

UNDERTAKING J2.9

Undertaking

Provide list of major projects (or references) that will be put into rates effective 2020, that is beyond the Unit 2 refurbishment (same level of detail as provided in D2-2-5, p. 6).

Response

This response provides a list of projects that are common to two or more units that are proposed to close to rate base with Unit 2, as well as the rationale for why each project is included in the Unit 2 in-service addition.

Projects with a total cost exceeding \$5M expected to be placed in service and proposed to close to rate base prior to the return to service of Unit 2 are set out in Ex. D2-2-10 Tables 2 and 3. These projects include Unit Refurbishment Early In-Service projects, Facilities & Infrastructure projects and Safety Improvement Opportunities, which, once completed, will immediately become used or useful to OPG's current nuclear operations, ahead of the completion of the Unit 2 refurbishment. These projects are discussed in Ex. D2-2-10, sections 2.2, 2.3 and 2.4, respectively. Placing these projects in service at the time of their completion is in accordance with US generally accepted accounting principles.

Chart 1 sets out the projects that are common to two or more units that are proposed to close to rate base with Unit 2, at which point these projects will become used or useful. These projects will be used or useful at the time Unit 2 is returned to service because they are necessary, in full, for the Unit 2 refurbishment, notwithstanding that their completion also may be necessary for the refurbishment of certain subsequent units. Placing these projects in service at the same time as Unit 2 is in accordance with US generally accepted accounting principles. In order to limit the number of projects to a reasonable number, a total project cost threshold of \$5M was applied.

Chart 1: Projects Greater than \$5M to be placed In-Service with Unit 2

Project Name	Rationale for Placing In-Service with Unit 2
Reactor Mock Up	Used for tool performance testing and verification and personnel training for the retube and feeder replacement activities, which are necessary to refurbish Unit 2, as well as subsequent units.

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Tooling for RFR	<p>Toolsets used for the retube and feeder replacement activities, which are necessary to refurbish Unit 2, as well as subsequent units.</p> <p>Consumables (e.g. lubricants, blade sets, etc) and maintenance on the tools used for subsequent unit refurbishments are charged to subsequent units.</p>
Fuel Handling Powertrack Refurbishment	<p>The Fuel Handling Powertrack is common to all units and will be refurbished during the Unit 2 refurbishment in order to ensure high performance during the post-refurbishment life of the units. Any remaining work on the Powertrack scheduled to be completed after Unit 2 returns to service will be placed in service with subsequent units.</p>
Retube Waste Processing Building	<p>Facility required to process Unit 2 retube waste (feeder pipes, pressure tubes, calandria tubes, end fittings, etc) and also for subsequent unit refurbishment waste processing.</p>
Defueling (Engineering & Procurement)	<p>This work pertains to engineering and procurement for defueling (execution of defueling is common to all units, but there will be no additional engineering scope for the remainder of the units).</p>
Work Control Area	<p>The work control area is required and used for the Unit 2 refurbishment, and will also be utilized during subsequent unit refurbishments.</p>
Breathing Air Capacity Enhancement	<p>Refurbishment of Unit 2 requires a high number of workers in radiation protection clothing (i.e. plastic suits) accessing breathing air. This required an upgrade to the station's breathing air system. The entire upgrade is necessary to execute Unit 2 refurbishment and will also be used during the subsequent unit refurbishments.</p>
Service Air Capacity Enhancement	<p>Refurbishment of Unit 2 required capacity enhancements to service air (e.g. for powering pneumatic tools). The entire upgrade is used to execute Unit 2 refurbishment and will be useful to the refurbishment of subsequent units.</p>

Project Name	Rationale for Placing In-Service with Unit 2
*Radiation Protection & Teledosimetry Facility	Facility required and used for Unit 2 refurbishment, with utility to both Units 1 and 2.
*Decontamination Shops and Scaffold Storage	Facilities required and used for Unit 2 refurbishment, with utility to both Units 1 and 2.
*Shops and Work Areas	Facilities required and used for Unit 2, with utility to both Units 1 and 2.

1 * These three projects will be of utility to both Units 2 and 1. There will be a repeat of these three
 2 projects for Units 3 and 4. The costs of the repeat projects will be placed in-service with Unit 3.