

2011 Performance Report

Darlington Nuclear

This report discusses performance for Darlington Nuclear in the areas of safety performance, electricity production, environmental performance, and significant accomplishments achieved during 2011.



OPG continues to maintain a high standard of public safety

Ontario Power Generation (OPG) maintains and builds upon a strong safety culture at each of our nuclear stations to ensure that there are no public or employee safety concerns as a result of our operations.

In the four decades that nuclear energy has served Canada's electricity needs, no member of the public has ever been harmed as a result of a radiation emission from a nuclear power plant or waste storage facility. Continuous monitoring of radiation exposure at the perimeter of our stations consistently demonstrates the public is protected at all times from radiation emissions. All Canadians are exposed to naturally-occurring radiation, mostly from the sun and from radon which is found in soil. The average exposure of Canadians is 1,770 microsieverts a year.

For people living near Darlington Nuclear, based on their actual lifestyle characteristics and food consumption patterns, the estimated additional exposure during the third quarter was 0.2 microsieverts. This is a very small percentage of the amount we each receive naturally and much lower than the 1,000 microsieverts permitted by the Canadian Nuclear Safety Commission regulation.

Keeping our employees safe

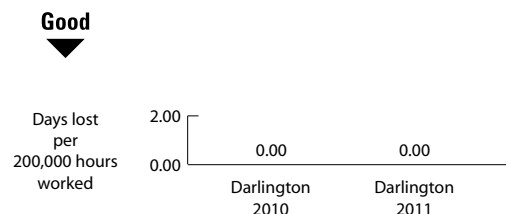
OPG's primary focus is the health and safety of employees and the public. In 2010, OPG became the first employer in Ontario to be awarded the ZeroQuest Platinum Award from the Infrastructure Health and Safety Association (IHSA). This award is the highest level of recognition a company can achieve in the ZeroQuest program and recognizes OPG's efforts to sustain and continuously improve our safety performance, health and safety management systems, and safety culture.

In 2011, OPG's safety performance was strong across the company and impressive as measured against other electricity companies. OPG's Accident Severity Rate (number of days lost due to injuries) and All Injury Rate (number of injuries) place OPG in the top quartile industry performance category set by the Canadian Electricity Association.

At OPG's nuclear operations, we are on a continuous journey toward excellence in our safety performance. We strive for zero injuries and to create a work environment where employees at Darlington Nuclear take personal responsibility to consistently build safety into every task they perform.

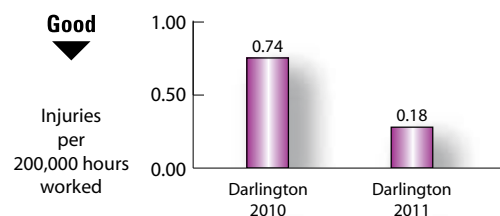
Employee Accident Severity Rate

Darlington's employee safety performance is measured against other companies. One measure is the employee Accident Severity Rate (ASR) which measures the number of days lost due to injuries per 200,000 hours worked. Overall safety performance is strong at OPG's nuclear sites where most of the safety metrics are considered industry top quartile, including the All Injury Rate (AIR) and the ASR. In 2011, Darlington recorded zero days lost per 200,000 hours worked. This is excellent performance and better than Canadian Electricity Association (CEA) top quartile performance.



Employee All Injury Rate

Another key safety measure is the All Injury Rate (AIR) which measures the number of workplace injuries per 200,000 hours worked. In 2011, Darlington recorded 0.18 injuries per 200,000 hours worked achieving good performance and better than CEA top quartile industry performance.

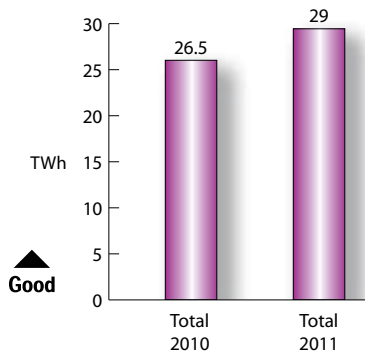


Safety Milestones

The safety of our employees, like the safe operation of our nuclear reactors is a top priority. In 2011, Darlington's employees achieved 12 million hours without a lost-time injury.

Electricity Production

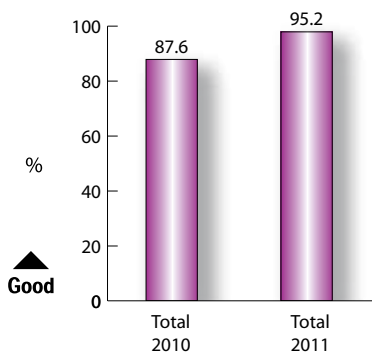
Darlington Electricity Production (TWh)



OPG's nuclear production for the year totalled 48.6 TWh compared to 45.8 TWh in 2010. In 2011, Darlington Nuclear performed well reporting an increase in generation output compared to 2010. Darlington's nuclear units produced 29 terawatt hours of electricity, meeting 20.5 per cent of Ontario's electricity demand.

Unit Capability Factor

Unit Capability Factor (%)



Another measure of the station's performance is its unit capability factor, basically a percentage of perfect generation a unit is capable of producing during a specified period. During 2011, Darlington achieved an improved capability factor compared to 2010 due to a decrease in the number of planned and unplanned maintenance outages.

In 2011, three of Darlington's four units achieved top quartile performance compared to other CANDU units worldwide.

Protecting the Environment

During 2011, Darlington Nuclear did not record any major or moderate spills to the environment.

Milestones and Items of Interest

Some of the milestones and items of interest achieved by Darlington and across OPG include the following:

- Following the earthquake and tsunami in Japan, OPG immediately began working with the CNSC, and nuclear industry groups and facilities around the world. OPG President and CEO Tom Mitchell was named Chair of the World Association of Nuclear Operators Post-Fukushima Commission. The 14-strong international committee will advise on how lessons learned can be applied by operators of all nuclear facilities around the world.
- The Canadian Nuclear Safety Commission (CNSC) released its Fukushima Task Force Report and proposed Management Response for both CNSC staff and licencees. The Task Force confirmed that Canadian nuclear power plants are safe. For more information, go to: www.opg.com/news/releases/japanearthquake.asp
- Darlington Units 1, 2 and 3 were among the top five best performing CANDU units in 2011. Pickering Unit 7 ranked 7th.
- The Canadian Nuclear Safety Commission released its annual report assessing the safety performance of Canadian nuclear stations in 2010. Darlington Nuclear received a fully satisfactory rating and all other Canadian stations, including Pickering Nuclear, received a satisfactory rating.
- As part of OPG's annual charity campaign in 2011, employees across Durham Region donated more than \$897,201 to charities and local organizations.
- The fish protection net installed at the lake water intake channel at Pickering Nuclear bettered its target of 80 per cent reduction of fish impingement. OPG partnered with Toronto and Region Conservation Authority on a northern pike habitat restoration project in Duffins Creek Marsh and is the lead sponsor of the Ontario Federation of Anglers and Hunters "Bring Back The Salmon" program.
- OPG successfully re-certified for ISO-14001 for its Environmental Management system at Pickering Nuclear, Darlington Nuclear and support organizations.

Do you have any questions about our performance results? If so, please give us a call at 905-623-7122.