

## INVESTING IN ONTARIO



### A GROUND BREAKING INVESTMENT

Ontario Power Generation (OPG) is constructing a 250,000 square-foot, multi-purpose building located on OPG-owned land in the Clarington Energy Park, west of the Darlington Nuclear station. The Darlington Energy Complex is the next step in OPG's ongoing investment in Durham Region.

With support from the Municipality of Clarington and Region of Durham, the site has been serviced and prepared for development with municipal services including water, sanitary sewer mains and storm water management systems.

The Darlington Energy Complex is a key element in the success of the Darlington Refurbishment Project and will support ongoing operations of the Darlington station into the future. The facility will include a public information centre and security processing centre. There will also be a training centre which will have a full-scale mock-up of the inside of a reactor, plus a tooling and testing facility to allow for the design and

development of tools and processes needed for the refurbishment project.

Construction of the new building began in mid-2011 with completion scheduled for Summer 2013. McKay-Cocker Construction Limited and their subsidiary contractors have been awarded the contract to build the facility.

Keeping with OPG's commitment to environmental responsibility, the Darlington Energy Complex is a Leadership in Energy and Environmental Design (LEED) registered project with the Canada Green Building Council.

### INVESTING IN OUR COMMUNITY

Ontario Power Generation has been a proud member of the Clarington community since 1978.

## INNOVATION AND TRAINING: THE DARLINGTON ENERGY COMPLEX

OPG's CANDU reactors are designed to provide decades of safe and reliable electricity generation. Mid-way through the reactor's life, replacement, or refurbishment of some of the key reactor and station components, such as pressure tubes, fuel channels and feeder pipes is required to allow for continued operation for about 30 additional years.

Construction of the Darlington Energy Complex is an important milestone in the definition and planning phase for the Darlington Refurbishment Project. The training centre will include a full-scale mock up of the inside of a reactor, just like the reactors at the station. Staff who will be working on the refurbishment activities will be trained in this facility before they ever set foot inside a reactor to perform the work. This will allow ample time for staff to rehearse the intricate work and perform a full "dress rehearsal" in a controlled environment, before and during project execution.



A full-size replica of a reactor (like the Darlington one shown here) will be built for staff to train and practice fuel channel and feeder pipe replacement prior to performing critical in-station work.



A feeder tube mock-up model (similar to this one) will allow for specialized training using innovative tools on intricate reactor feeder pipe configuration.

As well, innovative tooling and equipment will be developed and commissioned at the facility so workers can perform the detailed fuel channel and feeder replacement work remotely when they are in the station. Staff will learn to use the specialized tools as well as perfect their skills and techniques in the facility.

The use of mock-up training equipment has proven extremely valuable in the success of OPG's major projects across the nuclear fleet, as well as for day-to-day training for staff at the generating stations. This allows staff to receive intensive training in a safe environment. The facility will be in operation two years before the beginning of work execution, allowing ample time for training and practice.

OPG's thorough, up-front planning prior to commencement of station work - plus our strong culture of accountability - will ensure the success of the Darlington Refurbishment Project

**DELIVERING VALUE THROUGH EXCELLENCE  
IN PROJECT MANAGEMENT**

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