent is to provide forecasted annual expenditures for the purposes of applying Economic Cost Adjustments to Adjustable Costs.

Pricing Mechanism/Scope	Escalation Base Year	Base Cost (from Definition Phase Target Cost Worksheet)	Contract Year				Total
			2013	2014	2015	2016	
COSTS (at base year, i.e. unescalated)							Costs
Execution Phase Target Cost (Estimate Only)							
Index 1a	2013	\$ 55,608		\$ 13,902	\$ 41,706		\$ 55,608
Index 1b	2013	\$ -					\$ -
Index 12	2013	\$ -					\$ -
		\$ -					\$ -
		\$ -					\$ -
		\$ -					\$ -
Definition Phase Target Cost (Unescalated)		\$ 55,608	\$ -	\$ 13,902	\$ 41,706	\$ -	\$ 55,608
ESCALATION RATES		Escalation Base Year	2013	2014	2015	2016	
Year Over Year Escalation Rates							
Index 1a			0.00%	2.00%	2.00%	2.00%	
Index 1b			0.00%	2.00%	2.00%	2.00%	
Index 12			0.00%	0.00%	0.00%	0.00%	
Compounded Escalation Rates							
Index 1a	2013		100.00%	102.00%	104.04%	106.12%	
Index 1b	2013		100.00%	102.00%	104.04%	106.12%	
Index 12	2013		100.00%	100.00%	100.00%	100.00%	
ESCALATED COSTS							Total
Definition Phase Target Cost							
Index 1a			\$ -	\$ 14,180	\$ 43,391	\$ -	\$ 57,571
Index 1b			\$ -	\$ -	\$ -	\$ -	\$ -
Index 12			\$ -	\$ -	\$ -	\$ -	\$ -
							\$ -
							\$ -
							\$ -
Definition Phase Target Cost (Escalated)			\$ -	\$ 14,180	\$ 43,391	\$ -	\$ 57,571
The Definition Phase Target Cost Is:							\$ 57,571

Darlington Nuclear Generating Station Turbine Generator Refurbishment Project

ONTARIOPOWER
GENERATION

Attachment 7.1 (6) - Definition Phase Fixed Fee



Execution Phase Target Cost (Estimate Only)

Darlington Nuclear Generating Station Turbine Generator Refurbishment Project

ONTARIOPOWER
GENERATION

Attachment 7.1(11) - Milestone Payment Schedule for Definition Phase Fixed Fee (Condenser Scope)

Reference	Element of Work	% of Total	Definition Phase Fixed Fee Payment Breakdown by Milestone	Payment Milestone Completion Criteria	Contract Schedule/ Milestone Date
	Definition Phase Deliverables/Milestones	100%	\$ 35,813		
Milestone 44	Initial Work Assessments	20%	\$ 7,163	Milestone is declared complete upon OPG acceptance.	27-Nov-14
Milestone 45	Opex Review and Report	5%	\$ 1,791	Milestone is declared complete upon OPG acceptance.	27-Feb-15
Milestone 46	Inspection Procedure for UT	5%	\$ 1,791	Milestone is declared complete upon OPG acceptance.	17-Apr-15
Milestone 47	Weld Procedure for A285C to SA106B	5%	\$ 1,791	Milestone is declared complete upon OPG acceptance.	17-Apr-15
Milestone 48	Comprehensive Work Packages	30%	\$ 10,744	Milestone is declared complete upon OPG acceptance.	15-Jul-15
Milestone 49	Inspection and Test Plans	15%	\$ 5,372	Milestone is declared complete upon OPG acceptance.	15-Jul-15
Milestone 50	Release Quality Estimate - Resource Loaded Level 4 Schedule	20%	\$ 7,163	Milestone is declared complete upon OPG acceptance.	15-Sep-15

Checks 100% \$ 35,813

APPENDIX B



NK38-SOW-44000-1
0001-R000 - Darlington

Appendix B was not included in OPG's filing

Project Change Directive #001**Condenser Struts****PROJECT CHANGE DIRECTIVE**

To: SNC-Lavalin Nuclear Inc. and AECON Construction Group Inc. SNC-Lavalin Nuclear Inc. 2275 Upper Middle Road East Oakville, Ontario L6H 0C3 Attn: Project Director, Turbine Generator Refurbishment Project Darlington Nuclear Refurbishment Program	Contract: Engineering, Procurement and Construction Agreement between Ontario Power Generation Inc. and SNC-Lavalin Nuclear Inc. and AECON Construction Group Inc. dated as of March 27, 2013 for the Darlington Refurbishment Turbine Generators Refurbishment Project (the "TG EPC Agreement") Contract No.: PO# 232344 Project Change Directive No. 001 Date: December 15, 2014
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Defined terms used in this Project Change Directive have the same meanings given to those terms in the TG EPC Agreement.

A. Change to Work

In accordance with section 5.2 of the TG EPC Agreement OPG hereby directs the Contractor to make the following changes in the Work:

The Contractor will incorporate the following into the Work, specifically into Schedule 1.1(E) – Specifications, Section 1 NK38-SOW-41000-10003 as detailed in Attachment A :

- Section 2.6 Condenser Struts
- Section 3.7 Condenser Struts

B. Change to Definition Phase Target Cost

OPG expects that the changes to the Work set out in this Notice will have the following effect on the **Definition Phase Target Cost**:

Increase Definition Phase Target Cost for Condenser Strut Scope by \$57,571 as set out in Attachment B

C. Change to Definition Phase Fixed Fee

As a result of the change to the **Definition Phase Target Cost** set out above, the **Definition Phase Fixed Fee** will be adjusted as follows pursuant to section 5.6 of the TG EPC Agreement:

Increase Definition Phase Fixed Fee for Condenser Strut Scope by \$35,813 as set out in Attachment B

D. Change to Definition Phase Milestone Schedule

OPG expects that as a result of the changes to the Work set out in this Project Change Directive, there will be no change to the Definition Phase Milestone Schedule.

E. Amendment Conditions

No amendment (including an Amendment), restatement or termination of the Agreement in whole or in part is binding unless it is in writing and signed by each Party to the TG EPC Agreement. For certainty, while the Contractor is obligated to proceed with the changes contained herein, this Project Change Directive does not amend the TG EPC Agreement and OPG will not be deemed to have agreed to, or be required to pay for, any such changes until such time as an Amendment is executed pursuant to section 5.5 of the RFR EPC Agreement.

ONTARIO POWER GENERATION INC.

By: 

Name: Todd Josifovski

Title: PROJECT DIRECTOR

SNC-LAVALIN NUCLEAR INC.

By: 

Name: ROBERT STEWART

Title: SENIOR VICE PRESIDENT, OPERATIONS

AECON CONSTRUCTION GROUP INC.

By: 

Name: Sam Babin

Title: VP of nuclear

Attachment A was not included in OPG's filing

OPG Darlington Refurbishment Program

Darlington Nuclear Generating Station Turbine Generator Refurbishment Project

Attachment 7.1(4) - Definition Phase Target Cost (Condenser Scope)

ONTARIOPOWER
GENERATION

Ref.	Labour Schedule Ref.	Resources					Definition Phase		Applicable Adjustable Cost Index
		Position	Grade	Effective Date	Normal / Overtime	Rate	Hours	Total	
DEFINITION PHASE DELIVERABLES							700 hrs	\$ 55,608	
1	Condenser Strut Scope (NK38-SOW-44000-10001-R000)						700 hrs	\$ 53,989	
	1174	Project Coordinator / Assessor	0	01-Jan-2013	1x	\$ 75.08	336 hrs	\$ 25,227	Index 1a
	1171	Scope Lead	0	01-Jan-2013	1x	\$ 99.16	40 hrs	\$ 3,966	Index 1a
	1194	QC Coordinator	0	01-Jan-2013	1x	\$ 75.08	96 hrs	\$ 7,208	Index 1a
	1191	QA Specialist	0	01-Jan-2013	1x	\$ 87.81	40 hrs	\$ 3,512	Index 1a
	1188	QA Manager	0	01-Jan-2013	1x	\$ 99.16	20 hrs	\$ 1,983	Index 1a
	1203	EHS Coordinator	0	01-Jan-2013	1x	\$ 75.08	48 hrs	\$ 3,604	Index 1a
	1210	AECOM - Boltermaker - GF	0	01-Jan-2013	1x	\$ 62.06	40 hrs	\$ 2,482	Index 1a
	1141	M or E Estimators or risk coordinator	0	01-Jan-2013	1x	\$ 75.08	40 hrs	\$ 3,003	Index 1a
	1190	P-G Planner	0	01-Jan-2013	1x	\$ 75.08	40 hrs	\$ 3,003	Index 1a
2	Other Items (Proponent to insert additional line items below if required)							\$ 1,620	
	3% Contingency							\$ 1,620	Index 1a
								\$ -	
								\$ -	
The unescalated Definition Phase Target Cost is:							\$ 55,608		

460 hrs	\$	36,038	Work Packages	68.6%
100 hrs	\$	9,462	PMT	14.3%
120 hrs	\$	8,489	Const & Est	17.1%
700 hrs	\$	53,989		100.0%
	\$	1,620	3% Cont.	
Target Cost (unescalated)		\$	55,608	
Target Cost (incl. escal.)		\$	57,571	see 7.1(5)
Fixed Fee		\$	35,813	see 7.1(6)
Definition Phase Contract Price		\$	93,384	see 7.1 (1)

Project Change Directive #002 Revision 01**Removal of Layup Scope Elements****PROJECT CHANGE DIRECTIVE**

<p>To: AECON Construction Group Inc. and SNC-Lavalin Nuclear Inc.</p> <p>SNC-Lavalin Nuclear Inc. 2275 Upper Middle Road East Oakville, Ontario L6H 0C3</p> <p>Attn: Project Director, Turbine Generator Refurbishment Darlington Nuclear Refurbishment Program</p>	<p>Contract: Engineering, Procurement and Construction Agreement for the Turbine Generator Refurbishment Project between Ontario Power Generation Inc. and AECON Construction Group Inc. and SNC-Lavalin Nuclear Inc. dated as of January 22, 2014 (the "Agreement")</p> <p>Contract No.: PO# 232344 Project Change Directive No. 002 Revision 01 Date: December 11, 2015</p>
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Defined terms used in this Project Change Directive have the same meanings given to those terms in the Agreement.

A. Purpose of Revision to Project Change Directive

- (1) There is no change to Work contemplated under this revision 01 to Project Change Directive #002 (the "**PCD #002 Revision 01**"). The purpose of this PCD #002 Revision 01 is to provide supplementary information to the previously issued Project Change Directive #002 dated as of December 15, 2014 (the "**Original PCD #002**") that was not made part of the Original PCD #002 when it was issued.
- (2) The supplementary information provides clarity and has no material impact on the Original PCD #002. The supplementary information consists of: (i) additional scope related information, which is more particularly described in section B below; and (ii) changes to the Milestone Payment Schedule for Definition Phase Fixed Fee resulting from changes to the Work contemplated under the Original PCD #002, which is more particularly described in section C below.

B. Change to Attachment A of the Original PCD #002

The Original PCD #002 is hereby supplemented by the following scope related information:

The document entitled "NK38-SOW-09701-10041 TURBINE, GENERATOR AND AUXILIARIES SYSTEM LAYUP – TECHNICAL SCOPE OF WORK", a copy of the revision 002 of which is attached to this PCD #002 Revision 01 in Appendix A for reference, which will replace the information currently included in Attachment A to the Original PCD #002.

C. Change to Milestone Payment Schedule for Definition Phase Fixed Fee

The Original PCD #002 is hereby supplemented by adding the following information respecting changes to the Milestone Payment Schedule for Definition Phase Fixed Fee:

OPG expects that as a result of changes to the Work described in section A of the Original PCD #002, the Milestone Payment Schedule for Definition Phase Fixed Fee, which is set out in Attachment 7.1(11) to Schedule 7.1 (Contract Price) to the Agreement, will include following decreases in Definition Phase fixed fee payment breakdown for milestones 5, 8, 9, 10, 11, 12, 13, 14:

Reference	Element of Work	Decrease in Definition Phase Fixed Fee Payment Breakdown by Milestone
	Definition Phase Deliverables/Milestones Sub-Total:	\$84,377
Milestone 5	Execution Phase - Project Management Plan	\$14,062
Milestone 8	Design COMS for Turbine, Generator and Aux Systems Lay-up	\$7,032
Milestone 9	Commissioning Requirements	\$7,032
Milestone 10	Final Submittals of Design EC's Turbine System Lay-Up	\$14,062

Milestone 11	Commissioning Work Plans	\$7,032
Milestone 12	Maintenance Procedures	\$7,032
Milestone 13	Modification Installation Work Plans/Comprehensive Work Packages	\$14,062
Milestone 14	Release Quality Estimate - Resource Loaded Level 4 Schedule	\$14,062

In addition, the contents of "% of Total" for all milestones 1 through 14 will be recalculated as a result of the change described above.

For more information on the expected changes to the Milestone Payment Schedule for Definition Phase Fixed Fee, refer to Appendix B to this PCD #002 Revision 01. The information included in Appendix B to this PCD #002 Revision 01 will be added as Attachment B to the Original PCD #002. The above changes to the Milestone Payment Schedule for Definition Phase Fixed Fee will be reflected in the revised version of Attachment 7.1(11) to Schedule 7.1 (Contract Price) to the Agreement which will be revised by an Amendment.

C. No Other Changes to Original PCD #002

Apart from supplementing the information contained in the Original PCD #002 as described in this PCD #002 Revision 01, there are no other changes in the Original PCD #002.

ONTARIO POWER GENERATION INC.By: Name: Todd Iosifevski
Title: Project Director**AECON CONSTRUCTION GROUP INC.**By: Name: Ian Turnbull
Title: President**SNC-LAVALIN NUCLEAR INC.**By: Name: Robert Stewart
Title: Senior Vice President, Operations

APPENDIX A



NK38-SOW-09701-1
0041_R02.pdf

Appendix A was not included in OPG's filing

APPENDIX B



PCD 002 Rev 02
Pricing Sheets.pdf

Darlington Nuclear Generating Station Turbine Generator Refurbishment Project



Attachment 7.1(1) - Revised Contract Price for Optional Lay-up Scope

Contract Price is defined in Section 1.1(r) of the Agreement.

Pricing Model/SOW/Unit	Total	Turbine and Auxiliaries	Generator and Auxiliaries	Moisture Separator Reheaters	Turbine Controls Upgrade	Generator Excitation Controls Upgrade
		NK38-SOW-41000-10003	NK38-SOW-42000-10003	NK38-SOW-41800-10003	NK38-SOW-64100-10004	NK38-SOW-64220-10003
Definition Phase Target Cost (No specific Unit)	\$ (135,641)					
Definition Phase Fixed Fee (No specific Unit)	\$ (84,377)					
Execution Phase Target Cost (Non-Trades only) (No specific Unit)	\$					
Execution Phase Fixed Fee (Non-Trades only) (No specific Unit)	\$					
Execution Phase Target Cost (Trades only) (No specific Unit)	\$					
1st Unit	Priced during Definition Phase	Priced during Definition Phase	Priced during Definition Phase	Priced during Definition Phase	Priced during Definition Phase	Priced during Definition Phase
2nd Unit	Priced during Definition Phase	Priced during Definition Phase	Priced during Definition Phase	Priced during Definition Phase	Priced during Definition Phase	Priced during Definition Phase
3rd Unit	Priced during Definition Phase	Priced during Definition Phase	Priced during Definition Phase	Priced during Definition Phase	Priced during Definition Phase	Priced during Definition Phase
4th Unit	Priced during Definition Phase	Priced during Definition Phase	Priced during Definition Phase	Priced during Definition Phase	Priced during Definition Phase	Priced during Definition Phase
Execution Phase Fixed Fee (Trades only) (No specific Unit)	\$					
1st Unit	Priced during Definition Phase					
2nd Unit	Priced during Definition Phase					
3rd Unit	Priced during Definition Phase					
4th Unit	Priced during Definition Phase					
Execution Phase SS&E Target Cost & SS&E Fixed Fee (No specific Unit)	\$					
1st Unit	Priced during Definition Phase					
2nd Unit	Priced during Definition Phase					
3rd Unit	Priced during Definition Phase					
4th Unit	Priced during Definition Phase					
The Contract Price is: \$ (220,017)						
Dynamic Commissioning Work (Trades only) (Estimate) (No specific Unit)	Estimated during Definition Phase					
1st Unit	Estimated during Definition Phase					
2nd Unit	Estimated during Definition Phase					
3rd Unit	Estimated during Definition Phase					
4th Unit	Estimated during Definition Phase					
Mark-Up for Dynamic Commissioning Work (Estimate) (No specific Unit)	Estimated during Definition Phase					
1st Unit	Estimated during Definition Phase					
2nd Unit	Estimated during Definition Phase					
3rd Unit	Estimated during Definition Phase					
4th Unit	Estimated during Definition Phase					
Cost Reimbursable With Mark-Up (Estimate) (No specific Unit)	Estimated during Definition Phase					
Turbine and Auxiliaries	Estimated during Definition Phase					
Generator and Auxiliaries	Estimated during Definition Phase					
Turbine Controls	Estimated during Definition Phase					
Excitation Controls	Estimated during Definition Phase					
Moisture Separator Reheater	Estimated during Definition Phase					
Other	Estimated during Definition Phase					
Cost Reimbursable With No Mark-Up (Estimate) (No specific Unit)	Estimated during Definition Phase					
No Specific Unit	Estimated during Definition Phase					

OPG Darlington Refurbishment Program

Darlington Nuclear Generating Station Turbine Generator Refurbishment Project

Attachment 7.1(4) - Definition Phase Target Cost (Optional Lay-up Scope)

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Ref.	Labour Schedule Ref.	Position	Resources				Definition Phase		Applicable Adjustable Cost Index
			Grade	Effective Date	Normal / Overtime	Rate	Hours	Total	
DEFINITION PHASE DELIVERABLES							0 hrs	\$ (131,300)	
10		Other Items: Proponent to insert additional line items below if required.						\$ (131,300)	
		Removal of Layup Scope Elements						\$ (131,300)	
								\$ -	
The unescalated Definition Phase Target Cost is:							\$	(131,300)	

OPG Darlington Refurbishment Program

Darlington Nuclear Generating Station Turbine Generator Refurbishment Project



Attachment 7.1 (5) - Cost Flow Definition Phase Target Cost (Optional Layup Scope)

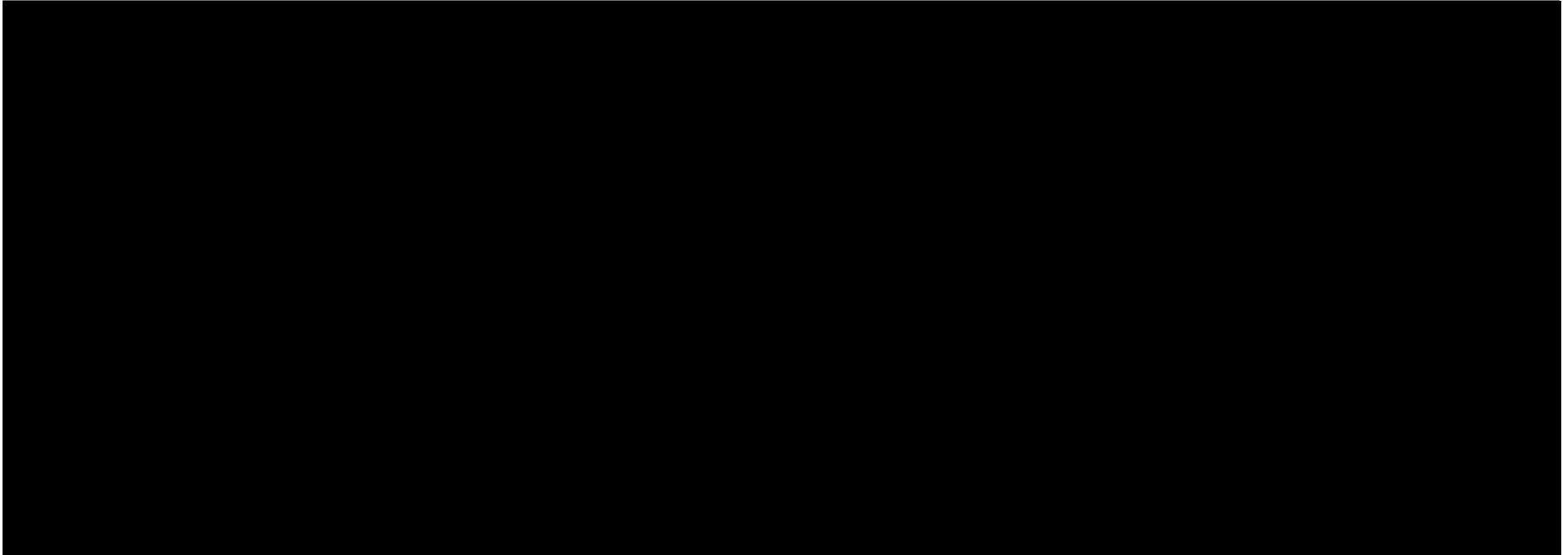
The Proponent is to provide forecasted annual expenditures for the purposes of applying Economic Cost Adjustments to Adjustable Costs.

Pricing Mechanism/Scope	Escalation Base Year	Base Cost (from Definition Phase Target Cost Worksheet)	Contract Year				Total
			2013	2014	2015	2016	
COSTS (at base year, i.e. unescalated)							
Definition Phase Target Cost							
Index 1a	2013	\$ (131,300)		\$ (47,268)	\$ (84,032)		\$ (131,300)
Index 1b	2013	\$ -		\$ -	\$ -		\$ -
Index 12	2013	\$ -		\$ -	\$ -		\$ -
		\$ -		\$ -	\$ -		\$ -
		\$ -		\$ -	\$ -		\$ -
Definition Phase Target Cost (Unescalated)		\$ (131,300)	\$ -	\$ (47,268)	\$ (84,032)	\$ -	\$ (131,300)
ESCALATION RATES							
Year Over Year Escalation Rates							
Index 1a			2.00%	2.00%	2.00%	2.00%	
Index 1b			2.00%	2.00%	2.00%	2.00%	
Index 12			0.00%	0.00%	0.00%	0.00%	
Compounded Escalation Rates							
Index 1a	2013		100.00%	102.00%	104.04%	106.12%	
Index 1b	2013		100.00%	102.00%	104.04%	106.12%	
Index 12	2013		100.00%	100.00%	100.00%	100.00%	
ESCALATED COSTS							
Definition Phase Target Cost							
Index 1a		\$ -	\$ (48,213)	\$ (87,427)	\$ -	\$ -	\$ (135,641)
Index 1b		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Index 12		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Definition Phase Target Cost (Escalated)		\$ -	\$ (48,213)	\$ (87,427)	\$ -	\$ -	\$ (135,641)
The Definition Phase Target Cost is: \$ (135,641)							

Darlington Nuclear Generating Station Turbine Generator Refurbishment Project

Attachment 7.1(6) - Definition Phase Fixed Fee (Optional Layup Scope)

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Darlington Nuclear Generating Station Turbine Generator Refurbishment Project



Attachment 7.1(11) - Milestone Payment Schedule for Definition Phase Fixed Fee (Optional Lay-up Scope)

Reference	Element of Work	% of Total	Definition Phase Fixed Fee Payment Breakdown by Milestone	Payment Milestone Completion Criteria	Contract Schedule/ Milestone Date
	Definition Phase Deliverables/Milestones		\$ (84,377)		
Milestone 1	Definition Phase - Draft Baseline Schedule - Level 3			Milestone is declared complete upon OPG acceptance.	28-Jul-14
Milestone 2	Engineering Plan and Modifications Summary			Milestone is declared complete upon OPG acceptance.	10-Sep-14
Milestone 3	Definition Phase - Final Baseline Schedule - Level 3			Milestone is declared complete upon OPG acceptance.	22-Sep-14
Milestone 4	Submission of Design Plans for Acceptance			Milestone is declared complete upon OPG acceptance.	30-Sep-14
Milestone 5	Execution Phase - Project Management Plan		\$ (14,062)	Milestone is declared complete upon OPG acceptance.	31-Oct-14
Milestone 6	Initial Work Assessment(s)			Milestone is declared complete upon entering the information in the required OPG work management system.	15-Nov-14
Milestone 7	Rev PB (80%) Submittals of Design EC's for Turbine, Generator and Aux Systems Lay-Up			Milestone is declared complete upon OPG acceptance.	21-Jan-15
Milestone 8	Design COMS for Turbine, Generator and Aux Systems Lay-up		\$ (7,032)	Milestone is declared complete upon OPG stakeholder signoff of the COMS declaration.	18-Mar-15
Milestone 9	Commissioning Requirements		\$ (7,032)	Milestone is declared complete upon OPG acceptance.	30-Jun-15
Milestone 10	Final Submittals of Design EC's Turbine System Lay-Up		\$ (14,062)	The milestone is declared complete upon OPG acceptance of all design packages and related documentation / information to be ready for issuance of notice-to-proceed with field installation pre-requisites.	15-Jul-15
Milestone 11	Commissioning Workplans		\$ (7,032)	Milestone is declared complete upon OPG acceptance.	15-Sep-15
Milestone 12	Maintenance Procedures		\$ (7,032)	Milestone is declared complete upon OPG acceptance.	15-Sep-15
Milestone 13	Modification Installation Workplans/Comprehensive Work Packages		\$ (14,062)	Milestone is declared complete upon OPG acceptance.	15-Sep-15
Milestone 14	Release Quality Estimate - Resource Loaded Level 4 Schedule		\$ (14,062)	Milestone is declared complete upon OPG acceptance.	15-Sep-15

Project Change Directive #002**Removal of Layup Scope Elements****PROJECT CHANGE DIRECTIVE**

To: SNC-Lavalin Nuclear Inc. and AECON Construction Group Inc. SNC-Lavalin Nuclear Inc. 2275 Upper Middle Road East Oakville, Ontario L6H 0C3 Attn: Project Director, Turbine Generator Refurbishment Project Darlington Nuclear Refurbishment Program	Contract: Engineering, Procurement and Construction Agreement between Ontario Power Generation Inc. and SNC-Lavalin Nuclear Inc. and AECON Construction Group Inc. dated as of March 27, 2013 for the Darlington Refurbishment Turbine Generators Refurbishment Project (the "TG EPC Agreement") Contract No.: PO# 232344 Project Change Directive No. 002 Date: December 15, 2014
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Defined terms used in this Project Change Directive have the same meanings given to those terms in the TG EPC Agreement.

A. Change to Work

In accordance with section 5.2 of the TG EPC Agreement OPG hereby directs the Contractor to make the following changes in the Work :

The Contractor will remove the following from the Work :

- Schedule 1.1(E) – Specifications, Section 6 - NK38-SOW-09701-10041, Section 4.0 Detailed Scope of Work, Table 3, items #7 and item #20:

#	Description	Group within OPG that is Accountable for Oversight	Technical Requirement	Executed by Contractor	Notes

7	Design, procure, install and remove modification to replace existing air filters 41720-FR5 with a filter with desiccant medium.	Shutdown Layup and Services Project	Turbine FRF, NK38-REP-09701-10057[10]	YES	Contractor responsible for design, procurement, installation and removal of modification to replace filters to 41720-FR5 as per [10] (reference MEC 121437). Contractor is responsible for safe removal of existing filter when system ready to lay up; installation of filter with desiccant medium for layup; frequent replacement of desiccant as needed as per Master EC 121437. Contractor also responsible for removal of filter with desiccant medium and returning condition to the as-found condition prior to return to service.
20	Design, procurement, installation and removal of modification to fill LPSW side of hydrogen coolers with Nitrogen gas. Includes sealing LPSW side with blind flanges.	Shutdown Layup and Services Project	Generator Hydrogen Coolers, NK38-REP-09701-10045[13]	YES	Contractor responsible for design, and be prepared for procurement of modification as per [13] (reference MEC 120938). This modification is contingent upon whether Item #19 is feasible. If #19 is not feasible, Contractor is also responsible for procurement, installation and removal of modification as per [13].

The Contractor will add the following to the Work :

- Schedule 1.1(E) – Specifications, Section 6 - NK38-SOW-09701-10041, Section 4.0 Detailed Scope of Work, Table 3, items #7 and item #20:

#	Description	Group within OPG that is Accountable for Oversight	Technical Requirement	Executed by Contractor	Notes
7	Design, procure, install and remove modification to replace existing air filters 41720-FR5 with a filter with desiccant medium.	Shutdown Layup and Services Project	Turbine FRF, NK38-REP-09701-10057[10]	No	FRF System will be laid up per normal shut down state as per NK38-OM-41720-04.01 and NK38-OM-41720-05. Ref DRAS 602. MEC 121437 to be cancelled.

20	Design, procurement, installation and removal of modification to fill LPSW side of hydrogen coolers with Nitrogen gas. Includes sealing LPSW side with blind flanges.	Shutdown Layup and Services Project	Generator Hydrogen Coolers, NK38-REP-09701-10045[13]	No	DRAS 562 approved. Lay up of Generator Hydrogen Coolers under dry air purge. MEC 120938 is to be cancelled. OPG to provide dry air source and connection to Generator Hydrogen Coolers.
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B. Change to Definition Phase Target Cost

OPG expects that the changes to the Work set out in this Notice will have the following effect on the **Definition Phase Target Cost**:

Decrease Definition Phase Target Cost by \$135,641

C. Change to Definition Phase Fixed Fee

As a result of the change to the **Definition Phase Target Cost** set out above, the **Definition Phase Fixed Fee** will be adjusted as follows pursuant to section 5.6 of the TG EPC Agreement:

Decrease Definition Phase Fixed Fee by \$84,377

D. Change to Definition Phase Milestone Schedule

OPG expects that as a result of the changes to the Work set out in this Project Change Directive, there will be no change to the Definition Phase Milestone Schedule.

E. Amendment Conditions

No amendment (including an Amendment), restatement or termination of the Agreement in whole or in part is binding unless it is in writing and signed by each Party

to the TG EPC Agreement. For certainty, while the Contractor is obligated to proceed with the changes contained herein, this Project Change Directive does not amend the TG EPC Agreement and OPG will not be deemed to have agreed to, or be required to pay for, any such changes until such time as an Amendment is executed pursuant to section 5.5 of the RFR EPC Agreement.

ONTARIO POWER GENERATION INC.

By: 

Name: TODD JUSIFOVSKI

Title: PROJECT DIRECTOR

SNC-LAVALIN NUCLEAR INC.

By: 

Name: ROBERT STEWART

Title: SENIOR VICE PRESIDENT, OPERATIONS

AECON CONSTRUCTION GROUP INC.

By: 

Name: Sam Bambino

Title: VP of Nuclear

Attachment A was not included in OPG's filing

Project Change Directive #003**Unit 2 Modification Deferral/Engineering Development/PM & EM Support/Additional Modifications****PROJECT CHANGE DIRECTIVE**

<p>To: AECON Construction Group Inc. and SNC-Lavalin Nuclear Inc.</p> <p>SNC-Lavalin Nuclear Inc. 2275 Upper Middle Road East Oakville, Ontario L6H 0C3</p> <p>Attn: Project Director, Turbine Generator Refurbishment Darlington Nuclear Refurbishment Program</p>	<p>Contract: Engineering, Procurement and Construction Agreement for the Turbine Generator Refurbishment Project between Ontario Power Generation Inc. and AECON Construction Group Inc. and SNC-Lavalin Nuclear Inc. dated as of January 22, 2014 (the "Agreement")</p> <p>Contract No.: PO# 232344 Project Change Directive No. 003 Date: February 26, 2015</p>
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Defined terms used in this Project Change Directive have the same meanings given to those terms in the Agreement.

A. Change to Work

In accordance with section 5.2 of the Agreement, OPG hereby directs the Contractor to make the following changes in the Work and hereby requires the Contractor to proceed with the changes in the Work prior to agreeing on the terms of an Amendment:

- (1) The Contractor will not prepare comprehensive work packages for the following Unit 2 Execution Phase activities as part of the Definition Phase Reimbursable Work due to deferral of execution work to future Unit 2 planned outages:
 - (a) Installation of turbine and excitation control upgrades; and
 - (b) Installation of all three generator and auxiliary skids (seal oil, hydrogen cooling and stator cooling water),

both of which were initially scheduled to be performed during the refurbishment outage of the first Unit to be refurbished (i.e., Unit 2). Specifically, the Contractor

will not be required to submit comprehensive work packages related to above deferred modification work, which includes installation work packages and commissioning work plans.

If required, OPG may require to include the above deferred modification work in Unit 2 in the Execution Phase activities for other Units at a later date.

For clarity, for purposes of this Project Change Directive the **"Deferred Modification Work in Unit 2"** means the deferred modification work related to turbine and excitation control upgrades as well as the generator and auxiliary skids (seal oil, hydrogen cooling and stator cooling water), which was initially scheduled to be performed during the refurbishment outage of Unit 2.

(2) The Contractor will incorporate the following into the Definition Phase Reimbursable Work:

- (a) The extension of detailed engineering and supporting project management personnel through March, 2016; and
- (b) Design, engineering and installation planning work (as applicable) of the following additional modifications:
 - i. Seal Oil System Pressure Relief Valve – design, and engineering only; (The above change to Work will be more particularly described in the next revision of the applicable scope of work document(s) in Schedule 1.1(E) (Specifications). Installation planning is not required for Unit 2.)
 - ii. Human Factor Engineering ("the HFE") Commercial-off-The Shelf (the "COTS") – HFE engineering only; (The above change to Work will be more particularly described in the next revision of the applicable scope of work document(s) in Schedule 1.1(E) (Specifications). Installation planning is not required for Unit 2.)
 - iii. Generator Shaft Grounding Access Platform; (The above change to the Work will be described in greater detail in the next revision of the following scope of work documents in Schedule 1.1(E) (Specifications):

Item 2: NK38-SOW-42000-10003; Scope of Work: Darlington Generator and Auxiliaries Refurbishment, in Section 2.1.4 (Brush Gear), the following paragraph will be inserted:

"(f) Modify existing access platform for bearing 5 shaft grounding equipment to provide access for on-power maintenance.")

- iv. New Access Platform & Stairs associated with Seal Oil Skid #2 Installation;
(The above changes to the Work will be described in greater detail in the next revision of the following scope of work document in Schedule 1.1(E) (Specifications):

Item 2: NK38-SOW-42000-10003; Scope of Work: Darlington Generator and Auxiliaries Refurbishment, in Section 2.5 (Seal Oil System), the following paragraph will be inserted:

"(m) The Contractor will design and construct an access platform and access stairs in order to facilitate maintenance and routine Operations field rounds for the seal oil skid found on Elev. 115 in DNGS.")

- v. NV 10 & NV 11 Interference Removal Permanent Modification (the "PMOD");
(The above changes to the Work will be described in greater detail in the next revision of the following scope of work document in Schedule 1.1(E) (Specifications):

Item 5: NK38-SOW-41800-10003; Scope of Work: Darlington Moisture Separators Reheaters Refurbishment, in Section 2.1.2 (Check Valves Extraction Steam), at the end the paragraph which reads as "The Contractor is required to overhaul the above check valves from feed heaters extraction lines.", the following sentence will be inserted:

"The Contractor will need to modify any structural members or civil interferences prohibiting maintenance access to the valves.")

- vi. Stator Cooling Water (the "SCW") Isolation Valves Installation;
The above changes to the Work will be described in greater detail in the next revision of the following scope of work document in Schedule 1.1(E) (Specifications):

Item 2: NK38-SOW-42000-10003; Scope of Work: Darlington Generator and Auxiliaries Refurbishment, in Section 2.4 (Stator Cooling Water (SCW) System), the following paragraph will be inserted:

"(f) The Contractor is required to provide isolation between the discharge side of SCW skid and supply side of stator core to allow partial drainage for the system and ease of installation new SCW skids in future refurbishment/planned outages."

- vii. Removal of Unit 2 Stator Winding Temperature Elements (the "TE") Jumpers;
(The above changes to the Work will be described in greater detail in the next revision of the following scope of work document in Schedule 1.1(E) (Specifications):

Item 2: NK38-SOW-42000-10003; Scope of Work: Darlington Generator and Auxiliaries Refurbishment, in Section 2.1.2 (Stator), the following paragraph will be inserted:

"Legacy EC's and TCR's were initiated to document hardwire jumpers placed to remove nuisance alarms in the MCR caused by defective TE's. The Contractor will be responsible for the preparation of Design Engineered Change to update engineering documentation with the removal of the jumpers once the defective elements have been replaced.")

For clarity, the full scope maintenance simulator (the "FSMS") will remain unchanged and will be executed as per the original plan, which includes completion of engineering work within the Definition Phase and installation of the FSMS as Unit 3 pre-requisites.

The above changes to the Work will be reflected in Schedule 1.1(E) (Specifications) which will be revised by an Amendment. All other elements of the Specifications will remain unchanged.

B. Change to Contract Schedule

OPG expects that Schedule 2.7(a)(1) (Contract Schedule) of the Agreement will reflect the following:

PCD #003: Unit 2 Modification Deferral/Engineering Development/PM & EM Support/Additional Modifications – February 26, 2015
OPG CCF #: 697 (for OPG reference only)

- (1) The Contractor will continue the provision of project management and engineering management support between May 16, 2015 and March 31, 2016 required to complete all design engineering work as documented in memorandum 617391-30CC-I-0033 (NK38-CORR-40005-0528100), dated February 26, 2015, attached hereto as Appendix A.

On page 2 of the Contract Schedule in the table titled "Definition Phase Milestones", on the row with a milestone titled as "Engineering Change Control/Engineered Tooling Documentation", the date "May 15, 2015" will be replaced with the following:

" * First Release - Acceptance of Design Completion Assurance Verification Review (the "DCAVR"): July 31, 2015; and

** Second Release - Completion of exempted items from DCAVR process as concurred by OPG Design Authority: March 31, 2016. "

- (2) On page 5 of the Contract Schedule in the table titled "Definition Phase Milestones", the contents on the rows with milestones titled as "Modification Installation Work Plans" and "Commissioning Requirements" will be replaced as follows:

<i>Milestone</i>	<i>Definition/Completion Criteria</i>	<i>Milestone Date</i>
Modification Installation Work Plans	Upon completion of detailed engineering for each modification work package, the Contractor is to develop and deliver to OPG installation work plans and related quality assurance documents (except for Deferred Modification Work in Unit 2). Milestone is declared complete upon OPG acceptance of all modification installation work plans.	July 31, 2016
Commissioning Requirements	Contractor shall develop a set of commissioning requirements for static and dynamic (related to their scope) commissioning for all modification work packages (except for Deferred Modification Work in Unit 2) and present it to OPG Design Authority or delegate for review / acceptance (note: all commissioning work to be completed in accordance with OPG Available-for-Service (AFS) requirements as	July 31, 2016

<i>Milestone</i>	<i>Definition/Completion Criteria</i>	<i>Milestone Date</i>
	defined in the AFS Strategy prepared in the Definition Phase). Upon OPG acceptance of the commissioning requirements, Contractor is to develop static commissioning workplan(s) for all planned modifications. Milestone is declared complete upon OPG acceptance of static commissioning work plans.	

The above changes to the Contract Schedule will be reflected in 2.7(a)(1) (Contract Schedule) which will be revised by an Amendment. All other elements of the Contract Schedule will remain unchanged.

C. Change to Definition Phase Target Cost

OPG expects that as a result of the changes to the Work set out in this Project Change Directive, there will be the following effect on the Definition Phase Target Cost:

The net increase in Definition Phase Target Cost will be \$118,467 (unescalated), with details described hereunder:

- (1) As a result of the Work being deferred as specified in section A(1) of this Project Change Directive, the Definition Phase Target Cost will be decreased by \$1,332,676 (unescalated), as detailed in Appendix B attached hereto.
- (2) As a result of the additional Work specified in section A(2) of this Project Change Directive, the Definition Phase Target Cost will be increased by \$1,451,143 (unescalated), with breakdowns listed in Table A hereunder and as detailed in Appendix B attached hereto.

Table A – Increase in Definition Phase Target Cost for additional Work described in section A(2) (unescalated)

Reference in this Project Change Directive	Description	Increase in Definition Phase Target Cost (unescalated)	Contractor's PCN Reference
Section A (2)(a)	Extension of detailed engineering and	\$202,316	PCN-0004

	supporting project management personnel	\$1,048,018	PCN-0006
Section A (2)(b)(i)	Design and engineering work of Seal Oil System Pressure Relief Valve	\$44,151	PCN-0003
Section A(2)(b)(ii)	Engineering work of HFE COTS	\$38,191	PCN-0007
Section A(2)(b)(iii)	Design, engineering and installation planning work of Generator Shaft Grounding Access Platform	\$19,178	PCN-0009
Section A(2)(b)(iv)	Design, engineering and installation planning work of New Access Platform & Stairs associated with Seal Oil Skid #2 Installation	\$19,178	PCN-0010
Section A(2)(b)(v)	Design, engineering and installation planning work of NV 10 & NV 11 Interference Removal PMOD	\$54,347	PCN-0011
Section A(2)(b)(vi)	Design, engineering and installation planning work of SCW Isolation Valves Installation		
Section A(2)(b)(vii)	Design, engineering and installation planning work of Removal of Unit 2 Stator Winding Temperature Elements Jumpers	\$25,764	PCN-0013
Sub-total increase in Definition Phase Target Cost for additional Work described in section A(2) of this Project Change Directive		\$1,451,143	N/A

Definition Phase Target Cost (unescalated)

As set out in the Agreement as of the date of the Agreement:

\$17,727,966**Definition Phase Target Cost (unescalated)**

As set out in the Agreement as of the date of the Agreement, as adjusted by all changes in the **Definition Phase Target Cost** made under all Amendments and/or Optional Work Notice to Proceed, if any:

\$19,184,756

Total increase to the **Definition Phase Target Cost (unescalated)** under this Project Change Directive: **\$118,467**

Revised **Definition Phase Target Cost (unescalated)** under this Project Change Directive: **\$19,303,223**

The above changes to the Definition Phase Target Cost will be reflected in Schedule 7.1 (Contract Price) which will be revised by an Amendment. All other elements of the Contract Price will remain unchanged.

D. Change to Definition Phase Fixed Fee

OPG expects that as a result of the changes to the Work set out in this Project Change Directive, there will be the following effect on the Definition Phase Fixed Fee.

The Definition Phase Fixed Fee will be increased by \$76,671, as detailed in Appendix B attached hereto.

Definition Phase Fixed Fee
as set out in the Agreement as of the date of the Agreement: **\$11,316,530.85**

Definition Phase Fixed Fee
as set out in the Agreement as of the date of the Agreement, as adjusted by all changes in the **Definition Phase Fixed Fee** made under all Amendments and/or Optional Work Notice to Proceed, if any: **\$12,251,825.09**

Total expected increase to the **Definition Phase Fixed Fee** under this Project Change Directive: **\$76,670.70**

Revised Definition Phase Fixed Fee under this Project
Change Directive:

\$12,328,495.79

The above changes to the Definition Phase Fixed Fee will be reflected in Schedule 7.1 (Contract Price) which will be revised by an Amendment. All other elements of the Contract Price will remain unchanged.

E. Change to Milestone Payment Schedule for Definition Phase Fixed Fee

OPG expects that as a result of changes to the Work and Contract Schedule described in sections A and B above, there will be the following effect on the Milestone Payment Schedule for Definition Phase Fixed Fee, which is set out in Attachment 7.1(11) of Schedule 7.1 (Contract Price):

- (1) Milestones 28, 30, 31, 33, and 35: contents in columns titled as "Element of Work", "% of Total", "Definition Phase Fixed Fee Payment Breakdown by Milestone" and "Contract Schedule/Milestone Date" will be replaced with the following:

Reference	Element of Work	% of Total	Definition Phase Fixed Fee Payment Breakdown by Milestone	Contract Schedule/Milestone Date
Milestone 28	Final Submittals of Design EC's for Generator Refurbishment (including Second Release)	TBD	\$339,496	March 31, 2016
Milestone 30	Final Submittals of Design EC's for Excitation Controls (including Second Release)	TBD	\$339,496	March 31, 2016

Milestone 31	Final Submittals of Design EC's for Turbine Controls (including Second Release)	TBD	\$339,496	March 31, 2016
Milestone 33	First Release Design of EC's for Generator Refurbishment	TBD	\$339,496	July 31, 2015
Milestone 35	First Release Design of EC's for Excitation Controls	TBD	\$339,496	July 31, 2015

(2) The following New Milestones 36 and 40 will be inserted:

Reference	Element of Work	% of Total	Definition Phase Fixed Fee Payment Breakdown by Milestone	Payment Milestone Completion Criteria	Contract Schedule/Milestone Date
Milestone 36	First Release Design of EC's for Turbine Controls	TBD	\$339,496	Milestone is declared complete upon OPG acceptance.	July 31, 2015
Milestone 40	Static Commissioning Work Plans	TBD	\$76,671	Milestone is declared complete upon OPG acceptance.	July 31, 2016

The above changes to the Milestone Payment Schedule for Definition Phase Fixed Fee will be reflected in Schedule 7.1 (Contract Price) which will be revised by an Amendment. All other elements of the Contract Price will remain unchanged.

F. Amendment Conditions

No amendment (including an Amendment), restatement or termination of the Agreement in whole or in part is binding unless it is in writing and signed by each Party to the Agreement. For certainty, while the Contractor is obligated to proceed with the changes contained herein, this Project Change Directive does not amend the Agreement and OPG will not be deemed to have agreed to, or be required to pay for, any such changes until such time as an Amendment is executed pursuant to section 5.5 of the Agreement.

ONTARIO POWER GENERATION INC.

By: 

Name: Todd Josifovski
Title: Project Director

AECON CONSTRUCTION GROUP INC.

By: 

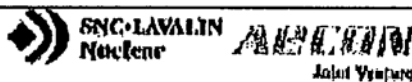
Name: Sam Bambino
Title: U. P. Aecon Nuclear

SNC-LAVALIN NUCLEAR INC.

By: 

Name: Matthew Ross
Title: U. P. Project Controls
for Rob Stewart
SVP Operations

APPENDIX A



SNC-LAVALIN NUCLEAR INC.
2270 Upper Middle Rd. Unit
Oakville, ON
L6H 6C3

Tel: (905) 820-8808
Fax: (905) 820-8808

Via Electronic Mail

February 26, 2015

617391-30CC-I-0033
NK30-CORR-40005-0520100

Ontario Power Generation Inc.
Darlington Energy Centre
1855 Energy Drive
Courtice, ON
L1E 0E7

Attention: Mr. Gregg McCabe -- Director of Refurbishment Engineering, Darlington
Nuclear Refurbishment Program

Subject: Darlington Turbine Generator Refurbishment
U2 Engineering Release Strategy

Mr. McCabe:

Based on the evaluation of design input availability and projected dates for completion of procurement process and fabrication by ESES vendor for the Turbine Generator Refurbishment Project, SLN-Aecon Joint Venture (JV) is requesting your acceptance of the following release strategy for U2 Design Engineering packages.

As discussed in earlier face-to-face meetings (Engineering Mobilization meeting May 2014, TGR Release Plan meeting November 2014 and as recently as January 21, 2015), the following is the proposed release strategy in relation to the U2 design:

- a) Design ECs will be released by July 31, 2015, incorporating design inputs from ESES vendor received by March 1, 2015, supported with design reviews, COMS and DCVAR meetings. Due to the lack of ESES vendor information to fully complete the design for this release, these Design ECs could be considered only partial with missing information or holds.
- b) Due to partial Design ECs, a recovery plan will be established to accomplish and fully incorporate/integrate:
 - Asset Suite updates (CAT IDs, MEL updates, EBOM, ICS database)
 - On Line Wiring
 - Design Manuals
 - TSSA Regulations
 - Commissioning Specifications
 - Integration of software documentation
 - HFE integrated validation
 - Inputs to DCC Updates

Page 2 of 4

The details of the design completion status are included in Attachment 1, U2 Engineering Completion Strategy.

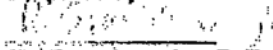
The EC revisions will be issued progressively on receipt of the balance of the design inputs from ESES vendor with a projected end date of March 31, 2015. The ESES vendor documentation such as, manufacturer manuals, training material, drawings, Bill of Material, test reports, calibration data, O&M Manuals etc is scheduled for delivery much later in the project. JV will track and issue as the documents become available.

There will be no impact on RQE as all new materials, including long lead items, will be identified at the July 31, 2015 milestone.

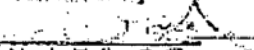
Any deviations from governance and guidelines from ECC process or other will be properly presented and approved by Engineering Stream IV Manager or higher prior to being officially documented in an SCR to satisfy the requirements set forth in the latest revision of Section 1.0.2 of N-GUID-00700-10000. They will also be documented in the Engineering Plan and the Design Plans and EC Release Plan associated with the Master ECs, as well as tracked in the Issue Tracking File.

Please do not hesitate to contact the undersigned should you wish to discuss, or require any further assistance.

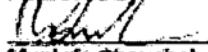
Prepared by:


Raj Sotakharajan, P. Eng.
Design Team Leader
SNC-Lavalin Nuclear - Aecon JV

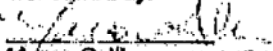
Concurred by:


Navin Toller P. Eng.
Engineering Manager
SNC-Lavalin Nuclear - Aecon JV

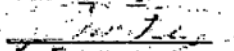
Approved by:


Mustafa Shousheh
Project Director (nolling)
SNC-Lavalin Nuclear - Aecon JV

Concurred by:


Marco Grill
TGR Design Team Leader
OPG, DNGS Refurbishment

Concurred by:


Jim Ferguson
TGR Project Engineering Lead
OPG, DNGS Refurbishment

Concurred by:


Rejman Asgharpour
TGR Project Manager
OPG, DNGS Refurbishment

Accepted by:


Rajeev Lakshya P. Eng.
Manager of Design Engineering
OPG, DNGS Refurbishment

Page 3 of 4

Accepted by:

[Signature]
 Gregg McCabe P. Eng
 Director Engineering
 OPG, DNGS Refurbishment

Accepted by:

Todd Josilovski
 Project Director
 OPG, DNGS Refurbishment

Attachment : (1) U2 Engineering Completion Strategy

cc:

OPG

Todd Josilovski
 Peter Moore
 Rajeev Lookha
 Jim Ferguson
 Marco Gatti
 Pejman Asgarpour

JV

Navin Tazor
 Raj Soundararajan
 George Mak
 Brad Honda
 Ema Qulambo

Box

www.cmu1@cleveland.oh.com

617391-

DNGS_TG_Refurb_DEF @nuclear.com

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Attachment 1 - U2 Engineering Completion Strategy

Gen Aux - MEC 117212, 117213, 117214
Turbine Control & Excretion Control - MEC 88835, 117408

Deliverable	RQO Completion Status	Exclusion For Partial
Logic Diagrams	C	
Panel General Arrangements	C	
Equipment Location Drawings	C	
Instrument Lists	C	
Panel/Junction Box Lists	C	
Isometric Drawings	C	
Calculations	C	Validation required
Cable Block Diagrams	C	
Flow Diagrams	P	TSSA Registration details (Gen Aux)
Elementary Wiring Diagrams	P	Terminal Info, Wire #
Installation Documents	P	Cable and process connection, BOM Items
Annunciation List / Alarm Response Manuals	P	Source terminal points
Catalog Identifications	P	New Alarm Items
Bill of Materials	P	CAT ID
Human Factors Engineering Summary Reports	P	JV integrated validation results
On-Line-Wiring	N	Will be issued in subsequent EC Revisions
Instrument Calibration Specifications	N	Will be issued in subsequent EC Revisions
Input/Output Lists	N	Will be issued in subsequent EC Revisions
Software Quality Assurance	N	Will be issued in subsequent EC Revisions
Design Manuals	N	Will be issued in subsequent EC Revisions
Inputs to DCC Updates	N	Will be issued in subsequent EC Revisions
C - Completed		
P - Partial (These items will be fully completed and issued in subsequent EC Revisions)		
N - Not Included		

To support this release strategy, JV outlined risk assessments that may arise on the following factors:

- Execution: No Impact - no field activities planned during this phase
- Equipment cost: No Impact - all new materials, including long lead items, will be identified at the July milestone. Critical items will be complete at RQO issue to feed into RQE.
- Technical risk: Low - no design intent change; Compliance to MP80 governance will be achieved
- Human Performance risk: Low - same level of quality rigor will be applied
- DCCVAR: Low Impact - all open items will be closed in the planned EC revision

617391-30CC-4-0033

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PCD #003: Unit 2 Modification Deferral/Engineering Development/PM & EM Support/Additional Modifications - February 26, 2015
 OPG CCF #: 697 (for OPG reference only)

Appendix B



PCD 0003 OPG
Pricing Sheets Rev 02

Darlington Nuclear Generating Station Turbine Generator Refurbishment Project

ONTARIOPOWER
GENERATION

Attachment 7.1(1) - Contract Price (PCD 0003)

Contract Price defined in Section 1.1(r) of the Agreement.

Pricing Model/SOW/Unit	Total	Turbine and Auxiliaries NK38-SOW-41000-10003	Generator and Auxiliaries NK38-SOW-42000-10003	Moisture Separator Reheaters NK38-SOW-41800-10003	Turbine Controls Upgrade NK38-SOW-64100-10004	Generator Excitation Controls Upgrade NK38-SOW-64220-10003
Definition Phase Target Cost	\$ 123,253					
Contract Price	\$ 123,253					
Definition Phase Fixed Fee	\$ 76,671					
Contract Price	\$ 76,671					
Execution Phase Target Cost (Non-Trades only)	\$ -					
No specific Unit	\$ -					
Execution Phase Fixed Fee (Non-Trades only)	\$ -					
No specific Unit	\$ -					
Execution Phase Target Cost (Trades only)	\$ -					
No specific Unit	Priced during Definition Phase					
1st Unit	Priced during Definition Phase	Priced during Definition Phase	Priced during Definition Phase	Priced during Definition Phase	Priced during Definition Phase	Priced during Definition Phase
2nd Unit	Priced during Definition Phase	Priced during Definition Phase	Priced during Definition Phase	Priced during Definition Phase	Priced during Definition Phase	Priced during Definition Phase
3rd Unit	Priced during Definition Phase	Priced during Definition Phase	Priced during Definition Phase	Priced during Definition Phase	Priced during Definition Phase	Priced during Definition Phase
4th Unit	Priced during Definition Phase	Priced during Definition Phase	Priced during Definition Phase	Priced during Definition Phase	Priced during Definition Phase	Priced during Definition Phase
Execution Phase Fixed Fee (Trades only)	\$ -					
No specific Unit	Priced during Definition Phase					
1st Unit	Priced during Definition Phase					
2nd Unit	Priced during Definition Phase					
3rd Unit	Priced during Definition Phase					
4th Unit	Priced during Definition Phase					
Execution Phase SS&E Target Cost & SS&E Fixed Fee	\$ -					
No specific Unit	Priced during Definition Phase					
1st Unit	Priced during Definition Phase					
2nd Unit	Priced during Definition Phase					
3rd Unit	Priced during Definition Phase					
4th Unit	Priced during Definition Phase					
The Contract Price is:	\$ 199,924					
Dynamic Commissioning Work (Trades only) (Estimate)	\$ -					
1st Unit	Estimated during Definition Phase					
2nd Unit	Estimated during Definition Phase					
3rd Unit	Estimated during Definition Phase					
4th Unit	Estimated during Definition Phase					
Mark-Up for Dynamic Commissioning Work (Estimate)	\$ -					
1st Unit	Estimated during Definition Phase					
2nd Unit	Estimated during Definition Phase					
3rd Unit	Estimated during Definition Phase					
4th Unit	Estimated during Definition Phase					
Cost Reimbursable with Mark-Up (Estimate)	\$ -					
Turbine and Auxiliaries	Estimated during Definition Phase					
Generator and Auxiliaries	Estimated during Definition Phase					
Turbine Controls	Estimated during Definition Phase					
Excitation Controls	Estimated during Definition Phase					
Moisture Separator Reheater	Estimated during Definition Phase					
Other	Estimated during Definition Phase					
Cost Reimbursable with no Mark-Up (Estimate)	\$ -					
No Specific Unit	Estimated during Definition Phase					

Darlington Nuclear Generating Station Turbine Generator Refurbishment Project

Attachment 7.1(4) - Definition Cost (PCD 0003)

ONTARIOPOWER
GENERATION

Ref.	Labour Schedule Ref.	Resources					Definition Phase		Applicable Adjustable Cost Index
		Position	Grade	Effective Date	Normal / Overtime	Rate	Hours	Total	
DEFINITION PHASE DELIVERABLES							18,015 hrs	\$ 118,467	
1	PCN 0004 U3 Engineering and Gap Analysis						2,617 hrs	\$ 202,316	
	924	SNC - Engineering Manager	Category E - Home Office	01-Jan-2013	1x	\$ 116.88	57 hrs	\$ 6,620	Index 1a
	951	SNC - Design Team Lead	Category D - Home Office	01-Jan-2013	1x	\$ 96.25	100 hrs	\$ 9,658	Index 1a
	975	SNC - Senior Engineer (Mechanical)	Category C - Home Office	01-Jan-2013	1x	\$ 75.63	626 hrs	\$ 47,366	Index 1a
	981	SNC - Senior Engineer (Electrical)	Category C - Home Office	01-Jan-2013	1x	\$ 75.63	942 hrs	\$ 71,233	Index 1a
	984	SNC - Senior Engineer (I&C/ HFE)	Category C - Home Office	01-Jan-2013	1x	\$ 75.63	709 hrs	\$ 53,608	Index 1a
	978	SNC - Senior Engineer (Civil/ Structural)	Category C - Home Office	01-Jan-2013	1x	\$ 75.63	105 hrs	\$ 7,956	Index 1a
	987	SNC - Intermediate Engineer (Mechanical)	Category C - Home Office	01-Jan-2013	1x	\$ 75.63	78 hrs	\$ 5,875	Index 1a
2	PCN-0006 PMT Extension						12,887 hrs	\$ 1,048,018	
	924	SNC - Engineering Manager	Category E - Home Office	01-Jan-2013	1x	\$ 116.88	1,317 hrs	\$ 153,885	Index 1a
	951	SNC - Design Team Lead	Category D - Home Office	01-Jan-2013	1x	\$ 96.25	1,317 hrs	\$ 126,729	Index 1a
	1188	QA Manager	0	01-Jan-2013	1x	\$ 99.16	329 hrs	\$ 32,641	Index 1a
	1200	EHS Manager	0	01-Jan-2013	1x	\$ 99.16	132 hrs	\$ 13,056	Index 1a
	1174	Project Coordinator / Assessor	0	01-Jan-2013	1x	\$ 75.08	329 hrs	\$ 24,714	Index 1a
	904	Project Director	0	01-Jan-2013	1x	\$ 120.41	1,317 hrs	\$ 158,540	Index 1a
	1148	Project Controls Manager	0	01-Jan-2013	1x	\$ 99.16	1,317 hrs	\$ 130,562	Index 1a
	912	PD Admin Assistant	0	01-Jan-2013	1x	\$ 45.33	1,317 hrs	\$ 59,686	Index 1a
	1153	Projects Coordinator	0	01-Jan-2013	1x	\$ 75.08	1,317 hrs	\$ 98,854	Index 1a
	1150	P-6 Planner	0	01-Jan-2013	1x	\$ 75.08	1,317 hrs	\$ 98,854	Index 1a
	1178	Project Accountant	0	01-Jan-2013	1x	\$ 58.08	1,564 hrs	\$ 90,811	Index 1a
	1158	Doc Control Clerk	0	01-Jan-2013	1x	\$ 45.33	1,317 hrs	\$ 59,686	Index 1a
3	PCN-0003 Seal Oil System Pressure Relief Valve						526 hrs	\$ 44,151	
	924	SNC - Engineering Manager	Category E - Home Office	01-Jan-2013	1x	\$ 116.88	106 hrs	\$ 12,389	Index 1a
	975	SNC - Senior Engineer (Mechanical)	Category C - Home Office	01-Jan-2013	1x	\$ 75.63	170 hrs	\$ 12,856	Index 1a
	984	SNC - Senior Engineer (I&C/ HFE)	Category C - Home Office	01-Jan-2013	1x	\$ 75.63	80 hrs	\$ 6,050	Index 1a
	987	SNC - Intermediate Engineer (Mechanical)	Category C - Home Office	01-Jan-2013	1x	\$ 75.63	170 hrs	\$ 12,856	Index 1a
4	PCN-0007 HFE COTS						505 hrs	\$ 38,191	
	981	SNC - Senior Engineer (Electrical)	Category C - Home Office	01-Jan-2013	1x	\$ 75.63	16 hrs	\$ 1,210	Index 1a
	984	SNC - Senior Engineer (I&C/ HFE)	Category C - Home Office	01-Jan-2013	1x	\$ 75.63	451 hrs	\$ 34,107	Index 1a
	978	SNC - Senior Engineer (Civil/ Structural)	Category C - Home Office	01-Jan-2013	1x	\$ 75.63	38 hrs	\$ 2,874	Index 1a
5	PCN-0009 - Generator Shaft Grounding Access Platform						240 hrs	\$ 19,178	
	990	SNC - Intermediate Engineer (Civil/ Structural)	Category C - Home Office	01-Jan-2013	1x	\$ 75.63		\$ -	Index 1a
	1153	Projects Coordinator	0	01-Jan-2013	1x	\$ 75.08	160 hrs	\$ 12,013	Index 1a
	1175	Project Coordinator / Assessor	0	01-Jan-2013	1.5x	\$ 91.33	40 hrs	\$ 3,653	Index 1a
	1191	QA Specialist	0	01-Jan-2013	1x	\$ 87.81	40 hrs	\$ 3,512	Index 1a
6	PCN-0010 - New Access Platform & Stairs associated with Seal Oil Skid #2 Installation						240 hrs	\$ 19,178	
	990	SNC - Intermediate Engineer (Civil/ Structural)	Category C - Home Office	01-Jan-2013	1x	\$ 75.63		\$ -	Index 1a
	1153	Projects Coordinator	0	01-Jan-2013	1x	\$ 75.08	160 hrs	\$ 12,013	Index 1a
	1175	Project Coordinator / Assessor	0	01-Jan-2013	1.5x	\$ 91.33	40 hrs	\$ 3,653	Index 1a
	1191	QA Specialist	0	01-Jan-2013	1x	\$ 87.81	40 hrs	\$ 3,512	Index 1a
7	PCN-0011 - NV10 & NV11 Interference removal PMOD and SCW Isolation valves installation						680 hrs	\$ 54,347	
	987	SNC - Intermediate Engineer (Mechanical)	Category C - Home Office	01-Jan-2013	1x	\$ 75.63		\$ -	Index 1a
	1011	SNC - Designer/ Drafter (Mechanical)	Category B - Home Office	01-Jan-2013	1x	\$ 45.38		\$ -	Index 1a
	1153	Projects Coordinator	0	01-Jan-2013	1x	\$ 75.08	460 hrs	\$ 34,536	Index 1a
	1191	QA Specialist	0	01-Jan-2013	1x	\$ 87.81	80 hrs	\$ 7,025	Index 1a
	1175	Project Coordinator / Assessor	0	01-Jan-2013	1.5x	\$ 91.33	140 hrs	\$ 12,786	Index 1a
	1191	QA Specialist	0	01-Jan-2013	1x	\$ 87.81		\$ -	Index 1a
8	PCN-0013 - Removal of stator winding Temperature Elements Jumpers						320 hrs	\$ 25,764	
	984	SNC - Senior Engineer (I&C/ HFE)	Category C - Home Office	01-Jan-2013	1x	\$ 75.63		\$ -	Index 1a

OPG Darlington Refurbishment Program

Darlington Nuclear Generating Station Turbine Generator Refurbishment Project



Attachment 7.1 (5) - Cost Flow DP Target Cost (PCD 0003)

The Proponent is to provide forecasted annual expenditures for the purposes of applying Economic Cost Adjustments to Adjustable Costs.

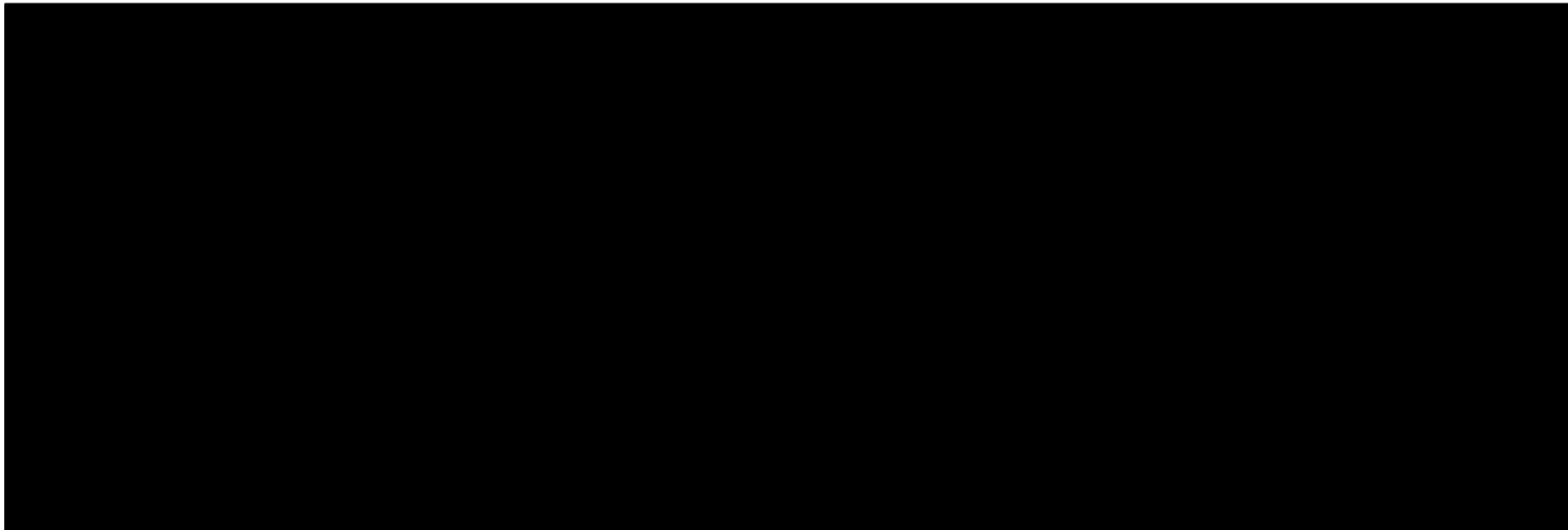
Pricing Mechanism/Scope	Escalation Base Year	Base Cost (from Definition Phase Target Cost Worksheet)	Contract Year				Total
			2013	2014	2015	2016	
COSTS (at base year, i.e. unescalated)							Costs
Definition Phase Target Cost							
Index 1a	2013	\$ 118,467			\$ 118,467		\$ 118,467
Index 2	2013	\$ -			\$ -		\$ -
Index 12	2013	\$ -			\$ -		\$ -
Index 3		\$ -			\$ -		\$ -
		\$ -			\$ -		\$ -
		\$ -			\$ -		\$ -
Definition Phase Target Cost (Unescalated)		\$ 118,467	\$ -	\$ -	\$ 118,467	\$ -	\$ 118,467
ESCALATION RATES	Escalation Base Year		2013	2014	2015	2016	
Year Over Year Escalation Rates							
Index 1a			2.00%	2.00%	2.00%	2.00%	
Index 2			0.00%	0.00%	0.00%	0.00%	
Index 12			0.00%	0.00%	0.00%	0.00%	
Index 3			0.00%	0.00%	0.00%	0.00%	
Compounded Escalation Rates							
Index 1a	2013		100.00%	102.00%	104.04%	106.12%	
Index 2	2013		100.00%	100.00%	100.00%	100.00%	
Index 12	2013		100.00%	100.00%	100.00%	100.00%	
Index 3				100.00%	100.00%	100.00%	
ESCALATED COSTS							Total
Definition Phase Target Cost							
Index 1a			\$ -	\$ -	\$ 123,253	\$ -	\$ 123,253
Index 2			\$ -	\$ -	\$ -	\$ -	\$ -
Index 12			\$ -	\$ -	\$ -	\$ -	\$ -
Index 3				\$ -	\$ -	\$ -	\$ -
							\$ -
							\$ -
Definition Phase Target Cost (Escalated)			\$ -	\$ -	\$ 123,253	\$ -	\$ 123,253
The Definition Phase Target Cost is: \$ 123,253							

OPG Darlington Refurbishment Program

Darlington Nuclear Generating Station Turbine Generator Refurbishment Project

Attachment 7.1(6) - Definition Phase Fixed Fee (PCD 0003)

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Darlington Nuclear Generating Station Turbine Generator Refurbishment Project



Attachment 7.1(11) - Milestone Payment Schedule for Definition Phase Fixed Fee (PCD 0003)

Reference	Element of Work	% of Total	Definition Phase Fixed- Fee Payment Breakdown by Milestone	Payment Milestone Completion Criteria	Contract Schedule/ Milestone Date
	Definition Phase Deliverables/Milestones		\$ 76,671		
Milestone 40	Static Commissioning Workplans		\$ 76,670.70	Milestone is declared complete upon OPG acceptance.	31-Jul-16

Project Change Directive #007**Crane Assessment – Inspection Work****PROJECT CHANGE DIRECTIVE**

<p>To: AECON Construction Group Inc. and SNC-Lavalin Nuclear Inc.</p> <p>SNC-Lavalin Nuclear Inc. 2275 Upper Middle Road East Oakville, Ontario L6H 0C3</p> <p>Attn: Project Director, Turbine Generator Refurbishment Darlington Nuclear Refurbishment Program</p>	<p>Contract: Engineering, Procurement and Construction Agreement for the Turbine Generator Refurbishment Project between Ontario Power Generation Inc. and AECON Construction Group Inc. and SNC-Lavalin Nuclear Inc. dated as of January 22, 2014(the "Agreement")</p> <p>Contract No.: PO# 232344 Project Change Directive No. 007 Date: May 20, 2015</p>
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Defined terms used in this Project Change Directive have the same meanings given to those terms in the Agreement.

A. Change to Work

In accordance with section 5.2 of the Agreement, OPG hereby directs the Contractor to make the following changes in the Work and hereby requires the Contractor to proceed with the changes in the Work prior to agreeing on the terms of an Amendment:

The Contractor will perform the inspection work of the two turbine hall cranes on the turbine floor at the DNGS in July 2015. Such inspection work is a component of the Contractor's independent assessment of the two turbine hall cranes as required under the Agreement. The crane inspection work was initially scheduled to be performed during the Execution Phase and it is requested to be brought forward in the Definition Phase.

The above changes to the Work will be clearly described in the next revision of the following scope of Work documents in Schedule 1.1 (E) (Specifications):

- i. Section 6.8 of NK38-SOW-41000-10003; Scope of Work: Darlington Steam Turbine and Auxiliaries Refurbishment;
- ii. Section 6.8 of NK38-SOW-42000-10003; Scope of Work: Darlington Generator and Auxiliaries Refurbishment;
- iii. Section 2.8 of NK38-SOW-64100-10004; Scope of Work: Darlington Turbine Controls Upgrades;
- iv. Section 3.8 of NK38-SOW-64220-10003; Scope of Work: Darlington Generator Excitation Controls Upgrade;
- v. Section 6.8 of NK38-SOW-41800-10003; Scope of Work: Darlington Moisture Separators Reheaters Refurbishment
- vi. Section 18.8 of NK38-SOW-40000-10001; Scope of Work: Darlington Steam Turbine Generator and Auxiliaries Refurbishment – Inspections

This Work will be treated as pre-requisite to start of main execution window for acceptance of the safety and reliability of turbine hall cranes by the Contractor as it was previously stated in the scope of Work documents referenced above. Advancement of the turbine hall cranes' inspection is requested by OPG to provide ample time for repair in the event the cranes' condition found to be deficient.

The above changes to the Work will be reflected in Schedule 1.1(E) (Specifications) which will be revised by an Amendment. All other elements of the Specifications will remain unchanged.

B. Change to Definition Phase Target Cost

OPG expects that as a result of the changes to the Work set out in this Project Change Directive, there will be the following effect on the Definition Phase Target Cost:

The Definition Phase Target Cost will be increased by \$194,480, as detailed in Appendix A of this Project Change Directive.

Definition Phase Target Cost (unescalated)

As set out in the Agreement as of the date of the Agreement:

\$17,727,966

Definition Phase Target Cost (unescalated)

As set out in the Agreement as of the date of the Agreement, as adjusted by all changes in the Definition Phase Target Cost made under all Amendments and/or Optional Work Notice to Proceed, if any:

\$19,194,756

Total increase to the **Definition Phase Target Cost** under this Project Change Directive:

\$194,480

Revised **Definition Phase Target Cost** under this Project Change Directive:

\$19,389,236

The above changes to the Definition Phase Target Cost will be reflected in Schedule 7.1 (Contract Price) which will be revised by an Amendment. All other elements of the Contract Price will remain unchanged.

C. Change to Definition Phase Fixed Fee

OPG expects that as a result of the changes to the Work set out in this Project Change Directive, there will be the following effect on the Definition Phase Fixed Fee:

The Definition Phase Fixed Fee will be increased by \$38,560, as detailed in Appendix A of this Project Change Directive.

Definition Phase Fixed Fee

as set out in the Agreement as of the date of the Agreement:

\$11,316,530.85

Definition Phase Fixed Fee

as set out in the Agreement as of the date of the Agreement, as adjusted by all changes in the **Definition Phase Fixed Fee** made under all Amendments and/or Optional Work Notice to Proceed, if any:

\$12,251,825.09

Total expected increase to the **Definition Phase Fixed Fee** under this Project Change Directive:

\$38,560

Revised Definition Phase Fixed Fee under this Project
Change Directive:

\$ 12, 290,385.09

The above changes to the Definition Phase Fixed Fee will be reflected in Schedule 7.1 (Contract Price) which will be revised by an Amendment. All other elements of the Contract Price will remain unchanged.

D. Change to Milestone Payment Schedule for Definition Phase Fixed Fee

OPG expects that as a result of changes to the Work described in section A above, there will be the following effect on the Milestone Payment Schedule for Definition Phase Fixed Fee, as detailed in Appendix A of this Project Change Directive:

The new milestone 37 will be inserted with contents described below:

Reference	Element of Work	% of Total	Definition Phase Fixed Fee Payment Breakdown by Milestone	Payment Milestone Completion Criteria	Contract Schedule/Milestone Date
Milestone 37	Report for July 2015 Turbine Hall Crane Inspection	TBD	\$38,560	Milestone is declared complete upon OPG acceptance.	September 30, 2015

The above changes to the Milestone Payment Schedule for Definition Phase Fixed Fee will be reflected in Schedule 7.1 (Contract Price) which will be revised by an Amendment. All other elements of the Contract Price will remain unchanged.

E. Change to Contract Schedule

OPG expects that as a result of the changes to the Work set out in this Project Change Directive, there will be no change to the Contract Schedule.

F. Amendment Conditions

No amendment (including an Amendment), restatement or termination of the Agreement in whole or in part is binding unless it is in writing and signed by each Party to the Agreement. For certainty, while the Contractor is obligated to proceed with the changes contained herein, this Project Change Directive does not amend the Agreement and OPG will not be deemed to have agreed to, or be required to pay for, any such changes until such time as an Amendment is executed pursuant to section 5.5 of the Agreement.

ONTARIO POWER GENERATION INC.By: 

Name:

TODD JOSIFOVSKI

Title:

PROJECT DIRECTOR

AECON CONSTRUCTION GROUP INC.By: 

Name:

Ian Turnbull

Title: President, Aecon Industrial, a Division of

SNC-LAVALIN NUCLEAR INC.By: 

Name:

ROBERT STEWART

Title: SR. VICE PRESIDENT, OPERATIONS

Appendix A



PCD 0007 Crane
Inspection Rev 01.pd

Darlington Nuclear Generating Station Turbine Generator Refurbishment Project

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 GENERATION

Attachment 7.1(1) - Contract Price (PCN-0012 July 2015 Crane Inspection)

Contract Price defined in Section 1.1(r) of the Agreement.

Pricing Model/SOW/Unit	Total	Turbine and Auxiliaries NK38-SOW-41000-10003	Generator and Auxiliaries NK38-SOW-42000-10003	Molten Salt Separator Reheaters NK38-SOW-41800-10003	Exhaust Gas Control Unit NK38-SOW-64100-10004	Generator Excitation Control Upgrade NK38-SOW-64220-10003
Definition Phase Target Cost	\$ 194,480	\$ -	\$ -	\$ -	\$ -	\$ -
Contract Price (PCN-0012 July 2015 Crane Inspection)	\$ 194,480	\$ -	\$ -	\$ -	\$ -	\$ -
Definition Phase Fixed Fee	\$ 98,560	\$ -	\$ -	\$ -	\$ -	\$ -
Contract Price (PCN-0012 July 2015 Crane Inspection)	\$ 38,560	\$ -	\$ -	\$ -	\$ -	\$ -
Execution Phase Target Cost (Non-Trade Only)	\$ -					
No specific Unit	\$ -					
Execution Phase Fixed Fee (Trade Only)	\$ -					
No specific Unit	\$ -					
Execution Phase Target Cost (Trade Only)	\$ -					
No specific Unit	\$ -					
1st Unit	Priced during Definition Phase	Priced during Definition Phase	Priced during Definition Phase	Priced during Definition Phase	Priced during Definition Phase	Priced during Definition Phase
2nd Unit	Priced during Definition Phase	Priced during Definition Phase	Priced during Definition Phase	Priced during Definition Phase	Priced during Definition Phase	Priced during Definition Phase
3rd Unit	Priced during Definition Phase	Priced during Definition Phase	Priced during Definition Phase	Priced during Definition Phase	Priced during Definition Phase	Priced during Definition Phase
4th Unit	Priced during Definition Phase	Priced during Definition Phase	Priced during Definition Phase	Priced during Definition Phase	Priced during Definition Phase	Priced during Definition Phase
Execution Phase Fixed Fee (Trade Only)	\$ -					
No specific Unit	\$ -					
1st Unit	Priced during Definition Phase					
2nd Unit	Priced during Definition Phase					
3rd Unit	Priced during Definition Phase					
4th Unit	Priced during Definition Phase					
Execution Phase Target Cost (Trade Only) Fixed Fee	\$ -					
No specific Unit	\$ -					
1st Unit	Priced during Definition Phase					
2nd Unit	Priced during Definition Phase					
3rd Unit	Priced during Definition Phase					
4th Unit	Priced during Definition Phase					
The Contract Price is: \$ 233,040						
Dynamic Commissioning Work (Trade Only) (Estimate)	\$ -					
1st Unit	Estimated during Definition Phase					
2nd Unit	Estimated during Definition Phase					
3rd Unit	Estimated during Definition Phase					
4th Unit	Estimated during Definition Phase					
Mark-Up on Dynamic Commissioning Work (Estimate)	\$ -					
1st Unit	Estimated during Definition Phase					
2nd Unit	Estimated during Definition Phase					
3rd Unit	Estimated during Definition Phase					
4th Unit	Estimated during Definition Phase					
Cost Reimbursable with Mark-Up (Estimate)	\$ -					
Turbine and Auxiliaries	Estimated during Definition Phase					
Generator and Auxiliaries	Estimated during Definition Phase					
Turbine Control	Estimated during Definition Phase					
Excitation Control	Estimated during Definition Phase					
Molten Salt Separator Reheater	Estimated during Definition Phase					
Other	Estimated during Definition Phase					
Cost Reimbursable with no Mark-Up (Estimate)	\$ -					
No Specific Unit	Estimated during Definition Phase					

Version: R01-20130529

Darlington Nuclear Generating Station Turbine Generator Refurbishment Project

Attachment 7.1(4) - Definition Cost (PCN-0012 July 2015 Crane Inspection)

ONTARIO POWER GENERATION

[illegible]

OPG Darlington Refurbishment Program

Darlington Nuclear Generating Station Turbine Generator Refurbishment Project

Attachment 7.1 (5) - Cost Flow DP Target Cost (PCN-0012 July 2015 Crane Inspection)

The Proponent is to provide forecasted annual expenditures for the purposes of applying Economic Cost Adjustments to Adjustable Costs.

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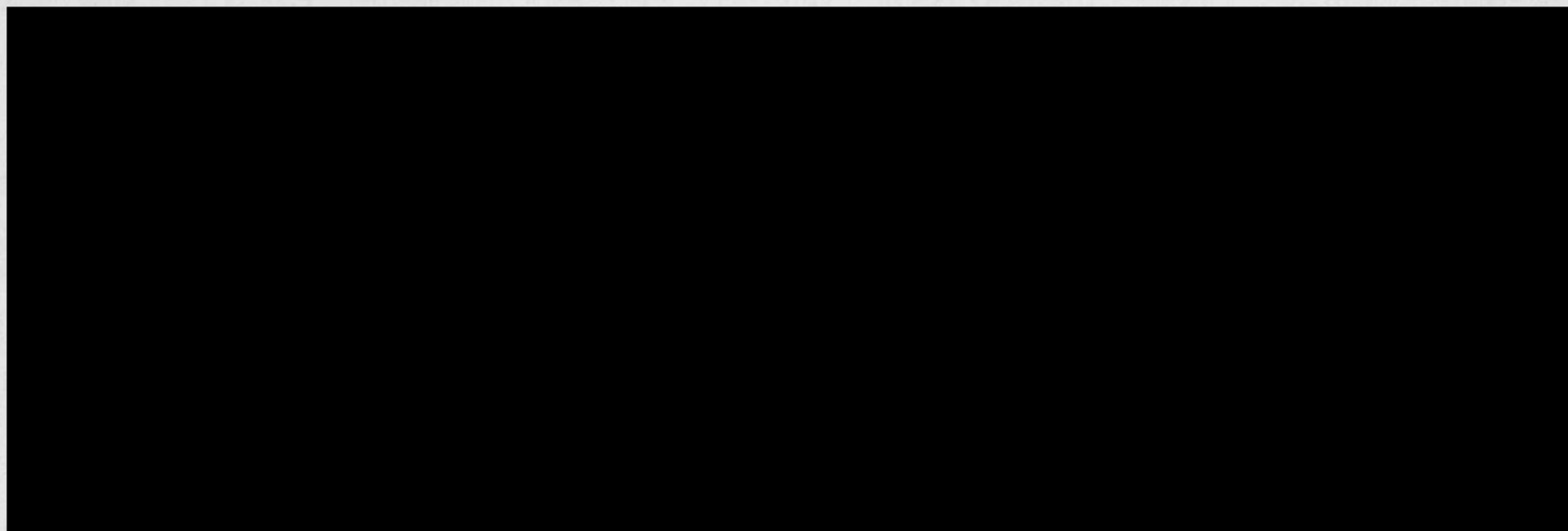
Pricing Mechanism/Type	Escalation Base Year	Base Cost from Definition Phase Target Costs Worksheet	Contract Years				
			2013	2014	2015	2016	
COSTS (at base year, i.e. unescalated)							
Definition Phase Target Cost							Cost
Index 1a	2013	\$ 9,559					\$ 9,559
Index 1b	2013	\$ -					\$ -
Index 12	2013	\$ 287					\$ 287
Index 3		\$ 184,247					\$ 184,247
		\$ -					\$ -
		\$ -					\$ -
Definition Phase Target Cost (Unescalated)		\$ 194,094	\$ -	\$ -	\$ 194,094	\$ -	\$ 194,094
ESCALATION RATES							
Year Over Year Escalation Rates							
Index 1a			2.00%	2.00%	2.00%	2.00%	
Index 1b			2.00%	2.00%	2.00%	2.00%	
Index 12			0.00%	0.00%	0.00%	0.00%	
Index 3			0.00%	0.00%	0.00%	0.00%	
Compounded Escalation Rates							
Index 1a	2013		100.00%	102.01%	104.04%	106.07%	
Index 1b	2013		100.00%	102.01%	104.04%	106.07%	
Index 12	2013		100.00%	100.00%	100.00%	100.00%	
Index 3			100.00%	100.00%	100.00%	100.00%	
ESCALATED COSTS							
Definition Phase Target Cost							Cost
Index 1a		\$ -	\$ -	\$ 9,946	\$ -	\$ -	\$ 9,946
Index 1b		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Index 12		\$ -	\$ -	\$ 287	\$ -	\$ -	\$ 287
Index 3		\$ -	\$ -	\$ 184,247	\$ -	\$ -	\$ 184,247
							\$ -
							\$ -
Definition Phase Target Cost (Escalated)		\$ -	\$ -	\$ 194,480	\$ -	\$ -	\$ 194,480
							The Definition Phase Target Cost is
							\$ 194,480

OPG Darlington Refurbishment Program

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Darlington Nuclear Generating Station Turbine Generator Refurbishment Project

Attachment 7.1(6) - Definition Phase Fixed Fee (PCN-0012 July 2015 Crane Inspection)

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OPG Darlington Refurbishment Program

Darlington Nuclear Generating Station Turbine Generator Refurbishment Project

Attachment 7.1(11) - Milestone Payment Schedule for Definition Phase Fixed Fee

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Reference	Element of Work	% of Total	Definition Phase Fixed Fee Payment Breakdown by Milestone	Payment Milestone Completion Criteria	Contract Schedule/Milestone Date
	Definition Phase Deliverables/Milestones		\$ 38,560		
Milestone 37	Report for July 2015 Turbine Hall Crane Inspection		\$ 38,560	Milestone is declared complete upon OPG acceptance.	30-Sep-15

Project Change Directive #008 (Revision 01)**Pre-Requisite Work****PROJECT CHANGE DIRECTIVE**

<p>To: AECON Construction Group Inc. and SNC-Lavalin Nuclear Inc.</p> <p>SNC-Lavalin Nuclear Inc. 2275 Upper Middle Road East Oakville, Ontario L6H 0C3</p> <p>Attn: Project Director, Turbine Generator Refurbishment Darlington Nuclear Refurbishment Program</p>	<p>Contract: Engineering, Procurement and Construction Agreement for the Turbine Generator Refurbishment Project between Ontario Power Generation Inc. and AECON Construction Group Inc. and SNC-Lavalin Nuclear Inc. dated as of January 22, 2014(the "Agreement")</p> <p>Contract No.: PO# 232344 Project Change Directive No. 008 (Revision 01) Date: September 03, 2015</p>
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Defined terms used in this Project Change Directive have the same meanings given to those terms in the Agreement.

This revision to Project Change Directive #008 replaces the previously issued version of this Project Change Directive in its entirety.

A. Change to Work

In accordance with section 5.2 of the Agreement, OPG hereby directs the Contractor to make the following changes in the Work and hereby requires the Contractor to proceed with the changes in the Work prior to agreeing on the terms of an Amendment:

The Contractor will proceed with the Work described hereunder. This Work was originally scheduled to be performed in the Execution Phase, but will be brought forward to the Definition Phase, and will be treated as a pre-requisite to the start of the main execution window (the "**Pre-Requisite Work**").

(1) The Contractor will incorporate the following in the Definition Phase Reimbursable Work:

- (a) Rotor stands and saddles refurbishment (ref #: PCN-0021);

1

PCD #008 (Revision 001): Pre-Requisite Work - September 03, 2015
OPG CCF # 692 (for OPG reference only)

P. Moore
Chairman

- (b) Supply and install 2 floor mounted jib cranes (ref #: PCN-0027);
- (c) Design and fabricate floor plates around CTs and Air Box (ref #: PCN-0016);
- (d) CT lifting devices Rehab (ref #: PCN-0020);
The purpose of such work is to confirm that such devices are acceptable for use.
- (e) Design and fabricate IPB Bus Ducts Dollies (ref #: PCN-0018);
- (f) Fabricate bolt carts, stools and stands (ref #: PCN-0022); and
- (g) Design and fabricate FRF pump maintenance stand (ref #: PCN-0017);

all of which were initially scheduled to be performed during the Execution Phase and were included in the Contractor's submission # 617391-0002-0000-33RA-0005 Darlington TGR – Execution Phase Complete Estimate for Unit 2, Schedule and Risk Report (R001), dated as of May 12, 2015. The Pre-Requisite Work items described above are now brought forward in the Definition Phase, as per OPG's direction. For clarity, the cost of the Pre-Requisite Work items described above will be added to Definition Phase Target Cost and Definition Phase Fixed Fee. The associated amounts included in the Contractor's submission # 617391-0002-0000-33RA-0005 Darlington TGR – Execution Phase Complete Estimate for Unit 2, Schedule and Risk Report (R001), dated as of May 12, 2015 will be taken out, as applicable, and the Execution Phase Target Cost, Execution Phase SS&E Target Cost, Execution Phase Fixed Fee and Execution Phase SS&E Fixed Fee will be reduced accordingly. The impact that these changes will have on the Contract Price is more particularly described in sections B, C, D, E, F, G, and H of this Project Change Directive.

(2) The Contractor will incorporate the following additional work in the Definition Phase Reimbursable Work:

- (a) H2 Fan Stand (ref #: PCN-0019); and
- (b) D3 Rotor Removal (ref #: PCN-0014)

This Work will be more particularly described in the revision of the following scope of work document in Schedule 1.1(E) (Specifications):

Item 2, *NK38-SOW-42000-10003; Scope of Work: Darlington Generator & Auxiliaries Refurbishment*, in section 2.1, the following sentences will be inserted:

- “ - Remove spare rotor from DNGS turbine hall and arrange for an unconditional transfer offsite; and
- Salvage the following components from the spare rotor: Slip ring and coupling.”

For clarity, the Pre-Requisite Work items described in section A(2)(a) and section A(2)(b) above were originally scheduled to be performed during the Execution Phase and were not included in the Contractor's submission # 617391-0002-0000-33RA-0005 Darlington TGR – Execution Phase Complete Estimate for Unit 2, Schedule and Risk Report (R001), dated as of May 12, 2015. OPG directs the Contractor to bring these two Pre-Requisites Work items forward in the Definition Phase. The impact that these changes will have on the Contract Price is more particularly described in sections B, C and D of this Project Change Directive.

The above changes to the Work will be reflected in the next revisions of the scope of work documents (as applicable) in Schedule 1.1(E) (Specifications) which will be revised by an Amendment. All other elements of the Specifications will remain unchanged.

B. Change to Definition Phase Target Cost

OPG expects that as a result of the changes to the Work set out in Section A of this Project Change Directive, there will be the following effect on the Definition Phase Target Cost:

The Definition Phase Target Cost will be increased by \$714,054 (unescalated), with breakdowns listed in Table A hereunder and as detailed in Appendix A and Appendix B of this Project Change Directive.

Table A – Increase in Definition Phase Target Cost (unescalated)

Reference in this Project Change Directive	Description	Increase in Definition Phase Target cost (unescalated)
Section A(1)(a)	Rotor Stands and Saddles Refurbishment (ref #: PCN-0021)	\$300,301
Section A(1)(b)	Supply and Install 2 floor mounted jib cranes (ref #: PCN-0027)	\$53,091
Section A(1)(c)	Design and fabricate floor plates around CTs and Air Box (ref #: PCN-0016)	\$62,172
Section A(1)(d)	CT lifting devices Rehab (ref #: PCN-0020)	\$6,128

Reference in this Project Change Directive	Description	Increase in Definition Phase Target cost (unescalated)
Section A(1)(e)	Design and fabricate IPB Bus Ducts Dollies (ref #: PCN-0018)	\$13,060
Section A(1)(f)	Fabricate bolt carts, stools and stands (ref #: PCN-0022)	\$46,544
Section A(1)(g)	Design and fabricate FRF pump maintenance stand (ref #: PCN-0017)	\$7,217
Section A(2)(a)	H2 Fan Stand (ref #: PCN-0019)	\$7,735
Section A(2)(b)	D3 rotor removal (ref #: PCN-0014)	\$217,807
Total increase in Definition Phase Target Cost (unescalated)		\$714,054

Definition Phase Target Cost (unescalated)

As set out in the Agreement as of the date of the Agreement:

\$17,727,966**Definition Phase Target Cost (unescalated)**

As set out in the Agreement as of the date of the Agreement, as adjusted by all changes in the **Definition Phase Target Cost** made under all Amendments and/or Optional Work Notice to Proceed, if any:

\$19,184,756

Total increase to the **Definition Phase Target Cost (unescalated)** under this Project Change Directive:

\$714,054

Revised **Definition Phase Target Cost (unescalated)** under this Project Change Directive:

\$19,898,810

The above changes to the Definition Phase Target Cost will be reflected in Schedule 7.1 (Contract Price) which will be revised by an Amendment. All other elements of the Contract Price will remain unchanged.

C. Change to Definition Phase Fixed Fee

OPG expects that as a result of the changes to the Work set out in this Project Change Directive, there will be the following effect on the Definition Phase Fixed Fee:

The Definition Phase Fixed Fee will be increased by \$178,699, with breakdowns listed in Table B hereunder and as detailed in Appendix A and Appendix B of this Project Change Directive.

Table B – Increase in Definition Phase Fixed Fee

Reference in this Project Change Directive	Description	Increase in Definition Phase Fixed Fee
Section A(1)(a)	Rotor Stands and Saddles Refurbishment (ref #: PCN-0021)	\$55,466
Section A(1)(b)	Supply and Install 2 floor mounted jib cranes (ref #: PCN-0027)	\$18,786
Section A(1)(c)	Design and fabricate floor plates around CTs and Air Box (ref #: PCN-0016)	\$15,462
Section A(1)(d)	CT lifting devices Rehab (ref #: PCN-0020)	\$1,471
Section A(1)(e)	Design and fabricate IPB Bus Ducts Dollies (ref #: PCN-0018)	\$2,567
Section A(1)(f)	Fabricate bolt carts, stools and stands (ref #: PCN-0022)	\$8,827
Section A(1)(g)	Design and fabricate FRF pump maintenance stand (ref #: PCN-0017)	\$1,466
Section A(2)(a)	H2 Fan Stand (ref #: PCN-0019)	\$1,741
Section A(2)(b)	D3 rotor removal (ref #: PCN-0014)	\$72,911
Total increase in Definition Phase Fixed Fee		\$178,699

Definition Phase Fixed Fee

as set out in the Agreement as of the date of the Agreement:

\$11,316,531

Definition Phase Fixed Fee

as set out in the Agreement as of the date of the Agreement, as adjusted by all changes in the **Definition Phase Fixed Fee** made under all Amendments and/or Optional Work Notice to Proceed, if any:

\$12,251,825

Total expected increase to the **Definition Phase Fixed Fee**

\$178,699

under this Project Change Directive:

Revised Definition Phase Fixed Fee under this Project
Change Directive:

\$12,430,524

The above changes to the Definition Phase Fixed Fee will be reflected in Schedule 7.1 (Contract Price) which will be revised by an Amendment. All other elements of the Contract Price will remain unchanged.

D. Change to Milestone Payment Schedule for Definition Phase Fixed Fee

OPG expects that as a result of changes to the Work described in section A above, there will be the following effect on the Milestone Payment Schedule for Definition Phase Fixed Fee, as detailed in Appendix A and Appendix B of this Project Change Directive:

Table C - The New Milestones 38 39 and 42 will be inserted with contents described below:

Reference	Element of Work	% of Total	Definition Phase Fixed Fee Payment Breakdown by Milestone	Payment Milestone Completion Criteria	Contract Schedule/Milestone Date
Milestone 38	Jib Crane Installation Complete	TBD	\$50,321	Milestone is declared complete upon OPG acceptance.	July 31,2016
Milestone 39	Refurbished Rotor Stands Delivered to Site(PCN-0021)	TBD	\$55,466	Milestone is declared complete upon OPG acceptance.	July 31,2016
Milestone 42	D3 Rotor Removed from Site(PCN-0014)	TBD	\$72,911	Milestone is declared complete upon OPG acceptance.	July 31,2016

The above changes to the Milestone Payment Schedule for Definition Phase Fixed Fee will be reflected in Schedule 7.1 (Contract Price) which will be revised by an Amendment. All other elements of the Contract Price will remain unchanged.

E. Change to Execution Phase Target Cost for Unit 2

The amount originally proposed by the Contractor as a portion of the Execution Phase Target Cost associated with Unit 2 was included in the Contractor's submission # 617391-0002-00000-33RA-0005 Darlington TGR – Execution Phase Complete Estimate for Unit 2, Schedule and Risk Report (R001), dated as of May 12, 2015 (the "**Proposed Execution Phase Target Cost for Unit 2**").

While the Parties are still in discussions respecting the Execution Phase Plan deliverables, OPG expects that as a result of the changes to the Work set out in section A of this Project Change Directive, there will be the following effect on the Proposed Execution Phase Target Cost for Unit 2:

The Proposed Execution Phase Target Cost for Unit 2 will be decreased by \$554,091 (unescalated), as detailed in Appendix B and Appendix C of this Project Change Directive.

Proposed Execution Phase Target Cost for Unit 2 (unescalated)

As submitted in the Contractor's submission 617391-0002-00000-33RA-0005 Darlington TGR – Execution Phase Complete Estimate for Unit 2, Schedule and Risk Report (R001), as of the date of May 12, 2015 (subject to finalization of the Execution Phase Plan negotiations between the Parties):

\$19,940,060

Total expected decrease to the **Proposed Execution Phase Target Cost for Unit 2 (unescalated)** under this Project Change Directive:

\$554,091

Revised **Proposed Execution Phase Target Cost for Unit 2 (unescalated)** under this Project Change Directive (subject to finalization of the Execution Phase Plan negotiations between the Parties):

\$19,385,969

The above changes to the Proposed Execution Phase Target Cost for Unit 2 will be reflected in the next revision of the Contractor's submission # 617391-0002-00000-33RA-0005, Darlington TGR – Execution Phase Complete Estimate for Unit 2, Schedule and Risk Report. Subject to finalization of the Execution Phase Plan negotiations between the Parties, all of the Execution Phase Plan deliverables, including the above revisions to the Proposed Execution Phase Target Cost for Unit 2, will be incorporated into the Agreement by an Amendment as per requirements of the Agreement.

F. Change to Execution Phase Fixed Fee for Unit 2

The amount originally proposed by the Contractor as a portion of the Execution Phase Fixed Fee associated with Unit 2 was included in the Contractor's submission # 617391-0002-00000-33RA-0005 Darlington TGR – Execution Phase Complete Estimate for Unit 2, Schedule and Risk Report (R001), dated as of May 12, 2015 (the "**Proposed Execution Phase Fixed Fee for Unit 2**").

While the Parties are still in discussions respecting the Execution Phase Plan deliverables, OPG expects that as a result of the changes to the Work set out in Section A of this Project Change Directive, there will be the following effect on the Proposed Execution Phase Fixed Fee for Unit 2:

The Proposed Execution Phase Fixed Fee for Unit 2 will be decreased by \$110,464, as detailed in Appendix B and Appendix C of this Project Change Directive.

Proposed Execution Phase Fixed Fee for Unit 2

As submitted in the Contractor's submission # 617391-0002-00000-33RA-0005 Darlington TGR – Execution Phase Complete Estimate for Unit 2, Schedule and Risk Report (R001), dated as of May 12, 2015 (subject to finalization of the Execution Phase Plan negotiations between the Parties):

\$6,199,940

Total decrease to the **Proposed Execution Phase Fixed Fee for Unit 2** under this Project Change Directive:

\$110,464

Revised **Proposed Execution Phase Fixed Fee for Unit 2** under this Project Change Directive (subject to finalization of the Execution Phase Plan negotiations between the Parties):

\$6,089,476

The above changes to the Proposed Execution Phase Fixed Fee for Unit 2 will be reflected in the next revision of the Contractor's submission # 617391-0002-00000-33RA-0005, Darlington TGR – Execution Phase Complete Estimate for Unit 2, Schedule and Risk Report. Subject to finalization of the Execution Phase Plan negotiations between the Parties, all of the Execution Phase Plan deliverables, including the above revisions to the Proposed Execution Phase Fixed Fee for Unit 2, will be incorporated into the Agreement by an Amendment as per requirements of the Agreement.

G. Change to Execution Phase SS&E Target Cost for Unit 2

The amount originally proposed by the Contractor as a portion of the Execution Phase SS&E Target Cost associated with Unit 2 was included in the Contractor's submission # 617391-0002-00000-33RA-0005 Darlington TGR – Execution Phase Complete Estimate for Unit 2, Schedule and Risk Report (R001), dated as of May 12, 2015 (the "**Proposed Execution Phase SS&E Target Cost for Unit 2**").

While the Parties are still in discussions respecting the Execution Phase Plan deliverables, OPG expects that as a result of the changes to the Work set out in section A of this Project Change Directive, there will be the following effect on the Proposed Execution Phase SS&E Target Cost for Unit 2:

The Proposed Execution Phase SS&E Target Cost for Unit 2 will be decreased by \$4,525 (unescalated), as detailed in Appendix B and Appendix C of this Project Change Directive.

Proposed Execution Phase SS&E Target Cost for Unit 2 (unescalated)

As submitted in the Contractor's submission 617391-0002-00000-33RA-0005 Darlington TGR – Execution Phase Complete Estimate for Unit 2, Schedule and Risk Report (R001), as of the date of May 12, 2015 (subject to finalization of the Execution Phase Plan negotiations between the Parties):

\$2,116,426

Total expected decrease to the **Proposed Execution Phase SS&E Target Cost for Unit 2 (unescalated)** under this Project Change Directive:

\$4,525

Revised **Proposed Execution Phase SS&E Target Cost for Unit 2 (unescalated)** under this Project Change Directive (subject to finalization of the Execution Phase Plan negotiations between the Parties):

\$2,111,901

The above changes to the Proposed Execution Phase SS&E Target Cost for Unit 2 will be reflected in the next revision of the Contractor's submission # 617391-0002-00000-33RA-0005, Darlington TGR – Execution Phase Complete Estimate for Unit 2, Schedule and Risk Report. Subject to finalization of the Execution Phase Plan negotiations between the Parties, all of the Execution Phase Plan deliverables, including the above revisions to the Proposed Execution Phase SS&E Target Cost for Unit 2, will be incorporated into the Agreement by an Amendment as per requirements of the Agreement.

H. Change to Execution Phase SS&E Fixed Fee for Unit 2

The amount originally proposed by the Contractor as a portion of the Execution Phase SS&E Fixed Fee associated with Unit 2 was included in the Contractor's submission # 617391-0002-00000-33RA-0005 Darlington TGR – Execution Phase Complete Estimate for Unit 2, Schedule and Risk Report (R001), dated as of May 12, 2015 (the "**Proposed Execution Phase SS&E Fixed Fee for Unit 2**").

While the Parties are still in discussions respecting the Execution Phase Plan deliverables, OPG expects that as a result of the changes to the Work set out in Section A of this Project Change Directive, there will be the following effect on the Proposed Execution Phase SS&E Fixed Fee for Unit 2:

The Proposed Execution Phase SS&E Fixed Fee for Unit 2 will be decreased by \$818, as detailed in Appendix B and Appendix C of this Project Change Directive.

Proposed Execution Phase SS&E Fixed Fee for Unit 2

As submitted in the Contractor's submission # 617391-0002-00000-33RA-0005 Darlington TGR – Execution Phase Complete Estimate for Unit 2, Schedule and Risk Report (R001), dated as of May 12, 2015 (subject to finalization of the Execution Phase Plan negotiations between the Parties):

\$388,897

Total decrease to the **Proposed Execution Phase Fixed Fee and SS&E Fixed Fee for Unit 2** under this Project Change Directive:

\$818

Revised **Proposed Execution Phase Fixed Fee and SS&E Fixed Fee for Unit 2** under this Project Change Directive (subject to finalization of the Execution Phase Plan negotiations between the Parties):

\$388,079

The above changes to the Proposed Execution Phase SS&E Fixed Fee for Unit 2 will be reflected in the next revision of the Contractor's submission # 617391-0002-00000-33RA-0005, Darlington TGR – Execution Phase Complete Estimate for Unit 2, Schedule and Risk Report. Subject to finalization of the Execution Phase Plan negotiations between the Parties, all of the Execution Phase Plan deliverables, including the above revisions to the Proposed Execution Phase SS&E Fixed Fee for Unit 2, will be incorporated into the Agreement by an Amendment as per requirements of the Agreement.

I. Change to Execution Phase Total Estimate for Unit 2

The amount originally proposed by the Contractor as a portion of the Execution Phase Total Estimate associated with Unit 2 was included in the Contractor's submission # 617391-0002-00000-33RA-0005 Darlington TGR – Execution Phase Complete Estimate for Unit 2, Schedule and Risk Report (R001), dated as of May 12, 2015 (the "**Proposed Execution Phase Total Estimate for Unit 2**").

While the Parties are still in discussions respecting the Execution Phase Plan deliverables, OPG expects that as a result of the changes to the Work set out in Section A of this Project Change Directive, there will be the following effect on the Proposed Execution Phase Total Estimate for Unit 2:

The Proposed Execution Phase Total Estimate for Unit 2 will be decreased by \$722,213, as detailed in Appendix B and Appendix C of this Project Change Directive.

Proposed Execution Phase Total Estimate for Unit 2

As submitted in the Contractor's submission # 617391-0002-00000-33RA-0005 Darlington TGR – Execution Phase Complete Estimate for Unit 2, Schedule and Risk Report

\$32,231,092

(R001), dated as of May 12, 2015 (subject to finalization of the Execution Phase Plan negotiations between the Parties):

Total decrease to the **Proposed Execution Phase Total Estimate for Unit 2** under this Project Change Directive: **\$722,213**

Revised **Proposed Execution Phase Total Estimate for Unit 2** under this Project Change Directive (subject to finalization of the Execution Phase Plan negotiations between the Parties): **\$31,508,879**

The above changes to the Proposed Execution Total Estimate for Unit 2 will be reflected in the next revision of the Contractor's submission # 617391-0002-00000-33RA-0005, Darlington TGR – Execution Phase Complete Estimate for Unit 2, Schedule and Risk Report. Subject to finalization of the Execution Phase Plan negotiations between the Parties, all of the Execution Phase Plan deliverables, including the above revisions to the Proposed Execution Phase Total Estimate for Unit 2, will be incorporated into the Agreement by an Amendment as per requirements of the Agreement.

J. Change to Contract Schedule

OPG expects that as a result of the changes to the Work set out in this Project Change Directive, there will be no change to the Contract Schedule.

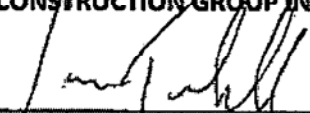
K. Amendment Conditions

No amendment (including an Amendment), restatement or termination of the Agreement in whole or in part is binding unless it is in writing and signed by each Party to the Agreement. For certainty, while the Contractor is obligated to proceed with the changes contained herein, this Project Change Directive does not amend the Agreement and OPG will not be deemed to have agreed to, or be required to pay for, any such changes until such time as an Amendment is executed pursuant to section 5.5 of the Agreement.

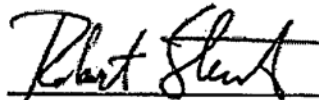
ONTARIO POWER GENERATION INC.

By: 
Name: Todd Josifovski
Title: Project Director

AECON CONSTRUCTION GROUP INC.

By: 
Name: Ian Turnbull
Title: President, Industrial Central

SNC-LAVALIN NUCLEAR INC.

By: 
Name: Robert Stewart
Title: Senior Vice President, Operations

Appendix A



Pre-Req OPG Pricing
Sheets Rev 09.pdf

Darlington Nuclear Generating Station Turbine Generator Refurbishment Project



Attachment 7.1(1) - Contract Price (PCD 0008)

Contract Price defined in Section 1.1(r) of the Agreement.

Pricing Model/SOW/Unit	Total	Turbine and Auxiliaries NK38-SOW-41000-10003	Generator and Auxiliaries NK38-SOW-42000-10003	Moisture Separator Reheaters NK38-SOW-41800-10003	Turbine Controls Upgrade NK38-SOW-64100-10004	Generator Excitation Controls Upgrade NK38-SOW-64220-10003
Definition Phase Target Cost	\$ 714,054					
Contract Price	\$ 714,054					
Definition Phase Fixed Fee	\$ 178,699					
Contract Price	\$ 178,699					
Execution Phase Target Cost (Non-Trades only)	\$					
No specific Unit	\$					
Execution Phase Fixed Fee (Non-Trades only)	\$					
No specific Unit	\$					
Execution Phase Target Cost (Trades only)	\$					
No specific Unit	Priced during Definition Phase					
1st Unit	Priced during Definition Phase	Priced during Definition Phase	Priced during Definition Phase	Priced during Definition Phase	Priced during Definition Phase	Priced during Definition Phase
2nd Unit	Priced during Definition Phase	Priced during Definition Phase	Priced during Definition Phase	Priced during Definition Phase	Priced during Definition Phase	Priced during Definition Phase
3rd Unit	Priced during Definition Phase	Priced during Definition Phase	Priced during Definition Phase	Priced during Definition Phase	Priced during Definition Phase	Priced during Definition Phase
4th Unit	Priced during Definition Phase	Priced during Definition Phase	Priced during Definition Phase	Priced during Definition Phase	Priced during Definition Phase	Priced during Definition Phase
Execution Phase Fixed Fee (Trades only)	\$					
No specific Unit	Priced during Definition Phase					
1st Unit	Priced during Definition Phase					
2nd Unit	Priced during Definition Phase					
3rd Unit	Priced during Definition Phase					
4th Unit	Priced during Definition Phase					
Execution Phase SS&E Target Cost & SS&E Fixed Fee	\$					
No specific Unit	Priced during Definition Phase					
1st Unit	Priced during Definition Phase					
2nd Unit	Priced during Definition Phase					
3rd Unit	Priced during Definition Phase					
4th Unit	Priced during Definition Phase					
The Contract Price is:	\$ 892,753					
Dynamic Commissioning Work (Trades only) (Estimate)	\$					
1st Unit						
2nd Unit						
3rd Unit						
4th Unit						
Mark-Up for Dynamic Commissioning Work (Estimate)	\$					
1st Unit						
2nd Unit						
3rd Unit						
4th Unit						
Cost Reimbursable with Mark-Up (Estimate)	\$ 26,775.00					
Goods	\$ 25,500.00					
Generator and Auxiliaries						
Turbine Controls						
Excitation Controls						
Moisture Separator Reheater						
Mark-up for Goods	\$ 1,275.00					
Cost Reimbursable with no Mark-Up (Estimate)	\$					
No Specific Unit						

Darlington Nuclear Generating Station Turbine Generator Refurbishment Project

Attachment 7.1(4) - Definition Cost (PCD 0008)

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Ref.	Labour Schedule Ref.	Position	Resources				Definition Phase		Applicable Adjustable Cost Index
			Grade	Effective Date	Normal / Overtime	Rate	Hours	Total	
DEFINITION PHASE DELIVERABLES							2,961 hrs	\$ 714,054	
6	Definition Phase PMT.						220 hrs	\$ 16,060	
	907	Civil Engineers	0	01-Jan-2013	1x	\$ 73.00	220 hrs	\$ 16,060	Index 2
7	Trades Labour						2,741 hrs	\$ 183,034	
		PCN-0014							
		Electrical Workers	Journeyman		Blended	\$ 68.84	30 hrs	\$ 2,065	Index 3
		Pipefitters	Journeyman		Blended	\$ 66.46	10 hrs	\$ 665	Index 3
		Millwrights	Journeyman		Blended	\$ 67.29	1,280 hrs	\$ 86,133	Index 3
		Operating Engineers	Operating Engineer Group 1 (A)		Blended	\$ 67.20	70 hrs	\$ 4,704	Index 3
		Ironworkers	Journeyman Ironworker, Rigger		Blended	\$ 64.91	15 hrs	\$ 974	Index 3
		PCN-0016							
		Electrical Workers	Journeyman		Blended	\$ 68.84	20 hrs	\$ 1,377	Index 3
		Ironworkers	Journeyman Ironworker, Rigger		Blended	\$ 64.91	553 hrs	\$ 35,895	Index 3
		PCN-0017							
		Millwrights	Journeyman		Blended	\$ 67.29	23 hrs	\$ 1,548	Index 3
		PCN-0018							
		Millwrights	Journeyman		Blended	\$ 67.29	31 hrs	\$ 2,086	Index 3
		PCN-0020							
		Millwrights	Journeyman		Blended	\$ 67.29	48 hrs	\$ 3,230	Index 3
		PCN-0021							
		Millwrights	Journeyman		Blended	\$ 67.29	187 hrs	\$ 12,583	Index 3
		Operating Engineers	Operating Engineer Group 1 (A)		Blended	\$ 67.20	30 hrs	\$ 2,016	Index 3
		Ironworkers	Journeyman Ironworker, Rigger		Blended	\$ 64.94	50 hrs	\$ 3,247	Index 3
		PCN-0022							
		Millwrights	Journeyman		Blended	\$ 67.29	70 hrs	\$ 4,710	Index 3
		PCN-0027							
		Millwrights	Journeyman		Blended	\$ 67.29	278 hrs	\$ 18,707	Index 3
		PCN-H2 Fan Stand							
		Millwrights	Journeyman		Blended	\$ 67.29	46 hrs	\$ 3,095	Index 3
							0 hrs		
10	Other items [Proponent to insert additional line items below if required]							\$ 514,960	
		LOA						\$ 31,933	Index 3
		Subcontracts (With OH & Profit)						\$ 521,444	Index 3
		Subcontracts (Without OH & Profit)						\$ (129,529)	Index 3
		Small Tools & Consumables (SS&E)						\$ 10,982	Index 3
		Other SS&E						\$ 2,465	Index 3
		PMT - Direct Non-Trade Labour (Site)						\$ 77,664	Index 3
		Goods							Index 3
								\$ -	
								\$ -	
								\$ -	
								\$ -	
								\$ -	
								\$ -	
The unescalated Definition Phase Target Cost is:							\$ 714,054		

Darlington Nuclear Generating Station Turbine Generator Refurbishment Project

ONTARIOPOWER
GENERATION

Attachment 7.1 (5) - Cost Flow DP Target Cost (PCD 0008)

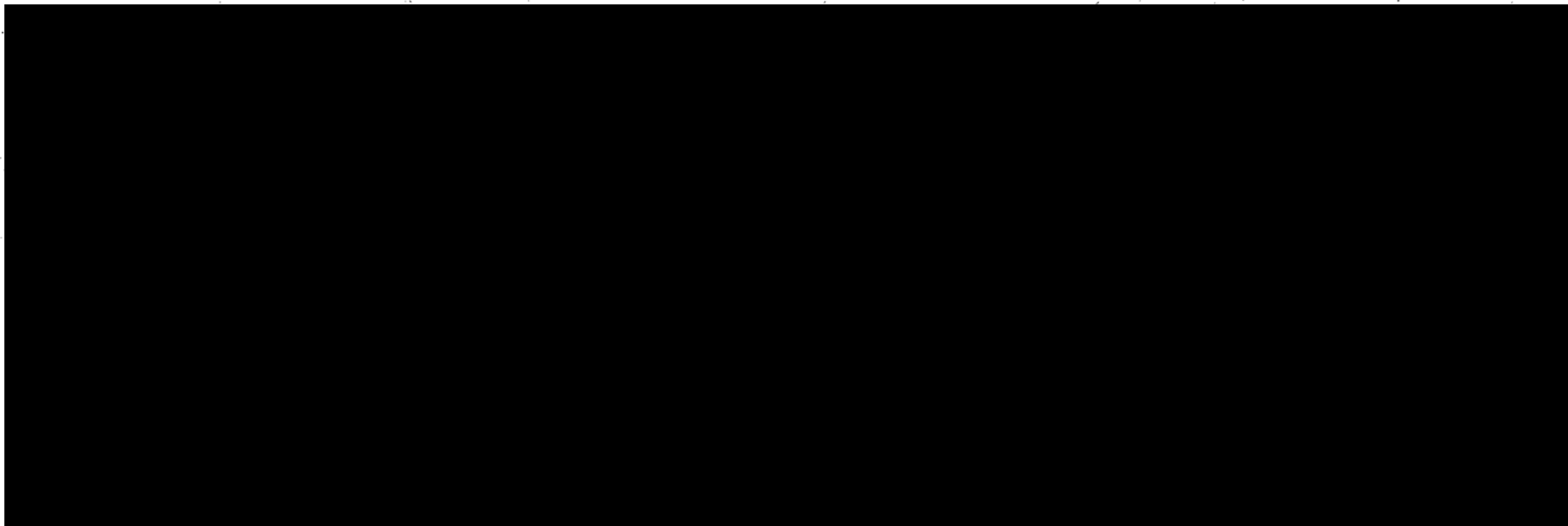
The Proponent is to provide forecasted annual expenditures for the purposes of applying Economic Cost Adjustments to Adjustable Costs.

Pricing Mechanism/Scope	Escalation Base Year	Base Cost (from Definition Phase Target Cost Worksheet)	Contract Year				Total
			2013	2014	2015	2016	
COSTS (at base year, i.e. unescalated)							Costs
Definition Phase Target Cost							
Index 1a	2013	\$ -			\$ -		\$ -
Index 2	2013	\$ 16,060			\$ 16,060		\$ 16,060
Index 12	2013	\$ -			\$ -		\$ -
Index 3		\$ 697,994			\$ 697,994		\$ 697,994
		\$ -					\$ -
		\$ -					\$ -
Definition Phase Target Cost (Unescalated)		\$ 714,054	\$ -	\$ -	\$ 714,054	\$ -	\$ 714,054
ESCALATION RATES	Escalation Base Year		2013	2014	2015	2016	
Year Over Year Escalation Rates							
Index 1a			2.00%	2.00%	2.00%	2.00%	
Index 2			0.00%	0.00%	0.00%	0.00%	
Index 12			0.00%	0.00%	0.00%	0.00%	
Index 3			0.00%	0.00%	0.00%	0.00%	
Compounded Escalation Rates							
Index 1a	2013		100.00%	102.00%	104.04%	106.12%	
Index 2	2013		100.00%	100.00%	100.00%	100.00%	
Index 12	2013		100.00%	100.00%	100.00%	100.00%	
Index 3				100.00%	100.00%	100.00%	
ESCALATED COSTS							Total
Definition Phase Target Cost							
Index 1a			\$ -	\$ -	\$ -	\$ -	\$ -
Index 2			\$ -	\$ -	\$ 16,060	\$ -	\$ 16,060
Index 12			\$ -	\$ -	\$ -	\$ -	\$ -
Index 3				\$ -	\$ 697,994	\$ -	\$ 697,994
							\$ -
							\$ -
Definition Phase Target Cost (Escalated)			\$ -	\$ -	\$ 714,054	\$ -	\$ 714,054
The Definition Phase Target Cost is: \$ 714,054							

Darlington Nuclear Generating Station Turbine Generator Refurbishment Project

Attachment 7.1(6) - Definition Phase Fixed Fee (PCD0008)

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Darlington Nuclear Generating Station Turbine Generator Refurbishment Project

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GENERATION

Attachment 7.1(11) - Milestone Payment Schedule for Definition Phase Fixed Fee (PCD 0008)

Reference	Element of Work	% of Total	Definition Phase Fixed Fee Payment Breakdown by Milestone	Payment Milestone Completion Criteria	Contract Schedule/ Milestone Date
	Definition Phase Deliverables/Milestones		\$ 178,698.59		
Milestone 38	Jib Crane Installation Complete		\$ 50,321.08	Milestone is declared complete upon OPG acceptance.	31-Jul-16
Milestone 39	Refurbished Rotor Stands Delivered to Site		\$ 55,466.21	Milestone is declared complete upon OPG acceptance.	31-Jul-16
Milestone 42	D3 Rotor Removed from Site		\$ 72,911.30	Milestone is declared complete upon OPG acceptance.	31-Jul-16

Notes:

Milestone 38 includes fee for:

PCN-0016

PCN-0020

PCN-0022

PCN-0027

PCN-0019

PCN-0017

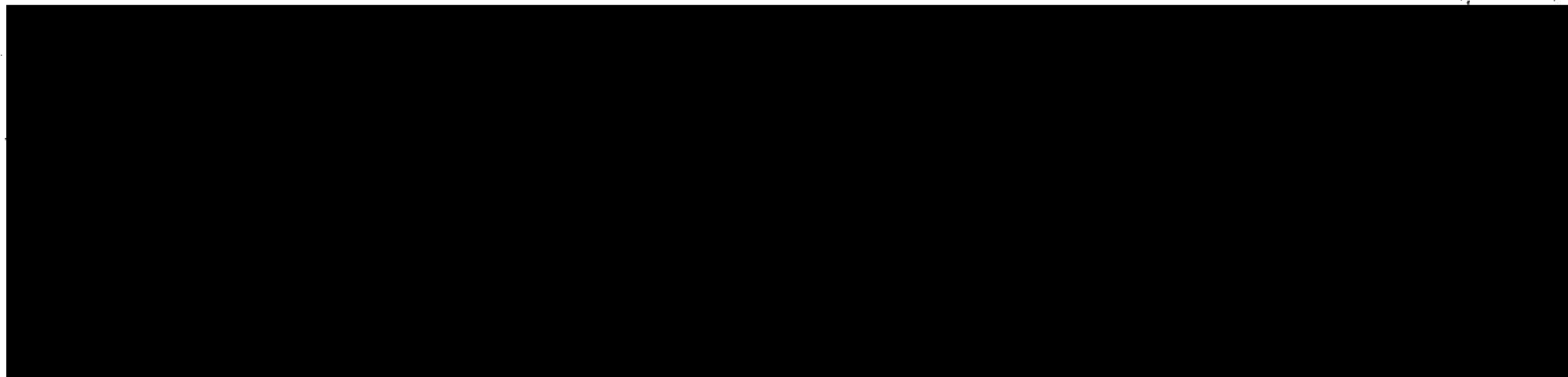
PCN-0018

Appendix B



PCD 0008 Summary
Rev 06.pdf

PCD 0008 - Cost Breakdown

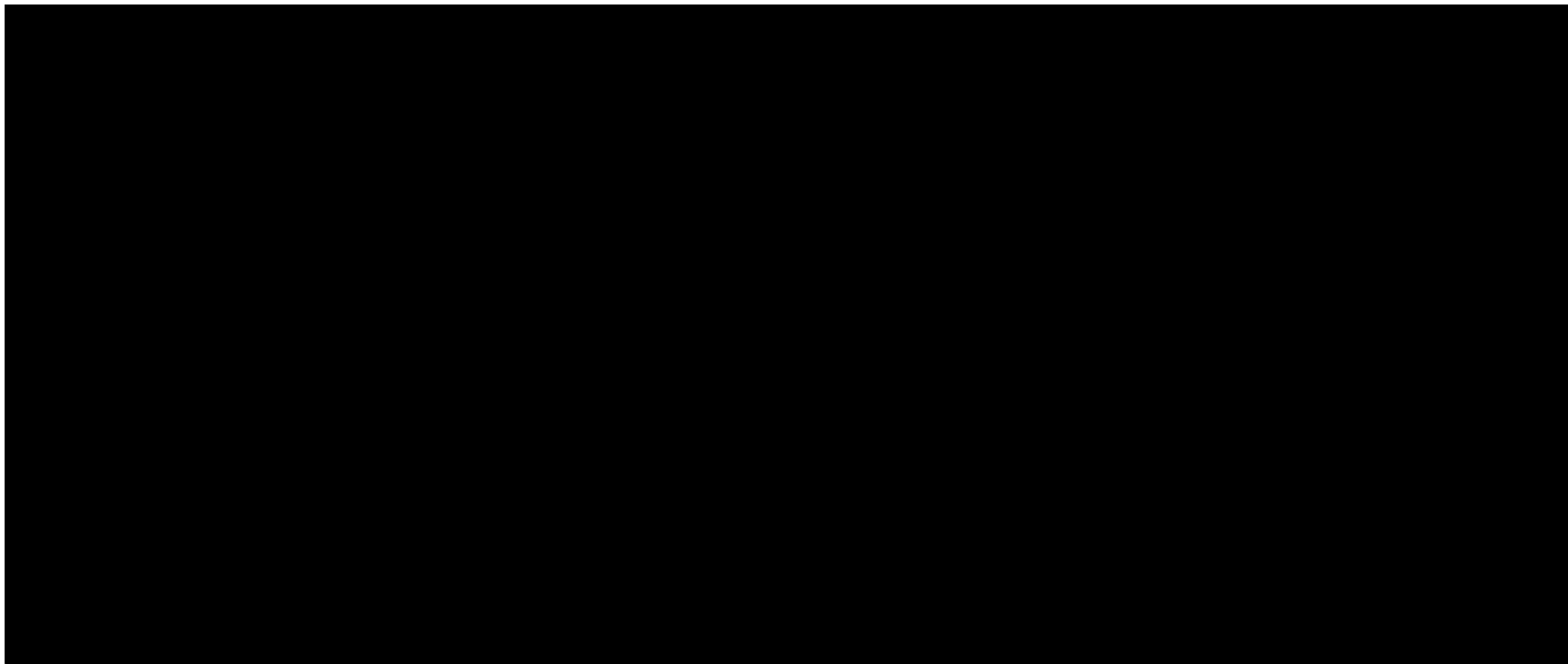


Appendix C



PCD 008 Execution
Phase Credit Summar

PCD 008 Execution Phase Credit Summary



Project Change Directive #009**Additional Maintenance Work****PROJECT CHANGE DIRECTIVE**

To: AECON Construction Group Inc. and SNC-Lavalin Nuclear Inc. SNC-Lavalin Nuclear Inc. 2275 Upper Middle Road East Oakville, Ontario L6H 0C3 Attn: Project Director, Turbine Generator Refurbishment Darlington Nuclear Refurbishment Program	Contract: Engineering, Procurement and Construction Agreement for the Turbine Generator Refurbishment Project between Ontario Power Generation Inc. and AECON Construction Group Inc. and SNC-Lavalin Nuclear Inc. dated as of January 22, 2014 (the " Agreement ") Contract No.: PO# 232344 Project Change Directive No. 009 Date: October 05, 2015
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Defined terms used in this Project Change Directive have the same meanings given to those terms in the Agreement.

A. Change to Work

In accordance with section 5.2 of the Agreement, OPG hereby directs the Contractor to make the following changes in the Work and hereby requires the Contractor to proceed with the changes in the Work prior to agreeing on the terms of an Amendment:

The Contractor will incorporate the additional maintenance work described hereunder (the "**Additional Maintenance Work**") in the Definition Phase Reimbursable Work:

- (1) The following work orders will be inserted in NK38-SOW-41000-10003 SCOPE OF WORK: DARLINGTON STEAM TURBINE AND AUXILIARIES REFURBISHMENT in Schedule 1.1(E)(Specifications) for Unit 2 only:

Work Order	Description
1718344	2-41830-EJ16, 17, 18, 21, 24, 27, 28, 30 INSPECTION
2651235	2-FAC 41830 PIPE INSPECTION - DA43C
2651362	2-FAC 41830 PIPE INSPECTION - DA43B

1

PCD #009 : Additional Maintenance Work - October 05, 2015
OPG CCF # 761 (for OPG reference only)

2851169	2-41510-CD1 BOROSCOPE INSPECTION
3038638	2-41790-V128 FLANGE LEAK REQUIRES REPAIR
3038648	D1321 2-41790-V110 FLANGE LEAK REQUIRES REPAIR
3041484	2-64172-TCV106 STEM REPLACEMENT REQUIRED
3051924	D1621 LP2 GLAND SEGMENTS REQUIRE REPLACEMENT
3058900	D1621 2-44110-CD3 REPLACE LOWER MANWAY DOOR NEXT OUTAGE
3073387	D1621 2-44110-CD2 REPLACE LOWER MANWAY DOOR NEXT OUTAGE
3088662	2-41230-PM16 REQUIRES REPLACEMENT
3128804	LOWER FITTING NEEDS REPLACEMENT AT PRV51
3129997	2-41520-F1 - REVERSE ROTATION ISSUE STILL PRESENT
3133786	2-41830-PAO101 SLIGHT LEAK
3137238	2-41220-P3 LUBE CHECKS.
3137312	2-44100-CD1 STAGE 5 LINER INSPECTION, SIC EXTRACTION STM. PI
3137966	2-41830-EJ19, 20, 22, 23, 25, 26 INSPECTION
3138440	2-41162-MV4 FRF LEAK ON TESTING LINE
3152503	LP TURBINE OUTAGE CONDENSER INSPECT. 2-44110-CD1, CD2, CD3
3164400	2-42110-BRG6, GEN NDE OIL LEAK FROM BRG6 COUPLING
3165726	OVERHAUL OF 2-64150-LCV32 REQUIRED
3170748	2-44110-CD1 STAGE 7 LINER/BELLOWS INSP,BCH EXTRACT. PIPES.LP
3180490	2-64810-SV110 - AIR LEAK FROM GASKET ON SV110
3182178	2-41200-FG440 OIL LEAK AT FITTING
3182180	2-41200-FG430 OIL LEAK AT FITTING
3184180	2-FAC 41830 PIPE INSPECTION - DA69
3184199	2-FAC 41830 PIPE INSPECTION - DA43A
3188710	2-FAC 44100 PIPE INSPECTION - DA11
3188764	2-FAC 41830 PIPE INSPECTION - DA43D
3191519	D1621 - INSPECT MAIN CONDENSER 2-44110-CD3 EAST
3192302	2-41830-TB1 STEAM LEAK FROM PIPEWORK
3193257	D1621 - INSPECT MAIN CONDENSER 2-44110-CD2 WEST
3193258	D1621 - INSPECT MAIN CONDENSER 2-44110-CD3 WEST
3193259	D1621 - INSPECT MAIN CONDENSER 2-44110-CD1 EAST
3193260	D1621 - INSPECT MAIN CONDENSER 2-44110-CD1 WEST
3194213	D1621 - INSPECT MAIN CONDENSER 2-44110-CD2 EAST
3202696	2-41830-L55 INSPECTION VIA PAO109
3202697	2-41830-L65 INSPECTION VIA PAO110
3202698	2-41830-L75 INSPECTION VIA PAO111
3202699	2-41830-L85 INSPECTION VIA PAO112
3202700	2-41830-L95 INSPECTION VIA PAO113
3202701	2-41830-L105 INSPECTION VIA PAO114
3202702	2-41830-L15 INSPECTION
3202703	2-41830-L25 INSPECTION

3202704	2-41830-L35 INSPECTION
3202706	2-41830-L45 INSPECTION
3202707	2-41500-NV INSPECTION & OVERHAUL
3215739	D1621 REPLACE DEFICIENT PV4 - STICKING DURING UNIT RUN-UPS
3235163	2-41720-P1,P2 LUBRICATION
3235491	2-41310-CN1 ANNUAL OIL PURIFIER MAJOR OVERHAUL & MTCE
3238524	CL6-2-41300-RV4 SWAP
3257511	2-41790-MV100/MV101 OVERHAUL
3261246	REPACK 2-45000-MV1 LEAKING AT GLAND
4726055	U2 EHC1 BALL CLEANING TO RESOLVE MW SWINGS DURING SRST10.03
4731284	D1621 - 2-41830-TB1 EDDY CURRENT INSPECTIONS REQUIRED
4743844	2-44130-SCR1 INSPECTION
4743873	2-44130-SCR2 INSPECTION
4743875	2-44130-SCR3 INSPECTION
4743877	2-44130-SCR4 INSPECTION
4743878	2-44130-SCR5 INSPECTION
4743880	2-44130-SCR6 INSPECTION
4756818	2-77700-RTN PUMP SYSTEM MAINTENANCE
4759197	MM, TROUBLESHOOT LEAKING OIL FROM 2-41220-P13
4761010	U2 TURB CONTROL BOX 115EL- PANEL RUBBER ISOLATORS
4766399	BRG3-JOP CONTAINMENT BOX -CLEAN OIL DRAIN SCREEN / BOX
44675769	2-44110-CD3 STAGE 2 LINER INSPECTION LP3 EXTRACTION LINE
4781630	2-41161-MV4 APPEARED TO BE SLOW FOLLOWING TURBINE TRIP.

(2) The following work orders will be inserted in NK38-SOW-42000-10003 SCOPE OF WORK: DARLINGTON GENERATOR AND AUXILIARIES REFURBISHMENT in Schedule 1.1(E) (Specifications):

Work Order	Description
1642374	2-42410-HX2 THREADED CONNECTION TO DRAIN VALVE IS LEAKING
2416078	2-42100-G-VT2 CABINET HANDLE BROKEN
2494864	2-64210-TE35#3, TE40#2 DEFECTIVE
2506589	2-42510-P7 LEAKS AT FITTINGS, EVIDENCE OF PIPE STRESS.
2595857	DSR: REPAIR DEFECTIVE 2-64210-TE'S & UPDATE DWG'S PER RESULT
2690442	2-42100-G-VT1 DOOR HANDLE IS BROKEN / NOT LOCKABLE I
2803653	2-64250-LS215 INSPECTION
2964227	REPAIR OR REPLACE 2-64210-TE78#3 ON STATOR CW DURING OUTAGE
2975283	REFURB:REMOVE/INSP U2 GEN SCW INLET/OUTLET PIPE ELBOWS-SCR
2987100	STATOR 2-TE41#3 NEEDS TO BE REPLACED
3136577	2-64240-LS FUNCTION CHKS & FS216 CAL

3137254	2-42200-AR31/32/33/34/35D001-M01 REPL FAN MOTOR
3137443	2-64230-FS101 CAL
3137684	2-42300-TP1 DRAIN HYDROGEN TRAP
3159191	PERFORM GENERATOR DEGAS AND OTHER OUTAGE ACTIVITIES PER OM'S
3173787	H2 SYSTEM SIGHTGLASS 2-64230-FI306 REQUIRES REPLACEMENT
3183133	REPLACE THE GASKET THAT WAS INSTALLED ON THE PIPING SUPPORT
3235246	D1621 - REPLACE 2-42510-HX1 TUBE BUNDLE
3236115	D1621 - REPLACE 2-42510-HX2 TUBE BUNDLE
3238402	D1621 - REPLACE SCW 2-42410-HX2
4702488	CL6 2-42300-RV31 SETPOINT CAL CHECK
4705534	UNIT 2 GENERATOR HYDROGEN CONSUMPTION HIGH, ~4 M3 PER DAY
4769934	2-42300-TP1 DRAIN HYDROGEN TRAP

(3) The following work orders will be inserted in NK38-SOW-41800-10003 SCOPE OF WORK: DARLINGTON MOISTURE SEPARATORS REHEATERS REFURBISHMENT in Schedule 1.1(E) (Specifications) for Unit 2 only:

Work Order	Description
2483313	2-48100-NV11 - SMALL STEAM LEAK
2613089	2-64173 & 64175 REPLACE SV'S
2640631	2-REPLICA TESTING IN CROSSOVER AND CROSSUNDER LINES
3013549	2-48100-NV14 FAILED FREEDOM OF MOVEMENT TEST
3089289	SV201 LEAKING FROM INTERNAL COMPONENTS
3137434	2-64187-SV101 OVERHAUL
3137435	2-64187-SV201 OVERHAUL
3184219	2-FAC 41870 PIPE INSPECTION - DA55D
3188781	2-FAC 41870 PIPE INSPECTION - DA55E
3188805	2-FAC 41870 PIPE INSPECTION - DA55H
3188806	2-FAC 41870 PIPE INSPECTION - DA55G
3262622	2- MSR DRAIN TANKS TSSA MANDATED INTERNAL WFMPE
3265752	2-41870-NV2 LEAKING STEAM AND CONDENSATE AT STEM.
4702074	2-48100-NV15 NO FREEDOM OF MOVEMENT

For clarity, the changes to the Work will be described in greater detail in the next revision of applicable scope of work documents in Schedule 1.1(E) (Specifications). In the Definition Phase, the Contractor will complete Asset Suite 7 Work Assessments and prepare Comprehensive Work Packages for the Additional Maintenance Work. The impact that these changes will have on the Contract Price is more particularly described in sections B, C and D. Further for clarity, the Contractor's cost estimates for the maintenance work to be performed in the Execution Phase, as detailed in Appendix B of

this Project Change Directive, will remain valid and will not be impacted by the finalization of the Execution Phase Plan negotiations between the Parties. The Contractor's cost estimates for the maintenance work to be performed in the Execution Phase, together with all Execution Phase Plan deliverables, will be incorporated into the Agreement by an Amendment as per requirements of the Agreement.

The above changes to the Work will be reflected in the next revisions of the scope of work documents in Schedule 1.1(E) (Specifications) which will be revised by an Amendment. All other elements of the Specifications will remain unchanged.

B. Change to Definition Phase Target Cost

OPG expects that as a result of the changes to the Work set out in Section A of this Project Change Directive, there will be the following effect on the Definition Phase Target Cost:

The Definition Phase Target Cost will be increased by \$613,716 (unescalated), as detailed in Appendix A of this Project Change Directive.

Definition Phase Target Cost (unescalated)

As set out in the Agreement as of the date of the Agreement:

\$17,727,966

Definition Phase Target Cost (unescalated)

As set out in the Agreement as of the date of the Agreement, as adjusted by all changes in the **Definition Phase Target Cost** made under all Amendments and/or Optional Work Notice to Proceed, if any:

\$19,184,756

Total increase to the **Definition Phase Target Cost (unescalated)** under this Project Change Directive:

\$ 613,716

Revised **Definition Phase Target Cost (unescalated)** under this Project Change Directive:

\$19,798,472

The above changes to the Definition Phase Target Cost will be reflected in Schedule 7.1 (Contract Price) which will be revised by an Amendment. All other elements of the Contract Price will remain unchanged.

C. Change to Definition Phase Fixed Fee

OPG expects that as a result of the changes to the Work set out in this Project Change Directive, there will be the following effect on the Definition Phase Fixed Fee:

The Definition Phase Fixed Fee will be increased by \$400,599, as detailed Appendix A of this Project Change Directive.

Definition Phase Fixed Fee

as set out in the Agreement as of the date of the Agreement:

\$11,316,531

Definition Phase Fixed Fee

as set out in the Agreement as of the date of the Agreement, as adjusted by all changes in the **Definition Phase Fixed Fee** made under all Amendments and/or Optional Work Notice to Proceed, if any:

\$12,251,825

Total expected increase to the **Definition Phase Fixed Fee** under this Project Change Directive:

\$400,599

Revised Definition Phase Fixed Fee under this Project Change Directive:

\$12,652,424

The above changes to the Definition Phase Fixed Fee will be reflected in Schedule 7.1 (Contract Price) which will be revised by an Amendment. All other elements of the Contract Price will remain unchanged.

D. Change to Milestone Payment Schedule for Definition Phase Fixed Fee

OPG expects that as a result of changes to the Work described in section A above, there will be the following effect on the Milestone Payment Schedule for Definition Phase Fixed Fee, which is set out in Attachment 7.1(11) of Schedule 7.1(Contract Price), as detailed in Appendix A of this Project Change Directive:

The new Milestones 41 and 43 will be inserted with contents described below:

Reference	Element of Work	% of Total	Definition Phase Fixed Fee Payment Breakdown by Milestone	Payment Milestone Completion Criteria	Contract Schedule/Milestone Date
Milestone 41	Final Work Assessments (for Additional Maintenance Work) Complete	TBD	\$100,150	Milestone is declared complete upon OPG acceptance.	February 16, 2016
Milestone 43	CWPs (for Additional Maintenance Work) Accepted	TBD	\$300,449	Milestone is declared complete upon OPG acceptance.	March 31, 2016

The above changes to the Milestone Payment Schedule for Definition Phase Fixed Fee will be reflected in Schedule 7.1 (Contract Price) which will be revised by an Amendment. All other elements of the Contract Price will remain unchanged.

E. Change to Contract Schedule

OPG expects that Schedule 2.7(a)(1) (Contract Schedule) of the Agreement will reflect the following:

In the table titled "Definition Phase Milestones", the following new milestones will be inserted, with contents described as below:

Milestone	Definition/Completion Criteria	Milestone Date
Final Work Assessments (for Additional Maintenance Work)	Contractor will submit all required field execution requests (e.g. PC1, etc), input additional work order/tasks, ensure all regulatory approvals have been obtained, and all tasks / documents for OPG's work management are complete. Milestone is declared complete upon OPG acceptance.	February 16, 2016
Comprehensive Work Packages	The Contractor is to develop and deliver to OPG comprehensive work packages. Milestone is	March 31, 2016

<i>Milestone</i>	<i>Definition/Completion Criteria</i>	<i>Milestone Date</i>
(for Additional Maintenance Work)	declared complete upon OPG final acceptance of all comprehensive work packages.	

F. Amendment Conditions

No amendment (including an Amendment), restatement or termination of the Agreement in whole or in part is binding unless it is in writing and signed by each Party to the Agreement. For certainty, while the Contractor is obligated to proceed with the changes contained herein, this Project Change Directive does not amend the Agreement and OPG will not be deemed to have agreed to, or be required to pay for, any such changes until such time as an Amendment is executed pursuant to section 5.5 of the Agreement.

ONTARIO POWER GENERATION INC.

By: 

Name: Todd Josifovski

Title: Project Director

AECON CONSTRUCTION GROUP INC.

By: 

Name: Ian Turnbull

Title: President, Industrial

SNC-LAVALIN NUCLEAR INC.

By: 

Name: Robert Stewart

Title: Senior Vice President, Operations

ONTARIO POWER GENERATION INC.

By: _____

Name: Todd Josifovski

Title: Project Director

AECON CONSTRUCTION GROUP INC.

By: _____

Name:

Title:

SNC-LAVALIN NUCLEAR INC.

By: _____

Name:

Title:

Appendix A



PCD 0009 PMID OPG
Pricing Sheets - Defin

Attachment 7.1(4) - Definition Cost (PCD 0009 Additional Maintenance Work - Definition Phase Only)

ONTARIOPOWER

Ref.	Labour Schedule Ref.	Position	Resources				Definition Phase		Applicable Adjustable Cost Index
			Grade	Effective Date	Normal / Overtime	Rate	Hours	Total	
DEFINITION PHASE DELIVERABLES							7,592 hrs	\$ 613,716	
	1153	Projects Coordinator	0	01-Jan-2013	1x	\$ 75.08	3,058 hrs	\$ 229,592	Index 1a
	1191	QA Specialist	0	01-Jan-2013	1x	\$ 87.81	2,030 hrs	\$ 178,250	Index 1a
	1174	Project Coordinator / Assessor	0	01-Jan-2013	1x	\$ 75.08	2,504 hrs	\$ 187,998	Index 1a
10	Other items [Proponent to insert additional line items below if required]							\$ 17,875	
	3% Contingency							\$ 17,875	Index 12
	3% Contingency (for NEW 9e)							\$ -	Index 12
							\$ -	-	
							\$ -	-	
							\$ -	-	
							\$ -	-	
							\$ -	-	
							\$ -	-	
							\$ -	-	
							\$ -	-	
							\$ -	-	
							\$ -	-	
							\$ -	-	
							\$ -	-	
							\$ -	-	
							\$ -	-	
The unescalated Definition Phase Target Cost is:							\$ 613,716		

OPG Darlington Refurbishment Program

Darlington Nuclear Generating Station Turbine Generator Refurbishment Project

ONTARIOPOWER
GENERATION

Attachment 7.1 (5) - Cost Flow DP-Target Cost (PCD 0009 Additional Maintenance Work - Definition Phase Only)

The Proponent is to provide forecasted annual expenditures for the purposes of applying Economic Cost Adjustments to Adjustable Costs.

Pricing Mechanism/Scope	Escalation Base Year	Base Cost (from Definition Phase Target Cost Worksheet)	Contract Year				Total
			2013	2014	2015	2016	
COSTS (at base year, i.e. unescalated)							
Definition Phase Target Cost							
Index 1a	2013	\$ 595,841			\$ 297,921	\$ 297,921	\$ 595,841
Index 1b	2013	\$ -			\$ -	\$ -	\$ -
Index 12	2013	\$ 17,875			\$ 17,875		\$ 17,875
		\$ -					\$ -
		\$ -					\$ -
Definition Phase Target Cost (Unescalated)		\$ 613,716	\$ -	\$ -	\$ 315,796	\$ 297,921	\$ 613,716
ESCALATION RATES							
	Escalation Base Year		2013	2014	2015	2016	
Year Over Year Escalation Rates							
Index 1a			2.00%	2.00%	2.00%	2.00%	
Index 1b			2.00%	2.00%	2.00%	2.00%	
Index 12			0.00%	0.00%	0.00%	0.00%	
Compounded Escalation Rates							
Index 1a	2013		100.00%	102.00%	104.04%	106.12%	
Index 1b	2013		100.00%	102.00%	104.04%	106.12%	
Index 12	2013		100.00%	100.00%	100.00%	100.00%	
ESCALATED COSTS							
Definition Phase Target Cost							
Index 1a		\$ -	\$ -	\$ 309,957	\$ 316,156	\$ -	\$ 626,112
Index 1b		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Index 12		\$ -	\$ -	\$ 17,875	\$ -	\$ -	\$ 17,875
		\$ -					\$ -
		\$ -					\$ -
Definition Phase Target Cost (Escalated)		\$ -	\$ -	\$ 327,832	\$ 316,156	\$ -	\$ 643,987
The Definition Phase Target Cost is:							\$ 643,987

OPG Darlington Refurbishment Program

Darlington Nuclear Generating Station Turbine Generator Refurbishment Project

ONTARIOPOWER
GENERATION

Attachment 7.1(6) - Definition Phase Fixed Fee (PCD 0009 Additional Maintenance Work - Definition Phase Only)



Darlington Nuclear Generating Station Turbine Generator Refurbishment Project



Attachment 7.1(11) - Milestone Payment Schedule for Definition Phase Fixed Fee (PCD 0009 Additional Maintenance Work - Definition Phase Only)

Reference	Element of Work	% of Total	Definition Phase Fixed Fee Payment Breakdown by Milestone	Payment Milestone Completion Criteria	Contract Schedule/Milestone Date
	Definition Phase Deliverables/Milestones	TBD	\$ 400,599		
Milestone 41	PCD 0009 Final Work Assessments Complete	TBD	\$ 100,150	Milestone is declared complete upon OPG acceptance.	16-Feb-16
Milestone 43	PCD 0009 CWP's Accepted	TBD	\$ 300,449	Milestone is declared complete upon OPG acceptance.	31-Mar-16

Appendix B



Revised PCD 0009
Pricing Draft 2015-10

Darlington Nuclear Generating Station Turbine Generator Refurbishment Project

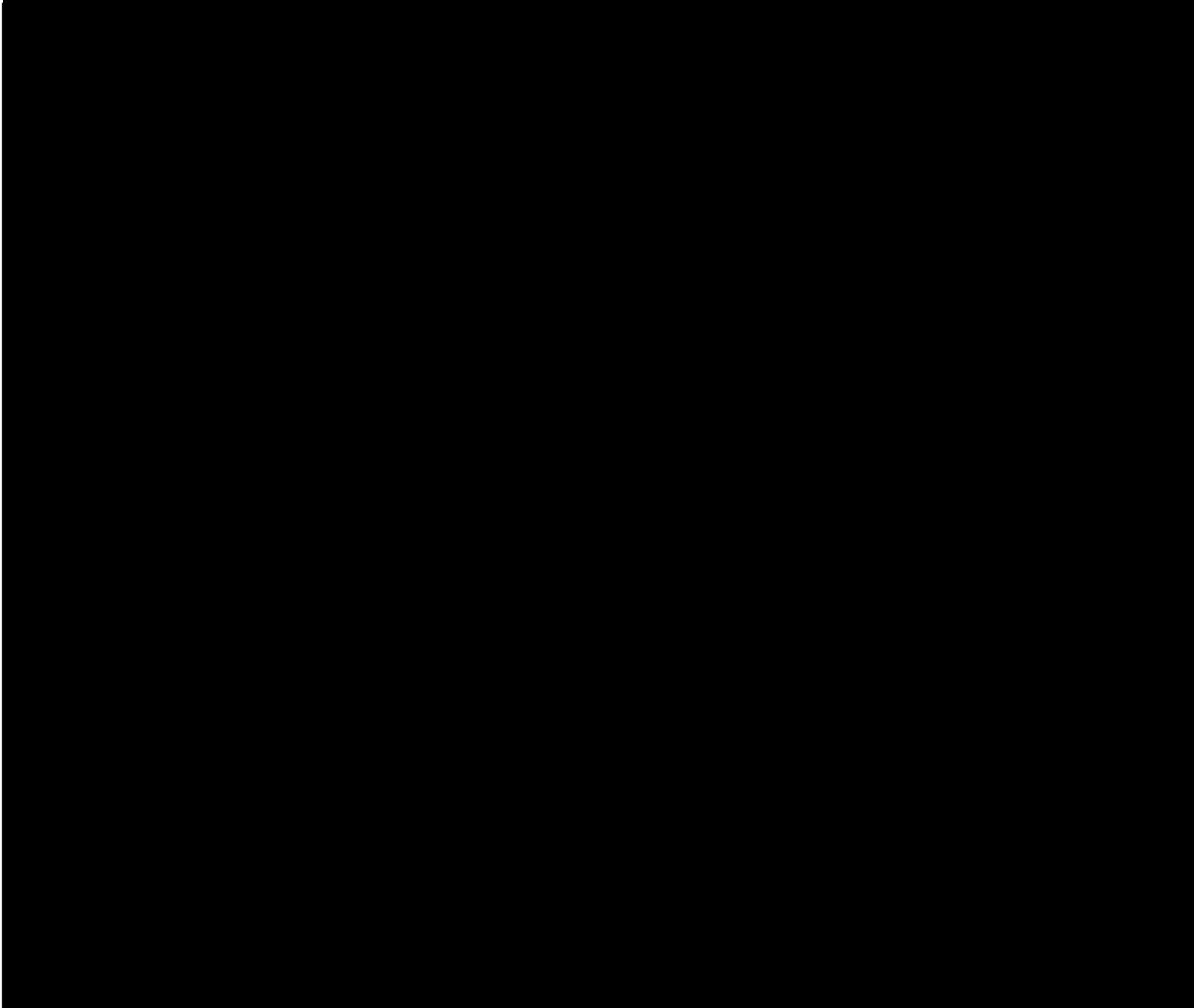
ONTARIOPOWER
GENERATION

Attachment 7.1(1) - Contract Price (PCD 0009 Additional Maintenance Work - Definition Phase Only)

Contract Price is defined in Section 1.1(r) of the Agreement.

Pricing Model/SOW/Unit	Total	Turbine and Auxiliaries NK38-SOW-41000-10003	Generator and Auxiliaries NK38-SOW-42000-10003	Moisture Separator Reheaters NK38-SOW-41800-10003	Turbine Controls Upgrade NK38-SOW-64100-10004	Generator Excitation Controls Upgrade NK38-SOW-64220-10003
Definition Phase Target Cost	\$ 643,987					
No specific Unit	\$ 643,987					
Definition Phase Fixed Fee	\$ 400,599					
No specific Unit	\$ 400,599					
Execution Phase Target Cost (Non-Trades only)	\$					
No specific Unit	\$					
Execution Phase Fixed Fee (Non-Trades only)	\$					
No specific Unit	\$					
Execution Phase Target Cost (Trades only)	\$					
No specific Unit	Priced during Definition Phase					
1st Unit	Priced during Definition Phase	Priced during Definition Phase	Priced during Definition Phase	Priced during Definition Phase	Priced during Definition Phase	Priced during Definition Phase
2nd Unit	Priced during Definition Phase	Priced during Definition Phase	Priced during Definition Phase	Priced during Definition Phase	Priced during Definition Phase	Priced during Definition Phase
3rd Unit	Priced during Definition Phase	Priced during Definition Phase	Priced during Definition Phase	Priced during Definition Phase	Priced during Definition Phase	Priced during Definition Phase
4th Unit	Priced during Definition Phase	Priced during Definition Phase	Priced during Definition Phase	Priced during Definition Phase	Priced during Definition Phase	Priced during Definition Phase
Execution Phase Fixed Fee (Trades only)	\$					
No specific Unit	Priced during Definition Phase					
1st Unit	Priced during Definition Phase					
2nd Unit	Priced during Definition Phase					
3rd Unit	Priced during Definition Phase					
4th Unit	Priced during Definition Phase					
Execution Phase SS&E Target Cost & SS&E Fixed Fee	\$					
No specific Unit	Priced during Definition Phase					
1st Unit	Priced during Definition Phase					
2nd Unit	Priced during Definition Phase					
3rd Unit	Priced during Definition Phase					
4th Unit	Priced during Definition Phase					
The Contract Price is: \$ 1,044,586						
Dynamic Commissioning Work (Trades only) (Estimate)	\$					
1st Unit	Estimated during Definition Phase					
2nd Unit	Estimated during Definition Phase					
3rd Unit	Estimated during Definition Phase					
4th Unit	Estimated during Definition Phase					
Mark-Up for Dynamic Commissioning Work (Estimate)	\$					
1st Unit	Estimated during Definition Phase					
2nd Unit	Estimated during Definition Phase					
3rd Unit	Estimated during Definition Phase					
4th Unit	Estimated during Definition Phase					
Cost Reimbursable with Mark-Up (Estimate)	\$					
Turbine and Auxiliaries	Estimated during Definition Phase					
Generator and Auxiliaries	Estimated during Definition Phase					
Turbine Controls	Estimated during Definition Phase					
Excitation Controls	Estimated during Definition Phase					
Moisture Separator Reheater	Estimated during Definition Phase					
Other	Estimated during Definition Phase					
Cost Reimbursable with no Mark-Up (Estimate)	\$					
No Specific Unit	Estimated during Definition Phase					

Additional Maintenance Work Change Order Rev 05



S180-0001

ATTACHMENT #2



Records File Information:
Retain in Contract File
(T06), SUP-0002

Internal Use Only
OPG-FORM-0214-R003*

Material Request

RFP 1358

Name: Peter Moore		Employee No.: 190521	
Department: Refurbishment Execution		Issue Facility: Nuclear Refurbishment	
Need Date: 19-Feb-2016	Job Type:	Priority:	Project No.: 73272/ 73512
MR No.:		WO Reference: n/a	
WO Description:			

Section A - Items			
Qty:	Catalog ID:	Ownership:	Acct:
Description:			
Qty:	Catalog ID:	Ownership:	Acct:
Description:			
Qty:	Catalog ID:	Ownership:	Acct:
Description:			
Qty:	Catalog ID:	Ownership:	Acct:
Description:			
Qty:	Catalog ID:	Ownership:	Acct:
Description:			
Delivery of Items			
Delivery to Facility : n/a		Deliver to:	
Delivery / Shipping Instructions:			

Internal Use Only
OPG-FORM-0214-R003
Material Request

Section B - For Services only															
Estimated Value (A):	<div style="background-color: black; width: 100px; height: 1.2em;"></div>	Estimated Contingency Amount (B):	<div style="background-color: black; width: 100px; height: 1.2em;"></div>	Previous Contract Value (if applicable) (C):	34,689,292	Total Requisition Amount (A + B) + C (if applicable):	36,800,000								
Existing PO (if applicable): 232344															
Has the PSA or CPAA been approved? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>															
Section B1: Scope / Statement of Work															
Scope of Work / Description of Duties															
<p>Identify below or reference/attach other documents that identify statement of work and scope, service description/description of duties, key milestones, expected results, proposed vendors, deliverables, timelines and schedules, intellectual property rights requirements, Quantity Required, Qualification or Certification Required, work space requirements and job location, required and available tools, and labour requirement as appropriate.</p> <p>A Purchase Order was previously issued for Definition Phase of the project which included EPC planning work for preparation of maintenance and modification activities during the field execution phase (Line 0001), and optional Layup work (Line 0002).</p> <p>The Purchase Order is being revised to include Amendment #1 changes, including incorporation of Project Change Directives 1,2,3,7,8,9 and Optional Work Notice to Proceed for Layup work.</p> <p>The Scopes of Work being revised under Amendment #1 and executed under this PO:</p> <p>NK38-SOW-41000-10003 Darlington Steam Turbine and Auxiliaries Refurbishment NK38-SOW-42000-10003 Darlington Generator and Auxiliaries Refurbishment NK38-SOW-64100-10004 Darlington Turbine Control Upgrade NK38-SOW-64220-10003 Darlington Generator Excitation Upgrade NK38-SOW-41800-10003 Darlington Moisture Separators Reheaters Refurbishment NK38-SOW-09701-10041 Turbine Generator and Auxiliaries Systems Layup - Technical Scope of Work</p> <p>An additional Scope of Work being executed under this PO (not revised) is:</p> <p>NK38-SOW-44000-10001 Scope Of Work Darlington Condenser Struts Maintenance-Inspection</p> <p>The Interface between OPG and EPC vendor will be in accordance with N-COI-00120-00001 and mutually agreed list of deviations.</p> <p>The requisition is to ^{revise} issue two line items under this PO:</p> <p>Revision 2:</p> <table style="width: 100%;"> <tr> <td style="width: 60%;">Line 1: Turbine Generator Project EPC Definition Phase</td> <td style="width: 40%; text-align: right;">=30.8M (total)</td> </tr> <tr> <td>Line 2: Turbine Generator Layup Project EPC Definition Phase</td> <td style="text-align: right;">=3.9M (total)</td> </tr> </table> <p>Revision 3(This revision):</p> <table style="width: 100%;"> <tr> <td style="width: 60%;">Line 1: Turbine Generator Project EPC Definition Phase</td> <td style="width: 40%; text-align: right;">=34.0M (total)</td> </tr> <tr> <td>Line 2: Turbine Generator Layup Project EPC Definition Phase</td> <td style="text-align: right;">=2.8M (total)</td> </tr> </table>								Line 1: Turbine Generator Project EPC Definition Phase	=30.8M (total)	Line 2: Turbine Generator Layup Project EPC Definition Phase	=3.9M (total)	Line 1: Turbine Generator Project EPC Definition Phase	=34.0M (total)	Line 2: Turbine Generator Layup Project EPC Definition Phase	=2.8M (total)
Line 1: Turbine Generator Project EPC Definition Phase	=30.8M (total)														
Line 2: Turbine Generator Layup Project EPC Definition Phase	=3.9M (total)														
Line 1: Turbine Generator Project EPC Definition Phase	=34.0M (total)														
Line 2: Turbine Generator Layup Project EPC Definition Phase	=2.8M (total)														
Construction Services / Statement of Work															
<p>Include completed N-FORM-11160: BTU Contract Statement of Work. If the scope of work document is security protected, please include only the identification reference and date when the scope of work document was approved.</p> <p>See above for SOW references.</p>															
<p>Need Date: <u>2016-02-26</u> End Date: <u>2020-04-15</u></p> <p style="text-align: center;">(YYYY-MM-DD) (YYYY-MM-DD)</p>															
Section B2: Recommended Sourcing Strategy															

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OPG-FORM-0214-R003
Material Request

Select recommended Sourcing Strategy:

☐ Utilize Existing Master Service Agreement

☒ Utilize Competitive Bid Process
(identify competitive Bid information below)

☐ Utilize Single Source Strategy (if so attach OPG-FORM-0003: Single/Sole Source Justification)

Identify the MSA (if known):

Note: Refer to OPG-PROC-0058 for details on sourcing strategy and any restrictions.

Competitive Bid Information

Identify or reference/attached other documents for the following information:

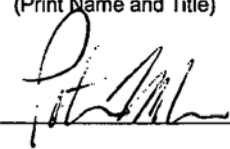

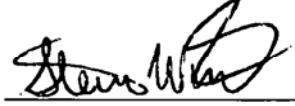
- Proposed Evaluation/Selection Criteria
- Proposed Vendors

This is a PO revision to existing contract.

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Material Request

Section B3: Quality Assurance Program			
Select whose QA Program is to be used:			
<input type="checkbox"/> OPGN QA Program (i.e. Contractor working to OPG procedures only)	<input checked="" type="checkbox"/> Supplier's QA Program (select QA Program from box below)	<input type="checkbox"/> QA Program Not Required	
Select the Appropriate Quality Assurance Program(s):			
<input type="checkbox"/> ISO/IEC – 17025 (Calibration or Testing Services)	<input type="checkbox"/> Calibration Services per N-INS-01516-10008	<input type="checkbox"/> Testing Services per N-PROC-MM-0010	<input checked="" type="checkbox"/> Software Quality Assurance per N-PROC-MP-0049, N-FORM-10408 (Specify details in 'Other' field below and attach form to MR)
<input type="checkbox"/> Z299.1 <input type="checkbox"/> Z299.2 <input checked="" type="checkbox"/> Z299.3 <input type="checkbox"/> Z299.4	<input type="checkbox"/> CSA N286-05 Procurement (applicable elements) <input checked="" type="checkbox"/> CSA N286-05 Design (applicable elements) <input checked="" type="checkbox"/> CSA N286-05 Construction (applicable elements) <input checked="" type="checkbox"/> CSA N286.7 Design, Development or Use of Analytical, Scientific and Design Software Note: The selection of any of the above CSA N286 programs must be accompanied by a Z299 selection.		
Other:			
Select whose Pressure Boundary Program is to be used:			
Does the Scope of Work contain Pressure Boundary activities? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No (if yes select appropriate requirements below)		Which Certificate of Authorization (C of A) and therefore PB quality program will be used? OPG C of A <input type="checkbox"/> or Contractor's C of A <input checked="" type="checkbox"/>	
Select the appropriate Pressure Boundary quality requirements:			
<input type="checkbox"/> CSA N285/CSA B51 Class 6 <input type="checkbox"/> CSA N285 / ASME III (NCA 4000) <input type="checkbox"/> CSA N285 / ASME III Material (NCA 3800)		<input type="checkbox"/> CSA N285 Unclassified <input checked="" type="checkbox"/> CSA B51 only - Compliant Program <input type="checkbox"/> CL1,1C <input type="checkbox"/> CL2/2C <input type="checkbox"/> CL3/3C <input type="checkbox"/> CLMC / CL4 <input type="checkbox"/> Testing Services per OPG N-INS-08173-10032	
Other			
Verification & Approval of QA and PB Requirements (Required for Nuclear Services Only when not approved in another document)			
Verification by Design Engineer:			
n/a - no change to original PO			
Print Name	Signature	Date: YYYY-MM-DD	
Approved by Section Manager, Design Engineering:			
Print Name	Signature	Date: YYYY-MM-DD	

Internal Use Only
OPG-FORM-0214-R003
Material Request

Section C: Charge Number											
Charge to (44 digit code):											
	Resp Centre	FAC	Resource Type	Service Unit	WPS	Project Number	Activity Field	SCI	Unit	Client	Local Field
# digits	4	5	3	4	4	5	3	5	2	4	5
	2082	17553	310	2082	8204	73272	000	00000	00	7820	00000
	2087	17553	310	2087	8204	73512	000	00000	00	7820	00000
For Nuclear Services only - Verification that the above charge number is correct (Project CSA or Local Finance)											
<input checked="" type="checkbox"/> Project, Project CSA <u>Josie Della Pia</u> Date <u>2016-02-17</u> <input type="checkbox"/> Base, Finance (Print Name and Signature) Verified: (YYYY-MM-DD)											
Section D: Required Approvals											
Prepared by: <u>Peter Moore, Project Manager</u> (Print Name and Title)											
Signature: <u></u>											
Date Submitted: <u>2016-02-17</u> Location: _____ Tel #: <u>7839622</u> (YYYY-MM-DD)											
Reviewed by Contract Owner: <u>Todd Josifovski, Project Director</u> (Print Name and Title)											
Signature: <u></u>											
Date Submitted: <u>2016-02-18</u> Location: _____ Tel #: <u>703-9522</u> (YYYY-MM-DD)											
For Nuclear Service Only:											
Reviewed by Local Finance: <u>Steve Wiacek, Finance Controller</u> (Print Name and Title) <i>- included in AGE Building estimate</i>											
Signature: <u></u>											
Date Submitted: <u>2016-02-22</u> Location: <u>DCI</u> Tel #: <u>5436</u> (YYYY-MM-DD)											

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OPG-FORM-0214-R003
Material Request

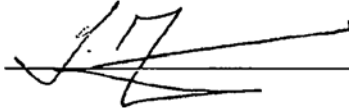
I hereby certify the scope and budget are within an approved Project BCS or Business Plan:

Approved by the
Requisitioning Line
Authority as per the
OAR:

Todd Josifovski (Project Director) / Bill Owens (VP
Refurbishment Execution)
(Print Name and Title)

OAR Authority
Level: F / D

Signature



Date Submitted:

2016-02-18
(YYYY-MM-DD)

Location:

Tel #:

705-9522

Additional OAR
Approval (if
required):

Michael Allen SVP Nuclear Refurbishment /

OAR
Authority
Level: SVP

* Dietmar Reiner SVP Nuclear Projects
(Print Name and Title)

Signature



Date Submitted:

2016-02-25
(YYYY-MM-DD)

Location:

DEC

Tel #:

5400

Additional OAR
Approval (if
required):

Glenn Jager, Nuclear President & CNO
(Print Name and Title)

OAR
Authority
Level: ELT

Signature



Date Submitted:

2016-04-06
(YYYY-MM-DD)

Location:

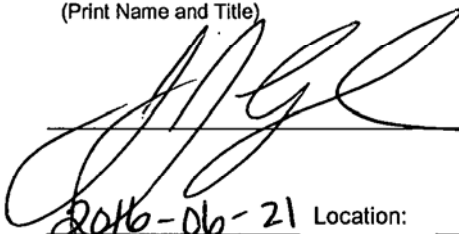
Tel #:

Additional OAR
Approval (if
required):

Jeff Lyash, President & CEO
(Print Name and Title)

OAR
Authority
Level: CEO

Signature



Date Submitted:

2016-06-21

Location:

Tel #:

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OPG-FORM-0214-R003
Material Request

(YYYY-MM-DD)



Records File Information:
Retained in Contract File
for T-06 years
SUP-0002

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N-FORM-10029-R010*

Services - Request for Purchasing

RFP 648

Prepared by:	Pejman Asgaripour			Telephone:	ext 5840		
Title:	Project Manager			Department:	Refurbishment Execution		
Site/Location:	DEC			<input checked="" type="checkbox"/>	New Contract		
Project Title:	Darlington Refurbishment Turbine Generator Project			<input type="checkbox"/>	Instruction Notice to existing Contract		
				Note: Original contract value to be identified below.			
				Existing PO #:			
<input type="checkbox"/>	Supports a Nuclear Operations Portfolio Project						
Estimated Value (A):	33.4M	Estimated Contingency Amount (B):	1.3M	Previous Contract Value (if applicable) (C):	0	Total Requisition Amount (A + B) + C (if applicable):	34.7M
Managed Task <input checked="" type="checkbox"/> Staff Augmentation <input type="checkbox"/> Consulting Services <input type="checkbox"/> Former Employee of OPG? <input type="checkbox"/>							
Has the PSA or CPAA been approved? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>							

*Associated with N-PROC-MM-0001, Requisition of Services

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N-FORM-10029-R010**Services - Request for Purchasing**

Scope / Statement of Work	
<input checked="" type="checkbox"/>	<p><u>Scope of Work / Description of Duties</u></p> <p>Identify key milestones, deliverables, expected results, description of duties, location, schedule, etc. as appropriate. Previously a contract was awarded for Engineering Services and Equipment Supply to the OEM. This Purchase Order requisition is being submitted for the definition phase of the project which includes EPC planning work in preparation of maintenance and modification activities during the field execution phase. As part of the definition phase the EPC vendor will also provide Release Quality Estimate for the field execution phase ahead of the October 2015 Milestone. The scope of work being executed under this PO are captured in the following documents:</p> <p>NK38-SOW-41000-10003 Darlington Steam Turbine and Auxiliaries Refurbishment NK38-SOW-42000-10003 Darlington Generator and Auxiliaries Refurbishment NK38-SOW-64100-10004 Darlington Turbine Control Upgrade NK38-SOW-64220-10003 Darlington Generator Excitation Upgrade NK38-SOW-41800-10003 Darlington Moisture Separators Repeaters Refurbishment NK38-SOW-09701-10059 Turbine Generator And Auxiliaries Systems Layup - Technical Scope Of Work</p> <p>The interface between OPG and EPC vendor will be in accordance with N-COI-00120-00001 and mutually agreed list of deviations.</p> <p>The requisition is to issue two line items under this PO: Line 1: Turbine Generator Project EPC Definition Phase [REDACTED] =30.8M (total) Line 2: Turbine Generator Layup Project EPC Definition Phase [REDACTED] 3.9M(total)</p>
<input type="checkbox"/>	<p><u>Augmented Staff</u></p> <p>Provide justification/rational for use of augmented staff.</p>
<input type="checkbox"/>	<p><u>Construction Services / Statement of Work</u></p> <p>Include completed N-FORM-11160: BTU Contract Statement of Work. If the scope of work document is security protected, please include only the identification reference and date when the scope of work document was approved.</p>
Need Date	2014-01-22 (yyyy-mm-dd)
End Date	2025-10-01 (yyyy-mm-dd)

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N-FORM-10029-R010**Services - Request for Purchasing**

Recommended Sourcing Strategy			
<input type="checkbox"/> Utilize Existing Master Service Agreement		<input checked="" type="checkbox"/> Utilize Competitive Bid Process	
<input type="checkbox"/> Utilize Single Source Strategy			
Note: Refer to OPG-PROC-0058 for details on sourcing strategy and any restrictions.			
Has Supply Chain been contacted for recommended Sourcing Strategy? <input checked="" type="checkbox"/> Y / <input type="checkbox"/> N			
Note: Please identify the following information: <ul style="list-style-type: none"> Evaluation/Selection Criteria (if a single source, attach OPG-FORM-0003: Single/Sole Source Justification). For Staff Augmentation: Qualifications / Certifications Required / Skill Set / OPG Stratum Level (MP2, MP3, MP4, etc). Request for Proposal was issued following the completion of Expression of Interest process and compiling a shortlist of prospective proponents. NK38-PLAN-09701-10173 (Turbine Generator Evaluation Plan) was used for bid evaluation.			
Quality Assurance Program			
Select QA Program Used:			
<input type="checkbox"/> OPGN QA Program		<input type="checkbox"/> QA Program Not Required	
<input checked="" type="checkbox"/> Supplier's QA Program (select from box below)			
Select the Appropriate Quality Assurance Program(s)			
<input type="checkbox"/> ISO/IEC - 17025 (Calibration or Testing Services)	<input type="checkbox"/> Calibration Services per OPG N-INS-01516-10008	<input type="checkbox"/> Testing Services per OPG N-INS-08173-10032	<input checked="" type="checkbox"/> Software Quality Assurance per OPG N-PROC-MP-0049
<input checked="" type="checkbox"/> CSA N286-05 Procurement (applicable elements)			
<input type="checkbox"/> Z299.1	<input checked="" type="checkbox"/> CSA N286-05 Design (applicable elements)	<input type="checkbox"/> CSA N286.1 (applicable elements)	
<input type="checkbox"/> Z299.2	<input checked="" type="checkbox"/> CSA N286-05 Construction (applicable elements)	<input type="checkbox"/> CSA N286.2 (applicable elements)	
<input checked="" type="checkbox"/> Z299.3	<input checked="" type="checkbox"/> CSA N286.7 Computer Programs	<input type="checkbox"/> CSA N286.3 (applicable elements)	
<input type="checkbox"/> Z299.4	Note: The selection of any of the above CSA N286 programs must be accompanied by a Z299 selection.		
Other CSA N285.0/ N-CORR-01930-0387907 P dated July 11, 2011). Refer to EPC agreement for Darlington Refurbishment Turbine Generator Project, Scopes of Work and related MDR's.			
Pressure Boundary Quality Requirements			
Does the Scope of Work contain Pressure Boundary activities?		Which Certificate of Authorization (C of A) will be used?	
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No (if yes select appropriate requirements below)		OPG C of A <input type="checkbox"/> or Contractor's C of A <input checked="" type="checkbox"/>	
Select the appropriate Pressure Boundary quality requirements.			
<input checked="" type="checkbox"/> CSA B51 Compliant Program		<input type="checkbox"/> CSA N285 / ASME III CL1,1C <input type="checkbox"/> CL2/2C <input type="checkbox"/> CL3/3C (NCA 4000)	
<input type="checkbox"/> CSA N285 / ASME III Material (NCA 3800)		<input type="checkbox"/> CSA N285 / ASME III CLMC / CL4 (NCA 4000)	
<input type="checkbox"/> Testing Services per OPG N-INS-08173-10032			
Other ASME VIII			
Design Delegate Verified & Approved by:			
Richard Okrasa			
Print Name	Signature	Date: YYYY-MM-DD	

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N-FORM-10029-R010

Services - Request for Purchasing

Charge to (44 digit code):											
	Resp Centre	FAC	Resource Type	Service Unit	WPS	Project Number	Activity Field	SCI	Unit	Client	Local Field
# digits	4	5	3	4	4	5	3	5	2	4	5
	2082	17553	310	2082	8204	73272	000	0000	00	2000	00000
	2087	17553	310	2087	8204	73512	000	0000	00	2000	30401

Identify Material Request Number or Attach copy of FIN-FORM-CM-016: Contract Change Authorization;
See attached P.O MR list.

Note: For Staff Augmentation: Material Request is prepared by Nuclear Supply Chain.

*based on Oncore
Setup later*

Verified:	
I certify that the above charge number is correct and the PassPort MR contains the correct number.	
<input checked="" type="checkbox"/> Project, Project CSA	Joanne Zhao/Mirela Courtney
<input type="checkbox"/> Base, Finance	(Print Name and Signature)
Date	2014-01-20
Verified:	(YYYY-MM-DD)

Required Approvals			
Prepared by:	Pejman Asgaripour, Project Manager/Vince Tzambazis Section Manager		
	(Print Name and Title)		
Signature:			
Date Submitted:	2014-01-16	Location:	DC1DC1-2
	(YYYY-MM-DD)	Tel:	5840
Reviewed by Contract Owner:	Todd Josifovski, Director Refurbishment Execution/Ken Graham Project Manager		
	(Print Name and Title)		
Signature:			
Date Submitted:	2014-01-16	Location:	DC1DC1-2
	(YYYY-MM-DD)	Tel:	5819
Note:	Not required for requisitions less than \$5 Million where the scope and budget is covered by an approved Nuclear Operations Portfolio Project BCS.		
Reviewed by Local Finance:	Leo Saagi, Darlington Refurbishment Finance Controller		
	(Print Name and Title)		
Signature:			
Date Submitted:	2014-01-23	Location:	DC1DC1-3
	(YYYY-MM-DD)	Tel:	5434

Internal Use Only
N-FORM-10029-R010**Services - Request for Purchasing**

I hereby certify the scope and budget are within an approved Project BCS or Business Plan.			
Approved by the Requisitioning Line Authority as per the OAR:	Tom Mitchell, President and CEO	OAR Authority Level:	CEO
	_____ (Print Name and Title)		
Signature:	Signature via MCM approval in accordance with OAR element 1.5(requisition) and OAR element 7.2(Procurement Contracts)		
Date Submitted:	_____ (YYYY-MM-DD)	Location:	TCH19A24
		Tel:	2121
Additional OAR Approval, (if required):			
	_____ (Print Name and Title)	OAR Authority Level:	
Signature:	_____		
Date Submitted:	_____ (YYYY-MM-DD)	Location:	
		Tel:	
Additional OAR Approval, (if required):			
	_____ (Print Name and Title)	OAR Authority Level:	
Signature:	_____		
Date Submitted:	_____ (YYYY-MM-DD)	Location:	
		Tel:	
Additional OAR Approval, (if required):			
	_____ (Print Name and Title)	OAR Authority Level:	
Signature:	_____		
Date Submitted:	_____ (YYYY-MM-DD)	Location:	
		Tel:	

Exception Approvals (Refer to OPG PROC 0058)			
VP of Requisitioning Department:	_____ (Print Name and Title)	OAR Authority Level:	
Signature:	_____		
Date Submitted:	_____ (YYYY-MM-DD)	Location:	
		Tel:	

Internal Use Only
N-FORM-10029-R010**Services - Request for Purchasing**Vice-President – Nuclear
Human Resources and
Employee Safety
(if required)

(Print Name)

Signature:

Date Submitted:

Location:

Tel:

Vice-President, Nuclear
Finance Approval
(if required)

(Print Name)

Signature:

Date Submitted:

Location:

Tel:

Vice-President, Nuclear
Supply Chain Approval
(if required)

(Print Name)

Signature:

Date Submitted:

Location:

Tel:

Reviews

Supply Chain Reviewer:

Andy Nelson, Senior Manager SC

Date Reviewed:

(Print Name and Title)

Signature: