PICKERING REFURBISHMENT PROGRAM
PROGRAM EXECUTION

1.0 OVERVIEW

This exhibit focuses on execution management, outlining the methods OPG, as the Owner, will use to ensure all scope is delivered safely, on time, within budget, and to the required quality. As stated in Ex. D2-3-2, certain OPG functional support groups play a key role in execution management and support. This schedule details the activities these functions will perform in the Pickering Refurbishment Program ("PRP"), along with essential control measures to be implemented during the Execution Phase.

The following components of the Program Management Functional support for execution management are discussed:

- Project Execution Support Function
- Work Management
- Functional Operations and Maintenance
- Planning and Controls

In addition, the following key controlling activities are described:

- Cost and Schedule Performance Monitoring
- Risk Management
- Change Management
- Reporting
- Oversight

These components will allow OPG to efficiently coordinate with engineering, procurement, and construction contractors; maintain control over work and track changes through integrated scheduling and cost monitoring tools; uphold worker protection, conventional and nuclear safety, environmental safety, and plant safety; ensure compliance with all quality

requirements; effectively manage risks; and establish robust reporting mechanisms with strong internal and external oversight.

2.0 PROJECT EXECUTION SUPPORT FUNCTION

The Project Execution Support Function provides assistance across major work bundles in four key areas during the Execution Phase. The structure is based on the learnings from the Darlington Refurbishment Program ("DRP") to enable timely and efficient support.

The key activities of the Project Execution Support Function are described below:

- **Construction Execution and Field Support**: This team supports OPG's contractors in executing their work safely and efficiently while maintaining the overall schedule. They address field issues that may hinder progress, such as missing equipment, worksite interferences, or constructability challenges. Additionally, they actively monitor evolving risks during field execution. Effective construction and field support is a widely recognized best practice in managing large-scale projects. Based on industry standards and operational experience, OPG's continuous, structured support and monitoring of contractor activities will enhance overall project performance.
- **Quality Management**: This team conducts quality surveillance through execution planning and in-field construction, addressing critical and emerging issues. They oversee work completion and verify compliance with regulatory requirements through periodic documentation checks. This ensures traceability of field activities in accordance with Pickering's operating license issued by the Canadian Nuclear Safety Commission ("CNSC") and compliance with CSA N286-12.
- **Nuclear Refurbishment Project Parts Integration**: This team ensures consistency and integrity in the processes and systems used by project directors to manage contractors responsible for parts procurement and delivery. They track contractor and subcontractor purchasing activities and ensure uniformity in contractor information.
- **Program Execution Support**: This team enhances oversight of Execution Phase activities by establishing a ready-to-execute plan, implementing a division of responsibilities framework, developing a project manager training program to ensure

qualified personnel for future unit refurbishments, and coordinating insurance reviews and other oversight measures.

3.0 WORK MANAGEMENT FUNCTION

This function is responsible for integrating, publishing, and managing individual unit outage and execution schedules, ensuring that all deliverables are identified, communicated, and completed in line with planning and execution expectations. The Work Management Function ensures proper planning before execution, manages and controls unit scope, coordinates day-to-day work control and interface activities, resolves issues, initiates and oversee changes, and monitors and reports on risks, schedule status, and performance metrics.

In addition, it oversees the preparation and execution of each unit outage, ensuring overall readiness. While each project team is responsible for meeting quality and timeline expectations, this function validates these schedules and integrates them into the overall schedule.

During the Execution Phase, the Work Management Function will undertake the following activities:

- Ensure work activities are effectively planned, prepared, coordinated, and monitored through data systems, including availability of necessary parts and tools.
- Planning, coordinating, and executing logistics required during refurbishment outages, such as space, services, resources, permits, and radiation protection.
- Managing unit shutdown and restart activities, including layup, islanding, and defueling, while ensuring compliance with CNSC commitments.
- Monitoring work processes, identifying opportunities, and collaborating with Functional Operations and Maintenance to implement improvements.
- Scheduling inspection and maintenance work performed by external contractors, covering areas such as fuel channels, steam generators, feeders, turbine generators, islanding, shutdown/layup, and balance of plant.
- Producing detailed work execution schedules at the required frequency to support effective project execution.

- Conducting critical reviews of upcoming work to ensure project alignment and adherence to the execution window.
- Optimizing the critical path while considering cost impacts on individual projects.
- Providing timely and credible variance explanations and producing execution status metrics.
- Conducting problem-solving and analysis when performance deviations occur, ensuring corrective actions are implemented and monitored to resolution.
- Operating a Project Control Centre to manage work priorities and issue resolution, leveraging experience from prior refurbishments.

4.0 FUNCTIONAL OPERATIONS AND MAINTENANCE

The Functional Operations and Maintenance group supports major work bundles related to the unit undergoing refurbishment. This Function serves as the “controlling authority” for units within the construction island during refurbishment, holding responsibility for plant safety, worker protection, and environmental safeguards. It ensures compliance with CNSC licence requirements have been integrated into the PRP to maintain and refurbish relevant structures, systems, and components to nuclear standards. This ensures that units are returned to service in optimal condition, meeting high standards for safety, reliability, and production. Additionally, upon units returning to service, the Functional Operations and Maintenance group acts as the “custodian” of the plant’s operating units, ensuring that refurbishment activities do not negatively impact their operations.

Key responsibilities of the Operations and Maintenance Function during unit refurbishment include:

- Overseeing the shutdown and layup of the unit for refurbishment, as well as monitoring and maintaining laid-up equipment.
- Providing oversight for chemistry, environmental protection, and radiation protection activities.
- Controlling work protection and authorization processes.

- Coordinating the start-up of the refurbished unit, including executing modification commissioning plans, system restart plans, readiness demonstrations, and returning the unit to normal operations.
- Managing non-radiological waste and overseeing proper waste disposal.
- Managing unit turnover and transition to minimize disruption to refurbishment, as well as plant operations upon units returning to service.

5.0 PLANNING AND CONTROLS

This Function supports the PRP by establishing and applying project controls, such as cost management, reporting, and risk management, at both the PRP and project levels. The Function applies industry best practices and recommendations to set standards. Specifically, its responsibilities include

- front-end planning
- program-level scope controls
- project controls (including implementing a gated approval process for major work bundles), cost management, earned value management, forecasting, reporting, change control, and risk management.

The Function also allocates funding for the information technology tools necessary for executing the refurbishment. As the PRP transitions from the Definition Phase to the Execution Phase, the focus will shift from establishing governance, tools, and processes to monitoring program performance through project controls, metrics, and reporting.

6.0 COST AND SCHEDULE PERFORMANCE MONITORING

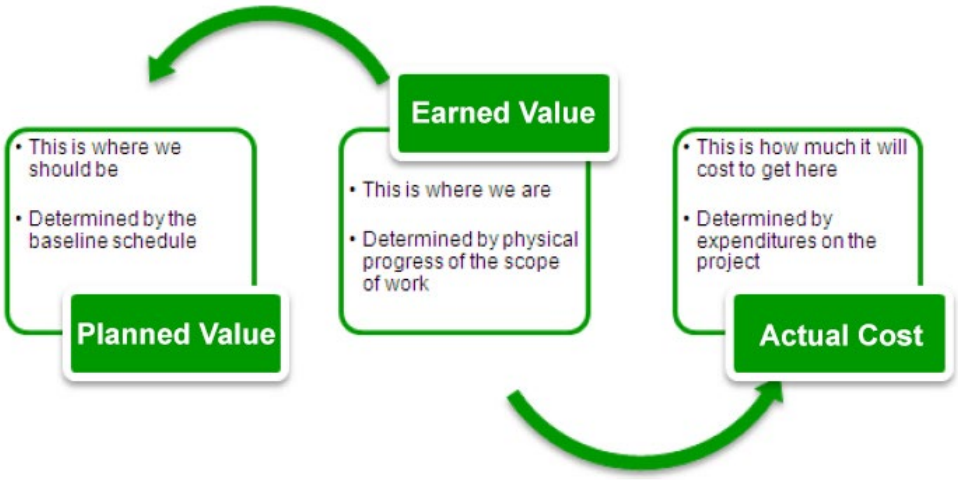
The Earned Value Management methodology is used by OPG as the primary tool for PRP cost and schedule management and monitoring. The Earned Value Management is a standard project management technique for quantifying and measuring project progress and performance. It provides a single objective system for tracking project progress, comparing planned work to actual work completed, and forecasting future performance in terms of both

budget and timeline. In other words, the project "earns" progress as work is completed, thus allowing management to implement corrective strategies if the project deviates from the plan. Earned Value Management analysis requires three key components:

1. Planned Value – The value of work scheduled to be completed at a given point in time.
2. Earned Value – The budgeted value of completed work, calculated as the percentage of physical progress achieved against the planned budget.
3. Actual Cost – The real expenditures incurred, sourced from finance/accounting records, contractor invoices, and accruals.

The Earned Value Process is illustrated in Figure 1 and further described below.

Figure 1 – Earned Value Process Summary Diagram



Cost performance is assessed by using standard industry metrics at the program, project, and functional levels. These earned value metrics provide insight into project efficiency and progress.

The following scenario illustrates how these metrics are calculated and interpreted:

Assume that four valves were scheduled for installation by the current date, each with a budgeted or planned value of $1,000, totaling $4,000. As of today, three valves have been installed, with a total expenditure of $2,500. Based on the experience of installing the first three valves, the cost to install the fourth valve is forecasted to be $800. The earned-value metrics are calculated as follows:

- **Schedule Performance Index ("SPI")** measures progress relative to the planned schedule (SPI = Earned Value / Planned Value). An SPI of 1.0 indicates that work is proceeding as planned, while a value below 1.0 signifies a schedule delay. A value above 1.0 means work has been completed ahead of schedule. In this scenario, SPI = $3,000 / $4,000 = 0.75, indicating that the project is behind schedule.
- **Cost Performance Index ("CPI")** evaluates cost efficiency by comparing the value of completed work to actual costs incurred (CPI = Earned Value / Actual Cost). A CPI of 1.0 means work has been completed at the planned cost, while a CPI below 1.0 indicates higher-than-expected costs. A CPI above 1.0 suggests cost savings. Here, CPI = $3,000 / $2,500 = 1.2, meaning the project is being executed more cost-effectively than planned.
- **Cost Variance ("CV")** represents the difference between the budgeted value of work performed and the actual cost incurred (CV = Earned Value - Actual Cost). In this case, CV = $3,000 - $2,500 = +$500, a favorable variance.
- **Schedule Variance ("SV")** measures the difference between the budgeted value of planned work and the earned value of completed work (SV = Earned Value – Planned Value). Here, SV = $3,000 - $4,000 = -$1,000, indicating an unfavorable schedule variance.

While SPI, CPI, and variance metrics provide insights into past performance, OPG also uses forecasting to assess future project success and enable proactive corrective actions at both the program and project levels. A key forecasting metric is the **Estimate at Completion ("EAC")**, which projects total expected costs (EAC = Actual Cost + Estimate to Complete). Using the scenario, EAC = $2,500 + $800 = $3,300.

Another important metric is the **Variance at Completion. ("VAC")**, which calculates the difference between the original budget and the forecasted final cost (VAC = Budget at

Completion - Estimate at Completion). In this case, VAC = $4,000 - $3,300 = +$700, indicating expected cost savings.

Estimate at Completion can be determined using different methodologies, such as applying the original planned values or adjusting forecasts based on actual unit costs. These forecasting tools allow OPG to maintain control over project costs and take corrective actions as needed.

7.0 RISK MANAGEMENT

The PRP has adopted a systematic approach to ensure risks and opportunities are identified, assessed, analyzed, mitigated with adequate risk response, and monitored to a robust and consistent standard to ensure that project objectives are achieved. This work is managed by the PMO Function, with additional oversight from OPG's Enterprise Project Management Office Risk Team.

Risk management provides projects with forward-looking actions and metrics to reduce the likelihood and minimize the impact of undesirable events (threats) during the project life cycle and increase the likelihood of positive events (opportunities) that can result in a cost and/or schedule saving.

Risk identification will continue throughout the lifecycle of the project utilizing various techniques as listed below:

- Risks identified during operating experience reviews and meetings with subject matter experts;
- Stakeholder interviews and reports; and
- Risk management meetings.

Specialists will qualitatively assess the probability and consequence of each identified risk and capture the information in the appropriate Risk Register to prioritize the risks.

All PRP Project teams are required to continuously review and monitor their individual Risk Registers throughout the project and adjust their assessments and mitigating actions

accordingly. Top program and major work bundle risks are reviewed during monthly status meetings. On a quarterly basis, a risk oversight meeting is held where top program and major work bundle risks are presented to and reviewed by the Risk Oversight Committee. In addition, specific projects risks and status are also presented during the project Gate Review process when seeking project funding approval from the Gate Review Board.

8.0 CHANGE MANAGEMENT

Change is inevitable in a project. A robust change management process provides guidance on how changes are assessed, implemented, and reported.

The PRP change management process ensures that all changes to project scope, cost, and schedule are controlled and documented; that contingency fund allocation is managed; and that the nature and cause of changes are documented, analyzed, approved, and implemented to minimize the impact to cost, schedule and scope.

The key principles that OPG applies with respect to change management include:

- the executing organization will first attempt to mitigate the impacts of the change so that change is managed at the lowest authorized level of the organization;
- a change that has a significant potential impact on scope, cost and schedule is reviewed in detail and the recommended direction is approved at the appropriate level;
- only after a change is approved by the appropriate authority level is the work assigned for action by the executing organization; and
- changes are not made solely for the purpose of correcting performance issues that are within the control of the work program owner.

The change control process is applied from project inception through completion. The constraints of cost, schedule, and scope are continuously and rigorously managed by rejecting or approving changes and subsequently incorporating approved changes into the revised program and performance measurement baseline where applicable.

Details of OPG's Integrated Change Management Process are set out in Attachment 1.

9.0 REPORTING

An integral part of successful project management is reliable and accurate performance information. Reporting provides this performance information through the collection, collation, and presentation of data and information. The key objectives of reporting are:

- ensure information is being communicated to the right stakeholders such that the appropriate decisions can be made, actions taken, or awareness generated;
- communicate the status of the Program including any trends, variance from plan, and how the potential variance is being addressed or corrected; and
- ensure information is reliable, accurate, and transparent.

A comprehensive reporting and data infrastructure framework has been established for reporting on the PRP. The purpose of the framework is to provide consistent, accurate, and timely information on project status to enable effective decisions and improve project performance.

Similar to the DRP, annual status reports are planned to be issued to the public and filed with the OEB for the duration of the PRP, beginning in the IR term. This reporting will include a range of measures, including construction completion, cost performance, schedule performance, and safety performance. The metrics proposed for PRP reporting are similar to those that were reported annually for the DRP, with refinements based on OPG's experience on reporting to date. Chart 1 illustrates the information that is planned to be provided through this public reporting for the duration of the PRP.

Chart 1 – Public Reporting on the PRP

Category	Measure
Introduction and Table Contents	N/A
Executive Summary	N/A
Overall Program Status	• High level overview of PRP
Progress	• Key Achievements • % Complete
Safety	• Serious Injury Incident Rate

Category	Measure
	• Summary of any material safety events
Significant Quality Events	• # of Significant Quality Events
Cost	• Cost Performance Index • Life-to-date cost • Forecast to Complete • Estimate at Complete
Schedule	• Current schedule performance (relative to OEB-approved) • Schedule Performance Index • Status of Key Milestones • Critical Path Progress • Forecasted Completion Dates
Engineering	• Summary of engineering status and key issues
Procurement	• Summary of procurement status and key issues
Construction	• Summary of construction progress and analysis of any material variances from plan • Summary of any material labour or staffing issues • Summary of any material environmental issues
Testing, Start-Up and Commissioning	• Summary of systems tested, commissioned, started, and any material key results and issues
Program Risks and Risk Management	• Key risks and mitigation • Key issues and corrective actions
Staffing	• Actual staffing levels against OEB-approved plan • Summary of any material staffing issues

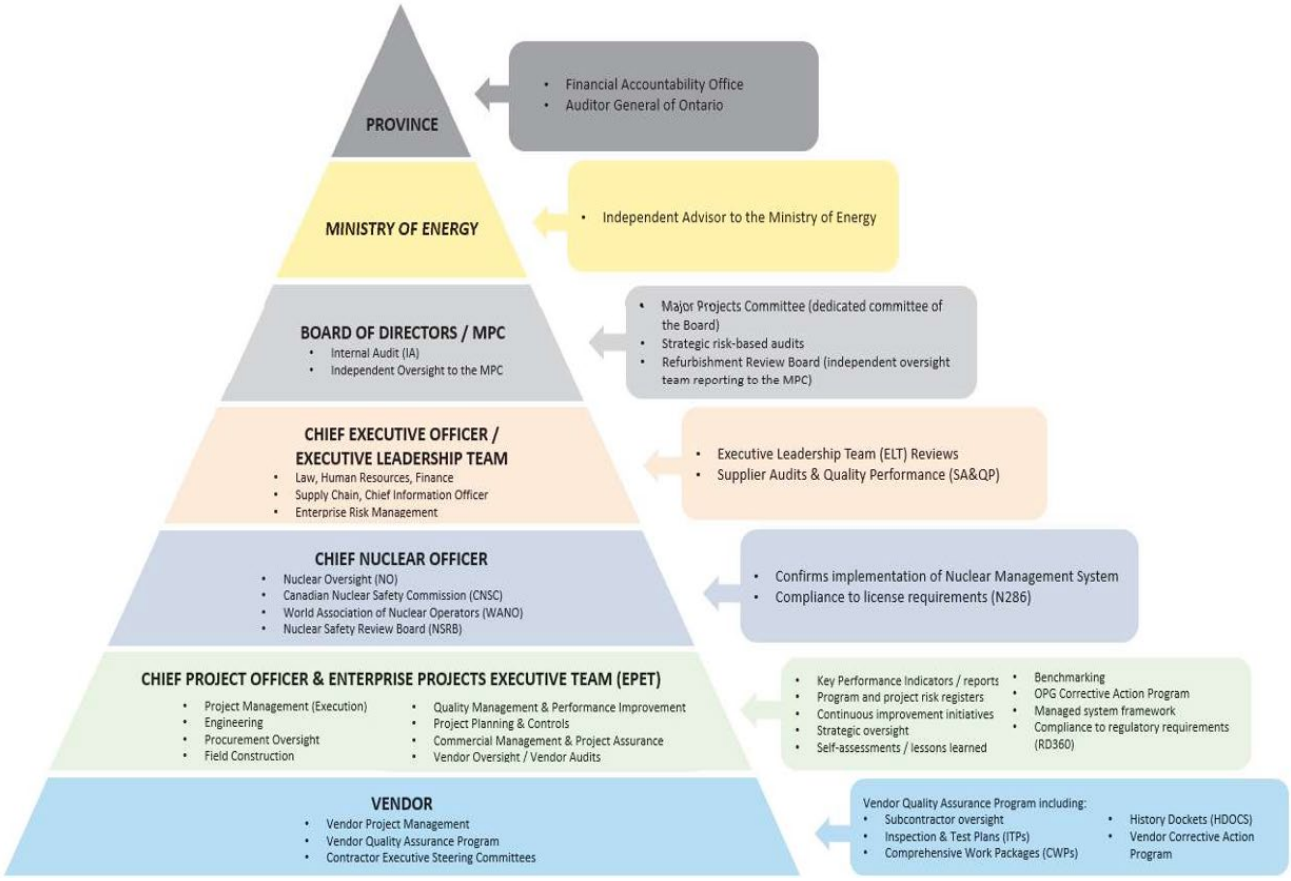
10.0 OVERSIGHT

OPG has established a comprehensive assurance plan that incorporates multiple layers of oversight, including PRP staff, external contractors, PRP leadership, enterprise leadership, and external advisors. This plan ensures robust oversight throughout the execution readiness and Execution Phase of the PRP, with a strong focus on key risk areas. Specifically, oversight will help to ensure that: (1) the PRP meets safety, quality, cost and

schedule expectations; (2) issues are identified and resolved expeditiously; and (3) transparent and accurate information is provided to OPG's Board of Directors to support effective oversight and decision-making.

The oversight and assurance processes are supported by transparent, timely and accurate information flows to support decision-making at appropriate levels within the organization. The flow of information and the organizational hierarchy of PRP oversight and assurance providers is provided in Figure 2 below. This figure provides context for various levels of oversight and examples of activities during the project.

Figure 2 – Pickering Refurbishment Program Oversight Assurance Framework



As per Institute of Nuclear Power Operations 17-004, Principles for Excellence in Corporate Performance, oversight is defined as "...the verification that the standards, expectations, and goals established through governance of the organization are met. Verification performed by managers and executives, up to and including the CEO and board of directors directly accountable for ensuring functional outcomes are met, is considered line oversight. Verification performed by personnel and groups; either internal or external to the organization and outside of the particular functional area, is considered independent oversight."[1]

The PRP Assurance is comprised of two main separate elements: External Assurance and Internal Assurance. Each element plays an important role in providing assurance to the stakeholders that the Program is being executed safely, to the required quality, on time and on budget.

The key provisions of this oversight and assurance model are provided below.

10.0 External Assurance

External Assurance is defined as oversight from outside the project including the Province of Ontario, industry and regulatory. The key provisions of External Assurance applied to the PRP include:

- *Independent Oversight* provided by an independent advisor of the Ministry of Energy who has been retained to monitor and report on the progress and performance of the PRP on a confidential basis directly to the Ministry of Energy. The Ministry of Environment, Conservation and Parks, and the Ministry of Labour, Immigration, Training and Skills Development may also provide oversight during the PRP as required.
- *Major Projects Committee of the OPG Board of Directors* supports program-level oversight by OPG's Board of Directors. As part of this oversight, the Major Projects Committee has retained the Refurbishment Review Board ("RRB") to provide independent assessments of the PRP. The RRB provides independent assessments of

[1] Institute of Nuclear Power Operations, "17-004, Principles for Excellence in Corporate Performance" (October 2017), p. 1-2.

PRP progress, estimates, and schedules to enable early intervention, help mitigate the project risks and improve overall project performance. It is typically comprised of five external experts in nuclear operations, mega-projects, and regulatory requirements (along with two internal OPG members). The RRB performs reviews of PRP three to four times per year, or at a frequency as directed by the Major Project Committee, and reports directly to the Major Projects Committee.

- *OPG's Nuclear Oversight* is an independent function within OPG that is separate from line management. Nuclear Oversight conducts the Independent Assessment Program to ensure that the PRP project meets the requirements of the Nuclear Management System as necessary. The findings are reported to OPG's Chief Nuclear Officer and are shared with the Major Projects Committee of OPG's Board of Directors.
- *OPG's Internal Audit,* which provides oversight in a broad range of areas such as scheduling, cost estimates, contractor procurement, quality assurance, cost management, contractor time keeping and contracts. OPG's Internal Audit group has functional independence from management. It publishes the results of audits in a report and requires management actions be assigned and tracked to completion. The results of all audits are presented to OPG's Chief Executive Officer and OPG's Board of Directors.
- *Industry Regulatory and Other Oversight Bodies* including the CNSC and the World Association of Nuclear Operators may perform routine audits, assessments, and inspections of PRP performance. As the PRP progresses, these reviews will include insights into the Program's compliance with applicable licences and regulations, and World Association of Nuclear Operators best practices.

10.1 Internal Assurance

Internal Assurance is defined as oversight provided by functional organizations within OPG and the PRP organization to support the project. The key provisions of Internal Assurance applied to PRP include:

- *Project-Specific Oversight* – Each Project Management Team, along with the Project Execution Support Function, conducts oversight based on risk management principles, operational experience, contract requirements, scope of work, and contractor performance evaluations (see Section 3.2.1 of Ex. D2-3-2).

- *Executing Organization Oversight* – PRP leadership and PRP functions oversee execution, including through the *Project Execution Support*, *Work Management, Functional Operations and Maintenance* and *Planning and Controls* Functions described above.
- *Oversight and assurance provided by OPG's Chief Nuclear Officer, Chief Projects Officer and Chief Nuclear Engineer,* who confirm compliance to the Nuclear Management System and licensing requirements throughout all project phases from design through to turnover to operations. This is achieved through functions including:
  - *Nuclear Regulatory Affairs,* which interfaces with external regulators such as the CNSC, Ministry of Energy and Ministry of Labour, Immigration, Training, and Skills Development, who perform assessments of compliance. OPG seeks to anticipate and address any issues in a way that maintains and builds regulatory confidence; and
  - *Construction Centre of Excellence,* which identifies, plans, executes and reports on construction oversight activities and trends throughout the project lifecycle.
- *Vendor Oversight* – Vendor oversight management involves actively monitoring and evaluating vendor performance to ensure compliance with contractual obligations, quality standards, and regulatory requirements. This process includes enforcing standardized processes for evaluation and performance monitoring to ensure vendors meet project requirements and safety standards. It also facilitates on-going communication and engagement with the vendors of contractual obligations, documentation of vendor activities, performance reviews requirements and frequency, and issue resolution. This oversight process minimizes risks, ensures service reliability, and protects OPG's interests by holding vendors accountable for their deliverables.

This multi-tiered oversight framework is integral to ensuring the success of the PRP, reinforcing accountability, and maintaining high standards for safety, cost efficiency, and schedule adherence.

LIST OF ATTACHMENTS

Attachment 1: Pickering Refurbishment Project Controls Program Management Plan – NK30-PLAN-00120-00003

ONTARIO POWER GENERATION

Program Management Plan

Internal Use Only

Document Number:
NK30-PLAN-00120-00003

Revision:
R001

Title:
PICKERING REFURBISHMENT PROJECT CONTROLS PROGRAM MANAGEMENT PLAN

The Program Management Plans outline the specific requirements and procedures related to each function of a project, with the aim of communicating how the staff will carry out their tasks while aligning with the objectives of the current OPG Project Management Standard.

General Program Information

Program Name:	Pickering Refurbishment	**Facility/Site:**	NK30/ Pickering B
Program Manager:	Luca Ceccato, SVP Pickering Refurbishment Execution	**Executing Org:**	Refurbishment Project Controls
		Sponsor:	Subo Sinnathamby

Program Management Plan Approval

Prepared by: Joanne Mercieca 05Sep25 **Joanne Mercieca, Project Specialist / Date**	Reviewed by: Kevin Tse 11Sep25 **Kevin Tse, Sr Manager Project Controls /Date**
Approved by: Vijay S 22/Sep/2025 **Vijay Santhanam, Director Refurbishment Project Controls /Date**	

Revision Summary

Revision Number	Date	Comments
R0	2025-01-29	Initial Issue
R1	2025-04-10	Section 2.2.2 added to include Gate 3 Estimate review requirements
R2	2025-09-05	Document references updated, Program Management Plan structure (Appendix A) updated

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1.0 PURPOSE

The intent of this plan is to define the implementing project controls processes for successful execution of the Pickering Refurbishment Program (PRP). The program requirements below are the minimum criteria applicable to all the components within the Project Controls program.

Program-specific Management Plans are to be consulted for direction on program governance and compliance requirements.

2.0 PROGRAM REQUIREMENTS

The Enterprise Project Management Office (EPMO) has established an organizational model and associated procedures consistent with industry best standards including recommended practices from the Project Management Institute, the Construction Industry Institute (CII), and the Association for the Advancement of Cost Engineering. The EPMO, where appropriate, has also adopted operating experience from many large scale Nuclear and non-Nuclear projects.

It is the intent that the Pickering Refurbishment Program will adhere to the established EPMO Project Controls processes.

All projects within the PRP are classified as Scalability level ‘A’ due to the substantial integration and oversight requirements associated with managing the program. Individual project level classifications based on the project’s specific complexity and anticipated cost at completion is not required.

A program level Refurbishment Charter NK30-CHAR-09701-00001 [R01] is in place to establish and communicate the expectations of the Senior Vice President (SVP), Enterprise Chief Project Officer regarding the management of the PRP. It also provides the process support document framework to be implemented within the PRP to manage all activities related to the refurbishment of the Pickering units. Individual project charters are not required.

Specific Program and Project Management Plans will document how the PRP meets the requirements of the OPG Nuclear Management System. Project Management Plans (PMP) are prepared strategically at the bundle level.

The program requirements being implemented by Pickering Refurbishment are outlined in the following sections.

2.1 Funding Release Strategy

Board of Director (BoD) approval will be required for funding releases to the Pickering Refurbishment Program. The funding approval process will include separate releases for the planning, prerequisite, execution and close out phases for each unit.

The funding release for Pickering Refurbishment will utilize the following strategy:

- Phased BoD Program releases based on progression of work will be implemented to allow programmatic objectives to be progressed along with specific project deliverables.

- Project and Functional support releases will be implemented as draw downs on the Program release through phase-gate and/or change management. The processes to be followed are documented in OPG-MAN-00120-0019 Project Phase Gate Management [R02] and OPG-MAN-00120-0016 Project Integrated Change Control [R03].

- Project-specific business case summaries (BCS) for projects executed within the PRP charter are not required.

2.2 Phase Gate Management

A modified gating process will be used to control funding approval through the project phases.

Program Release	Applicable Gates	Scope	TCD
Release #1A-1 RP-0200	Bundle Gate 1	• Procurement of Major Long Lead Materials for U5/U6 • Completion of Scope Refinement • Advancement of Preliminary Engineering	Jan-24 COMPLETE
Release #1A-2 RP-0210	Bundle Gate 2	• Procurement of materials for U5/U6 • Procurement of all materials for U7/U8 • Completion of Detailed Design	Nov-24 COMPLETE
Release #1B RQE RP-0211	Bundle Gate 2/ Gate 3	• Completion of Installation/Work Planning • Execution of Facilities, Defueling, U5/U6 Layup, and selected common work	Nov-25
Release #2 RP-0220	Gate 3 U5, 6, 7 & 8	All Bundles Gate 3 approved • Full execution and close out of U5, 6, 7 & 8 (TG, BOP, RFBR, SGs)	Nov-26

Releases to execute individual project scopes will follow the principles of the phase-gating process guidelines documented in OPG-MAN-00120-0019, Project Phase-Gate Management [R02].

Projects within scope of the Refurbishment program that will be funded individually are included in the bundles below:

- Retube & Feeder Replacement
- Boiler Replacement
- Turbine Generator Refurbishment
- Deep Water Intake
- Balance of Plant Scope
- Operations & Maintenance
- Facility & Infrastructure Upgrades
- Functional Support

Gate package preparation should reflect the programmatic release strategy, project contracting strategies and planned funding requests.

Gate packages are to be prepared using the standardized Program Gate Progression Form in ePMX. The template provides additional details on the scope schedule and financial summaries within the projects in lieu of individual project Business Case Summaries.

Gate packages will be reviewed, evaluated and approved by the Pickering Refurbishment – Gate Review Board (GRB). The GRB Terms of Reference describes the function and role of the GRB in more detail.

A more detailed gate strategy and release plan for each bundle is documented in the Bundle-specific Project Management Plan.

2.2.1 Electronic Approval of Gate Packages

The following Gating requirements and expectations have been established for Pickering Refurbishment. Reference Pickering Refurbishment Program Gate Review Board Terms of Reference NK30-TOR-09701-00003 [R32]

Approvals for Gate 1 & Gate 2 including all sub-gates are permitted to be routed electronically instead of a Gate Review Board Quorum meeting. To use this exception ALL of the following conditions must be met:

- Release requested for the scope of work is in line with the Program Class IV estimate for that same scope of work, broken down to WBS level 1,
- Estimate classification for the release requested meets gate requirement.
- Schedule requirements for gate release are met, and

- Top risks for release have post-mitigation score of score ≤10.

Expectations for electronic approval:

1) Follow gating requirements. Governance still applies.

2) Prepare Gate Package including Gate Progression Form (GPF) and Gate Presentation and obtain reviews from Execution line up to VP and P&C Manager.

Prior to requesting approval, stakeholder endorsement reviews are to be held with

- Project Controls Sr Manager
- Project Controls Director
- SVP, Governing Body Chair

A .pdf of the Gate Progression Form is to be submitted to the above approvers and the results formally documented on the GPF Decision tab in ePMX.

All Gate 3 release requests require GRB quorum meeting per Terms of Reference NK30-TOR-09701-00003 [R33]. By exception only, email approval by Director, Project Controls is required for a Project or Function to seek an electronic gate approval instead of GRB quorum meeting for Gate 3 release.

2.2.2 Estimate Reviews

For all PNR Gate 3 packages, a formal estimate review by the PMO Estimating Team is required. The review is to be documented using GATE-FORM-004 and attached in the Estimate section of the Gate Progression Form in EBX. GATE-FORM-004 Estimate Checklist is available on the Project Management Governance Map under Phase Gate Management.

If an exception to this requirement has been granted by the Director P&C, email or memo documentation must be attached in the GPF in lieu of the review checklist.

2.3 Integration Management

Project Integration Management is the main process through which the project manager ensures that all elements of the project are adequately developed, coordinated, managed and aligned.

For the Pickering Refurbishment program, Project Controls will leverage the guiding principles identified in OPG-MAN-00120-0010, Project Integration Management [R04] for alignment between all projects executed within the program scope.

This includes the use of established Project Management Information Systems (PMIS) tools and software for managing related project work including EcoSys, ePMX, AS9 and P6 scheduling software.

A Pickering Refurbishment Program and Project Work Breakdown Structure has been developed and is to be used by all Bundles/projects. Use of a standardized Work Breakdown Structure (WBS) will facilitate successful coordination and alignment of project teams, processes, systems, and interfaces.

For the PRP, the Work Package level is the Cost and Schedule Integration point of scope, budget, actual cost and schedule and where the measurement of performance will occur. e.g.: Procurement Packages, Engineering/Design Packages, Construction Packages, etc.

2.4 Project Scope Management

The Refurbishment program Scope Management principles and requirements are documented in OPG-MAN-00120-0011, Project Scope Management [R05].

The objective of Scope Management is to ensure that the individual projects included in the Refurbishment program include all the work required, and only the work required, to complete the refurbishment successfully. Managing project scope is primarily concerned with defining and controlling what is and is not included in a specific project.

The Refurbishment Change Control Board (RCCB) has been established to provide a structured forum for control of changes to the scope and structure of the Pickering Refurbishment Program (PRP).

This Board is a transition from the Pickering Scope Review Board (PSRB) and takes authority as of May 2024, post Major Scope Freeze. Reference NK30-TOR-09701-00002 Pickering Refurbishment Program Refurbishment Change Control Board Terms of Reference [R06].

The RCCB will manage new scope requests and approved scope changes for the individual projects, ensuring requirements are fit-for-purpose, properly defined, validated, controlled, and align with the overall program objectives.

In addition to the Refurbishment Program, a Sustaining Capital/OM&A program will be implemented during the refurbishment time frame. The Sustaining program will be the responsibility of the Pickering Station.

For approval of scope that is funded from the Sustaining program, refer to Project Management OPG-STD-0148 and associated processes.

2.5 Manage Decisions

Throughout the PRP life cycle, concepts may be initiated/proposed for analysis and decision, which may involve significant changes and impacts to the program.

For the PRP, the Decision Record and Analysis Summary (DRAS) form will be used to initiate the process to analyze and approve or reject new concepts. Decisions are to be documented and administered through the DRAS - Decisions Module within Enterprise Project Management Extensions (ePMX).

Decisions affecting scope, schedule and/or budget will need to be approved by the Refurbishment Change Control Board.

OPG-MAN-00120-0010 Project Integration Management [R04] provides direction on management of decisions.

2.6 Schedule Management

Schedule Management will follow the principles and direction outlined in OPG-MAN-00120-0014, Project Schedule Management [R07]. The primary PMIS scheduling software is Primavera P6.

The schedule is the main planning tool used to understand and communicate the status, interrelationships and dependencies among project activities and deliverables.

Individual project schedules will be maintained throughout the life cycle of the projects, in addition, a program master schedule will be implemented and maintained to facilitate effective planning of the project components and to provide all key stakeholders with a visual representation of how the program is being delivered throughout the life cycle.

Maintaining a logic-based program network diagram and monitoring the critical paths for each project with interdependencies between other project work is essential for effective management of the program master schedule.

PRP Standard P6 milestones are to be identified and coded in each Bundle/Project schedule to enable consistent program reporting. The milestones and codes are documented in NK30-MAN-09701-10005-MLST [R08].

The Multi-Layer scheduling concept will be incorporated in which each project has a single schedule file containing activities of different levels, and high-level activities are summaries of their lower level activities. This concept includes vendor and OPG activities in the same schedule environment.

Management of the schedule performance measurement baseline will be in accordance with the Project Integrated Change Control process and will be supported by the PRP PMO Business Unit subject matter expert and Primavera system administrator assigned to the Refurbishment program.

Changes to schedule baselines will be coordinated and controlled across program components.

Each PMP should include a Schedule Management Plan defining the criteria and activities for developing, monitoring, and controlling the schedule. OPG-GUID-00120-0001 Project Scheduling Guide [R09] provides detailed guidance to assist OPG and vendor schedulers on understanding the requirements for project schedule development, updating and control within Primavera P6.

There will be one P6 scheduling database controlled and managed by OPG. All work groups (OPG and vendor work groups) will work in the same P6 instance.

- An OPG Assigned Master Scheduler is responsible to control and manage the unified P6 schedule.

- A Project Controls member will be assigned to each bundle and will follow schedule process direction from the OPG Master Scheduler.

  - The Lead Scheduler has authority to update and revise his schedule within the protocols specified by the Master Scheduler

2.7 Work Management

The Work Management section under the Project Controls Director is responsible for an Integrated Level 3 Execution Master Schedule providing collaboration between all the refurbishment projects for current and subsequent unit execution work.

The focus of the group will be on facilitating the planning, preparation and execution of the scope of work with individual Project Managers and Vendor Partners through schedule oversight.

There are three key fundamental areas of accountability:

1. Scope Management: The Work Management section manages the Major and Minor Scoping Milestones and post milestone scope control, reference:
   - N-GUID-09300-10000, Outage Scope Control Process [R26] – W/O Creation, Major Scope & Initial Planning.
   - N-GUID-09300-10010, WCTL Desktop Guide for Nuclear Planned Outages [R27] – Planned Outage Scoping, Preparation, Execution and Post Outage Expectations for Work Control Team Lead (WCTL).

2. Schedule Management: The Work Management section owns the individual unit outage execution schedules and provides key input to the overall program schedule, reference:
   - OPG-MAN-00120-0014, Project Schedule Management [R07].

   While each project and contractor are responsible to produce a logical and executable schedule, Work Management validates the schedule and integrates it into the overall program schedule, identifying modifications as required. The direction and oversight requirements of any individual project are the accountability of the project.

3. Planning Preparation Milestones: Work Management provides the oversite of and manages the Refurbishment Unit Planning Milestones program, reference:
   - NK30-MAN-09701-10005 Pickering Refurbishment Work Management [R28].
   - NK30-MAN-09701-10005 MLST Pickering Refurbishment Program Unit Planning Milestones [R29].
   - NK30-MAN-09701-10005 WIN Pickering Refurbishment Program Unit Planning Window Milestones [R30].

The responsibilities of Work Management with Integration and collaboration includes:

- Planning, organizing, coordinating and maintaining status on all preparatory and ongoing requirements of the schedule.
- Monitoring the work being performed to completion as scheduled and managing and directing the resolution of all intergroup or inter-department coordination issues.

- Implementation of a Unit Coordination and Lookahead Team - This Look Ahead Team ensures all work needed before the start of refurbishment execution is scoped, planned, and scheduled in a manner that will achieve the overall program strategies and goals.
- Ensure integration of contractors and refurbishment activities.
- Ensure logistics required during unit refurbishment including space, services, resources, permits, and radiation protection are planned, coordinated, and executed.
- Ensure the work execution is monitored & tracked to Window baseline durations & execution schedule timelines.
- Ensure work activities are properly planned, prepared, coordinated, and monitored during the actual execution phase through the planning controls systems including making sure parts and tools are readily available.
- Ensure Canadian Nuclear Safety Commission (CNSC) commitments related to assigned outage are coordinated and executed.
- Implementation of a Project Control Centre (PCC) - Responsible to communicate progress on a daily or weekly published schedule to a large number of coordinators and stakeholders, as well as ensure the schedule is followed, work is prioritized, and progression is tracked. All issues that require resolution during the Refurbishment execution are coordinated through the PCC Manager.

2.8 Cost Management/ Estimating

2.8.1 Cost Management

Cost Management is the process of estimating, budgeting, monitoring and controlling program/project costs.

The Refurbishment program will follow the principles outlined in OPG-MAN-00120-0013, Project Cost Management [R11].

To facilitate Cost Management the budgets of the individual program components need to be established to develop the overall budget for the program, and to integrate and control costs during program life cycle.

The following factors play a part in cost management:

- Funding, Budget (estimate), Forecasting
- Schedules
- Contract payment schedules
- Cost reporting and Metrics
- Change management.

Implementing the PRP standard Work Breakdown Structure (WBS) is critical for reporting as it facilitates alignment of cost and schedule within and between projects. The WBS used by individual projects should include 100% of the scope and all elements of cost for the project (e.g. direct effort, interest costs, staff expenses).

Program contingency will be managed at the Program level within the Functional Bundle.

Interest charges will be managed at the project level and are to be included in project estimates under the appropriate Cost Management WBS element.

Bundle contingency based on project risks will be available for allocation though the Integrated Change Control process. New scope or significant changes to draw contingency from the Program will need Change Control Board approval. Any changes to project budgets and drawdown/return of contingency should be managed in accordance with the Project Integrated Change Control manual. [R03]

EcoSys will be the repository of Program/Project budgets, forecasts and life-to-date actuals.

2.8.2 Estimating

The estimating process is performed during each phase of the program/project life cycle as project scope is further defined, modified, and refined. The refurbishment program will take guidance from OPG-MAN-00120-0012, Project Estimating Manual [R12] to develop or validate estimates.

Estimates are to be reviewed by the PMO Estimating Team. Ensure adequate time is allocated for estimate review and validation activities, and any resulting corrective actions.

2.8.3 Forecasting

Forecasting is the process of making projections of conditions and events in a projects' future, predicting the final outcome of the cost, time and resources required to complete a scope of work.

As described in the Cost Management Manual OPG-MAN-00120-0013 the project manager is to ensure that the project forecast is updated in EcoSys at a minimum, on a monthly basis.

For assistance in developing forecasts, Project Managers can refer to COST-DTG-001 FORECASTING [R13] available on the Governance Roadmap located on the EPMO Website

2.9 Integrated Change Control

Integrated Change Control: is a Project Management process that justifies or rejects a change request to scope, budget and/or schedule.

Implementing formal change control ensures that all changes to the Refurbishment program, and associated projects, performance baselines are controlled and documented to:

- Minimize the impact to program cost, schedule and scope by documenting, analyzing, and approving the nature and cause of project changes.
- Manage updates to project scope, schedule and/or cost "project performance baselines.
- Manage program contingency fund allocation.

The guiding principles identified in OPG-MAN-00120-0016, Project Integrated Change Control [R03] will be used to develop any PRP program/project specific change requirements.

Changes should be identified in a timely manner to allow for appropriate reviews and approvals prior to implementing resulting actions. This includes contractor and OPG request for change.

All change control is to be documented in the ePMX Change Control module. Baseline cost and schedules are updated within the OPG PMIS source systems. Example ePMX, EcoSys and P6, if applicable.

All changes to project scope, schedule and/or cost baselines should be performed through the ePMX Change Control Form (CCF) in a timely manner. Changes to baselines will be coordinated and controlled across program components.

As discussed in Section 2.4 Scope Management, any new scope requests and/or scope changes for individual projects must be approved by the RCCB before proceeding with CCF approval. Reference NK30-TOR-09701-00002 PRP RCCB Terms of Reference [R06].

2.10 Risk Management

2.10.1 Risk

The fundamental project risk management processes are:

- Plan Risk Management
- Identify Risks and Issues
- Perform Qualitative Risk Analysis
- Perform Quantitative Risk Analysis
- Plan and Implement Risk Responses
- Monitor Risks and Issues

NK30-PLAN-00120-10014 Pickering Refurbishment Risk Program Management Plan [R34] provides guidance on Risk management processes and approach required for the PRP. Project and program risks, issues and opportunities are to be maintained in the ePMX Risk and Actions Module. The Risk and Actions Module is a live tool that allows the project to provide details on risks, response type and mitigating actions to monitor and control risks, and actively execute effective, proactive risk management.

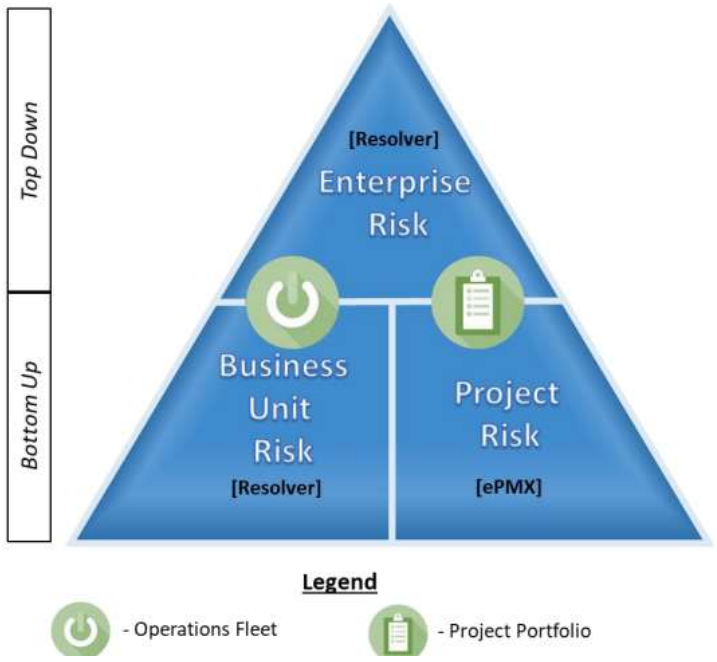
Risks specific to project scope or scope related items are to be captured in the individual project PMPs. OPG-MAN-00120-0015, Project Risk Management [R18] documents the process to identify and evaluate project risks and opportunities with an adequate risk response plan. Note for implementation of the requirements in the manual, all Bundles/projects within the Refurbishment program are Scalability A.

Key Program risks will be reported to Enterprise Risk Management (ERM) in accordance with reporting requirements defined in OPG-PROG-0004, Enterprise Risk Management.

Risk at the fleet and program level will be considered from a broader strategic perspective. For PRP risks that are included in the Enterprise and Business Unit risks, co-ordination will be managed by Enterprise Risk Management Team.

The Enterprise Project Risk Committee (EPRC) will be responsible for providing risk oversight of the Enterprise Projects portfolio via the Enterprise Project Management Oversight Committee (EPMOC) meeting.

The following diagram illustrates the risk management framework at OPG:



2.10.2 Lessons Learned

Lessons learned knowledge gained during initial Refurbishment work planning and execution will be used for the planning and execution of subsequent Refurbishment units, or Station Maintenance.

OPG-GUID-00120-10054 Lessons Learned Guide [R20] describes the Pickering Refurbishment Internal Lessons Learned Program.

All Refurbishment employees and vendor partners have a responsibility to identify and document lessons learned. Lessons are to be identified on an ongoing basis during the planning and execution of work, or as soon as possible after key work completion to ensure the information is accurate and complete.

The ePMX Lessons Learned module will serve as the single repository for documentation of all Refurbishment Lessons Learned.

2.11 Communication and Stakeholder Management

Communication provides the critical link between stakeholders and program information that is necessary for decision-making and support engagement. Effective communication and stakeholder management is part of effective project change management.

While projects share the need to communicate project information, the information needs, methods of distribution, and the amount of information may vary widely. Refer to OPG-MAN-00120-0017, Project Communication and Stakeholder Management [R21] principles for determining the information and communication needs of the stakeholders based on the program stakeholder register. A communication management plan should be included within the individual Project Management Plans (PMP). Consideration is to be give to Legal, regulatory, and commercial sensitivity requirements.

For specific requirements refer to the Communications & Stakeholder Relations PgMP NK30-PLAN-00120-00013 [R22].

2.12 Indigenous Engagement Plan

OPG is committed to working with Indigenous Nations and communities to foster positive and mutually beneficial relationships that will create social and economic benefits through partnership and collaboration. Projects are to develop effective Indigenous Engagement Plans (IEP) to support meaningful engagement and consultation with Indigenous Nations and communities with respect to OPG's current and future operations and projects.

IEPs are to be included in Project Management Plans and will be part of the PRP Gate progression checklist to ensure indigenous engagement has been integrated into the project team deliverables.

The Indigenous Relations Department is available to support development an IEP. Early engagement with Indigenous Nations and communities prior to finalizing an IEP is important in order to understand their interests and/or concerns related to the proposed project and to receive feedback on how they would like to be engaged.

Project teams are encouraged to contact the Indigenous Relations Team prior to reaching out to the Indigenous Nations and Communities.

Refer to Indigenous Relations Manual OPG-MAN-08410.1-0001 [R31].

2.13 Performance Measurement and Reporting

Performance measures assess the extent to which performance is achieving the intended targets. A set of standard reports are produced for communicating program and project level performance to various stakeholders.

Accurate and timely project reporting will be the responsibility of each project manager. In addition, information may be requested from project teams to support the level 2 and 1 program level report requirements.

A Nuclear Refurbishment Reporting Website is maintained and utilised across the organization as a repository for official reports. Automated reports currently produced

include, but are not limited to:

- Cost performance reports using baseline cost data from EcoSys,
- Schedule performance reports based on Primavera P6,
- Actual cost collected from Financial Reporting & Analytics (FRA) source systems.
- Milestone reports using schedule data from Primavera P6 identifying progress on specific milestone types or reporting events at all levels from program down to the individual milestones.
- Engineering progress reports using schedule data from Primavera P6 and information regarding engineering scope entered into EPMX by the line of business.
- Risk Management status reports using actions, risks, issues and decisions entered into the ePMX tool.

2.14 Document Management

Records, documents, and data collectively form the history of the PRP. They constitute the business and intellectual assets of critical importance and are fundamental for knowledge transfer. Documents are to be maintained to meet both regulatory and business requirements and should be managed throughout their life cycle e.g. project planning, execution and program closure in accordance with Information Management. OPG-MAN-00120-0017 Appendix D provides guidance on documents and records creation and Associated Form or Template Number and Records Management System Filing Information/Retention.

ePMX has the capability to create and store project documentation including:

- Gate Package
- Business Case Summary (BCS)
- Gate Progression Form (GPF)
- Gate Tracker
- Decision
- Post Implementation Review
- Report of Equipment In-Service (REIS)
- Project Closure Report (PCR)

Each project is to maintain a SharePoint repository of critical documents including Correspondence and Technical data that are not available in other systems such as ePMX and AS9. Official Records shall be processed in accordance with OPG-PROC-0019, Records and Document Management [R23] and registered in the appropriate document management system.

2.15 Resource Management

The Refurbishment Project Controls organization has resources dedicated to the Refurbishment program. Staffing will follow the matrix model by assigning Project Controls staff to specific bundles in addition to centralized Program support. Labour charges will be assigned to cost accounts per the OPG Cost Model.

The Refurbishment Project Controls Office will also work with the Enterprise Project Management Office (EPMO) for supplementary support to ensure the processes are consistently applied and specialist resources are not duplicated.

Staffing and resourcing requirements will vary over the life cycle of the PRP. As each individual project or Bundle progresses through the project life cycle, resource requirements will be updated in the estimate based on current scope and assumptions. Project Estimating OPG-MAN-00120-0012 [R12] defines the process to develop resource requirements such as labour, material, and equipment.

Training requirements for employees is further defined in NK30-PLAN-00120-00017 Training Program Management Plan [R24].

Processes to support Resource Management are documented in NK30-PLAN-00120-00015 Resource Management/Staffing PgMP [R25].

A draft organization chart for the Project Controls group is available in Appendix D.

3.0 ROLES AND ACCOUNTABILITIES

Key OPG Project Controls personnel and responsibilities include but are not limited to the accountabilities as follows:

VP Planning & Project Controls, Enterprise Projects

- Is accountable for the effective design and implementation of a Project Planning & Controls organization capable of supporting and executing the strategies and processes outlined in this document.

Director, Refurbishment Project Controls

- Liaises with the senior members of the Project Execution organization on programmatic strategies, program performance and corrective actions required.
- Liaises with the Enterprise Project Office – Project Services Division to ensure that effective managed systems are in place for the planning, execution, monitoring, and reporting of scope, schedule, cost, risk, operating experience, gated process and records management for all of the PRP bundles and functions.
- Is accountable for ensuring accurate, timely performance reports to senior OPG management and other stakeholders.
- Responsible for integrating Work Management processes and tools into the Project Controls group.

- Is the owner of this document and is accountable for its definition, implementation and continuous improvement. Responsible for maintaining the Project Controls Program plan and or Project Charter

Sr Manager, Refurbishment Project Controls

- Conducts program level performance trends analysis and communicate accurate and timely performance reports to senior OPG management and stakeholders.
- Documents and tracks program and project level issues, risks, and scope changes.
- Reconciles project schedules with the program milestone schedule.
- Monitors progress to key program milestones, strategies and goals.
- Conducts periodic quality assurance audits of all of their constituent projects to ensure that project management processes are being followed.
- Provides a repository for program and project management metrics.
- Ensures that the program revenue and costs are controlled.
- Leads cross-project planning, as well as dependency and conflict resolution.
- Resolves issues that cannot be resolved at the project level.
- Escalates issues/risks to the governing body that cannot be resolved at the program level.
- Represents the program and provides status updates to the BoD.
- Ensures appropriate management of the day-to-day activities of the PMO.

Sr Manager Work Management

- Ensure refurbishment work is executed according to refurbishment standards and in a manner that will achieve the overall business objectives.
- Provide Site Work Management Integration.
- Responsible for Revision A,B,C,0 execution schedules.
- Responsible for subsequent Unit planning.
- Responsible for managing the Refurbishment Scoping Process.
- Responsible for managing the Planning Milestone process.

4.0 ACRONYMS

AS9	Asset Suite
BCS	Business Case Summary(ies)
BoD	Board of Directors
ePMX	Enterprise Project Management Extensions
EPMO	Enterprise Project Management Office
P6	Primavera Project Planner Scheduling Software
PgMP	Program Management Plan
PMIS	Project Management Information Systems
PMP	Project Management Plans
PRP	Pickering Refurbishment Program
RFBR	Retube, Feeder and Boiler Replacement
WBS	Work Breakdown Structure

5.0 REFERENCES

[R01] NK30-CHAR-09701-00001 Pickering Refurbishment Charter
[R02] OPG-MAN-00120-0019 Project Phase Gate Management
[R03] OPG-MAN-00120-0016 Project Integrated Change Control
[R04] OPG-MAN-00120-0010, Project Integration Management
[R05] OPG-MAN-00120-0011, Project Scope Management
[R06] NK30-TOR-09701-00002, Pickering Refurbishment Change Control Board
[R07] OPG-MAN-00120-0014, Project Schedule Management
[R08] NK30-MAN-09701-10005-MLST Standard Milestones
[R09] OPG-GUID-00120-0001 Project Scheduling Guide
[R11] OPG-MAN-00120-0013, Project Cost Management
[R12] OPG-MAN-00120-0012, Project Estimating Manual
[R13] COST-DTG-001 Forecasting
[R14] OPG-PROG-0038 Contract Management
[R15] OPG-PROC-0058 Procurement Activities
[R16] OPG-PROC-0060, Requisitioning Items and Services
[R17] OPG-PROC-0064, Purchasing Card
[R18] OPG-MAN-00120-0015, Project Risk Management
[R20] OPG-GUID-00120-10054 Lessons Learned Guide
[R21] OPG-MAN-00120-0017, Project Communication and Stakeholder Management
[R22] NK30-PLAN-00120-00013 Communications & Stakeholder Relations PgMP
[R23] OPG-PROC-0019, Records and Document Management
[R24] NK30-PLAN-00120-00017 Training Program Management Plan
[R25] NK30-PLAN-00120-00015 Resource Management/Staffing PgMP
[R26] N-GUID-09300-10000, Outage Scope Control Process

[R27] N-GUID-09300-10010, WCTL Desktop Guide for Nuclear Planned Outages

[R28] NK30-MAN-09701-10005 Pickering Refurbishment Unit Planning Milestones.

[R29] NK30-MAN-09701-10005 MLST Pickering Refurbishment Program Unit Planning Milestones

[R30] NK30-MAN-09701-10005 WIN Pickering Refurbishment Program Unit Planning Window Milestones

[R31] OPG-MAN-08410.1-0001 Indigenous Relations Manual

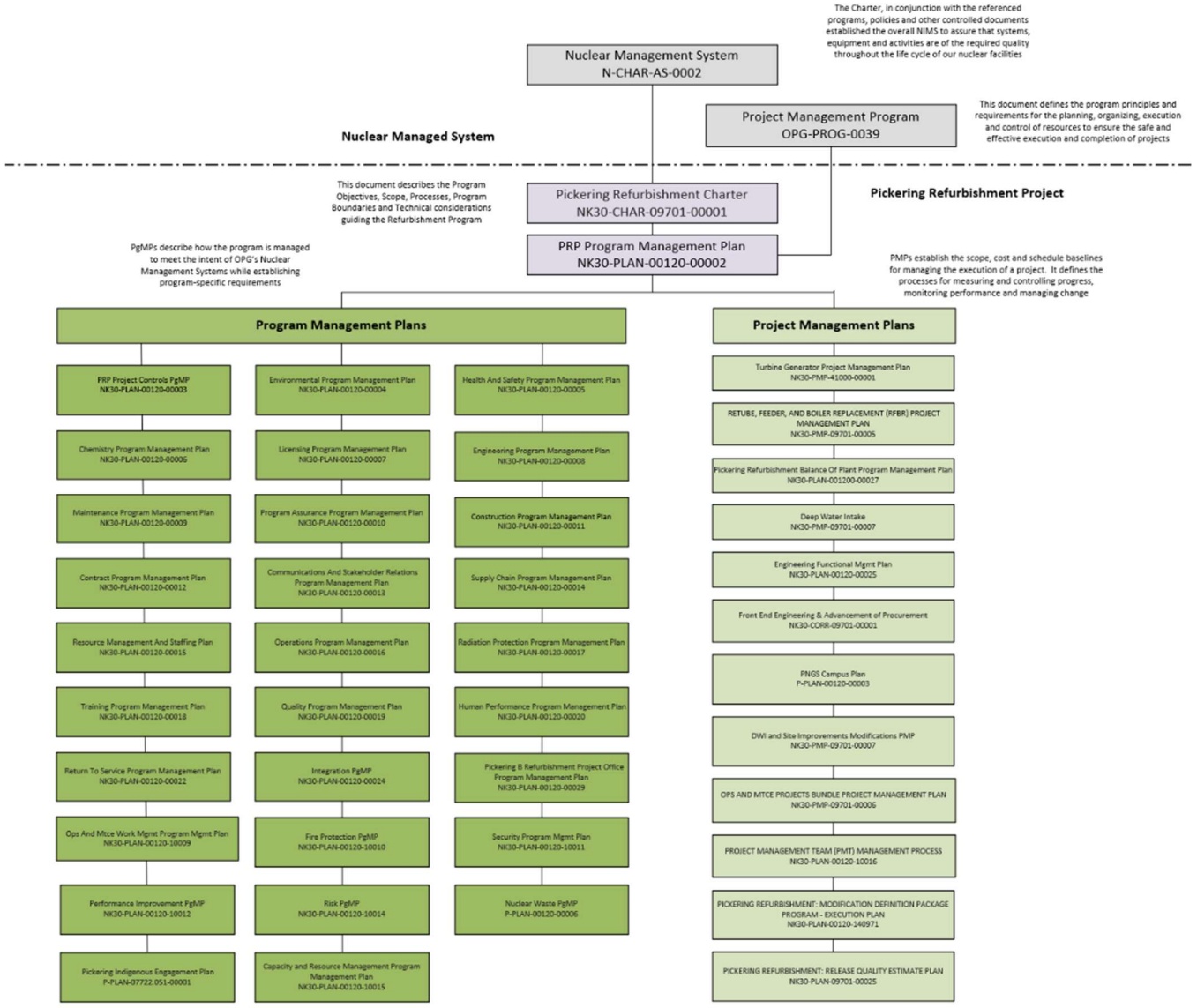
[R32] Pickering Refurbishment Program Gate Review Board Terms of Reference

[R33] NK30-PLAN-00120-10014 Pickering Refurbishment Risk Program Management Plan

Title:
PICKERING REFURBISHMENT PROJECT CONTROLS PROGRAM MANAGEMENT PLAN

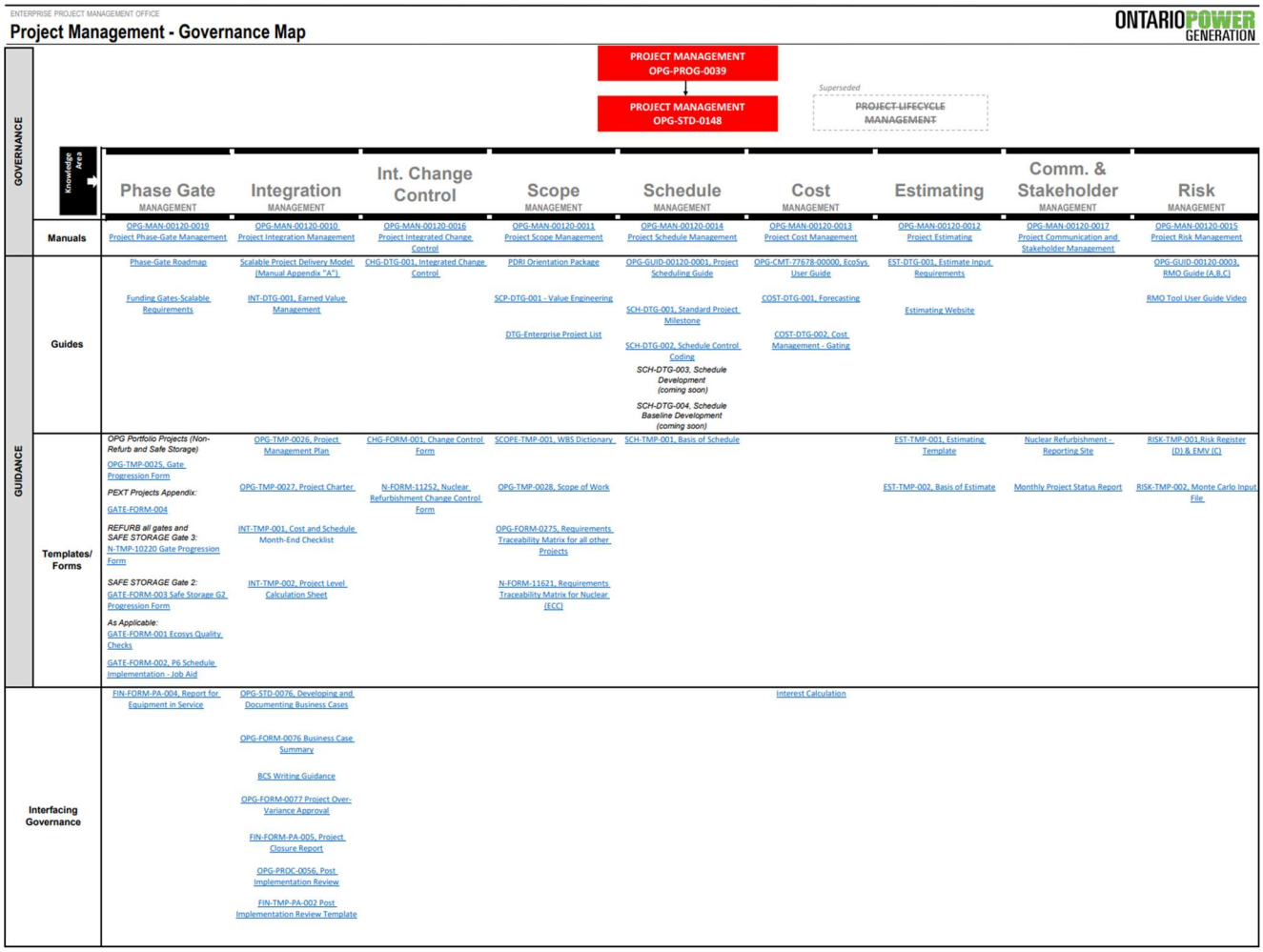
Appendix A Program Management Plan structure

Pickering Refurbishment Program Governance Structure



Appendix B Project Management Governance Framework

See latest version on Enterprise Project Management website



ENTERPRISE PROJECT MANAGEMENT OFFICE

Project Management - Governance Map

ONTARIO POWER GENERATION

GOVERNANCE

PROJECT MANAGEMENT OPG-PROG-0039

PROJECT MANAGEMENT OPG-STD-0148

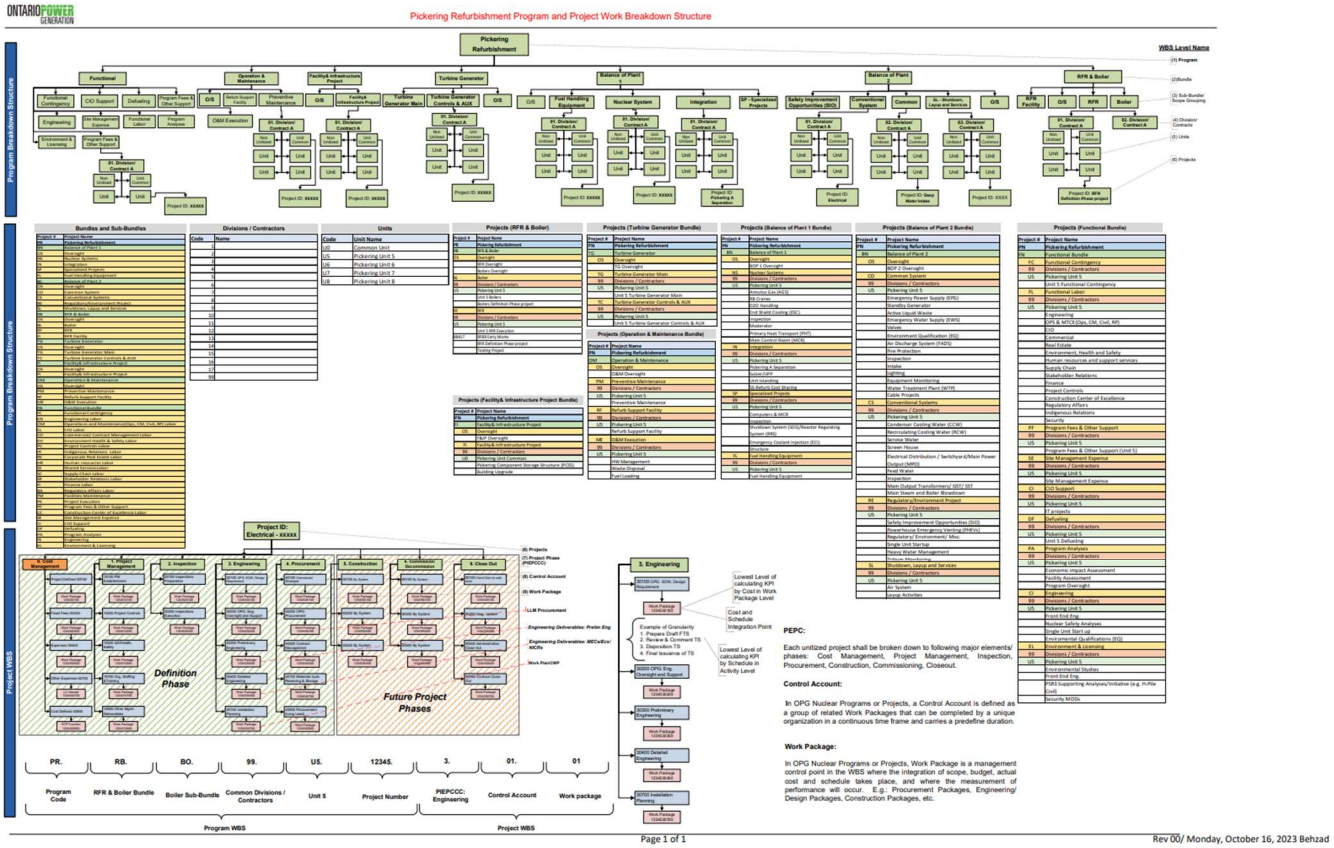
Superseded: ~~PROJECT LIFECYCLE MANAGEMENT~~

GUIDANCE

Knowledge Area	Phase Gate MANAGEMENT	Integration MANAGEMENT	Int. Change Control	Scope MANAGEMENT	Schedule MANAGEMENT	Cost MANAGEMENT	Estimating	Comm. & Stakeholder MANAGEMENT	Risk MANAGEMENT
Manuals	OPG-MAN-00120-0019 Project Phase-Gate Management	OPG-MAN-00120-0010 Project Integration Management	OPG-MAN-00120-0016 Project Integrated Change Control	OPG-MAN-00120-0011 Project Scope Management	OPG-MAN-00120-0014 Project Schedule Management	OPG-MAN-00120-0013 Project Cost Management	OPG-MAN-00120-0012 Project Estimating	OPG-MAN-00120-0017 Project Communication and Stakeholder Management	OPG-MAN-00120-0015 Project Risk Management
Guides	Phase-Gate Roadmap Funding Gates-Scalable Requirements	Scalable Project Delivery Model (Manual Appendix "A") INT-DTG-001, Earned Value Management	CHG-DTG-001, Integrated Change Control	PDRI Orientation Package SCP-DTG-001 - Value Engineering DTG-Enterprise Project List	OPG-GUID-00120-0001, Project Scheduling Guide SCH-DTG-001, Standard Project Milestone SCH-DTG-002, Schedule Control Coding *SCH-DTG-003, Schedule Development (coming soon)* *SCH-DTG-004, Schedule Baseline Development (coming soon)*	OPG-CMT-77678-00000, EcoSys User Guide COST-DTG-001, Forecasting COST-DTG-002, Cost Management - Gating	EST-DTG-001, Estimate Input Requirements Estimating Website		OPG-GUID-00120-0003, RMO Guide (A,B,C) RMO Tool User Guide Video
Templates/ Forms	*OPG Portfolio Projects (Non-Refurb and Safe Storage)* OPG-TMP-0025, Gate Progression Form *PEXT Projects Appendix:* GATE-FORM-004 *REFURB all gates and SAFE STORAGE Gate 3:* N-TMP-10220 Gate Progression Form *SAFE STORAGE Gate 2:* GATE-FORM-003 Safe Storage G2 Progression Form *As Applicable:* GATE-FORM-001 Ecosys Quality Checks GATE-FORM-002, P6 Schedule Implementation - Job Aid	OPG-TMP-0026, Project Management Plan OPG-TMP-0027, Project Charter INT-TMP-001, Cost and Schedule Month-End Checklist INT-TMP-002, Project Level Calculation Sheet	CHG-FORM-001, Change Control Form N-FORM-11252, Nuclear Refurbishment Change Control Form	SCOPE-TMP-001, WBS Dictionary OPG-TMP-0028, Scope of Work OPG-FORM-0275, Requirements Traceability Matrix for all other Projects N-FORM-11621, Requirements Traceability Matrix for Nuclear (ECC)	SCH-TMP-001, Basis of Schedule		EST-TMP-001, Estimating Template EST-TMP-002, Basis of Estimate	Nuclear Refurbishment - Reporting Site Monthly Project Status Report	RISK-TMP-001,Risk Register (D) & EMV (C) RISK-TMP-002, Monte Carlo Input File
Interfacing Governance	FIN-FORM-PA-004, Report for Equipment in Service	OPG-STD-0076, Developing and Documenting Business Cases OPG-FORM-0076 Business Case Summary BCS Writing Guidance OPG-FORM-0077 Project Over-Variance Approval FIN-FORM-PA-005, Project Closure Report OPG-PROC-0056, Post Implementation Review FIN-TMP-PA-002 Post Implementation Review Template				Interest Calculation			

Appendix C Standard WBS

Contact Project Controls for a current copy.



Appendix D Refurbishment Project Management Office Organization

Jan'25