

2010 Performance Report

DARLINGTON NUCLEAR

This report discusses performance for Darlington Nuclear in the areas of safety, electricity production, environment, and significant accomplishments achieved during 2010.



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 in 2010 was 0.3 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

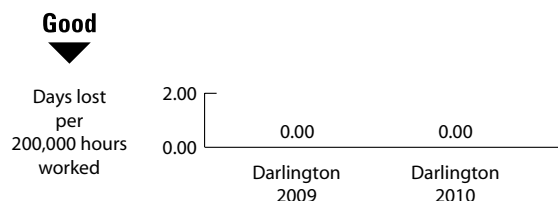
OPG's primary focus is the health and safety of employees and the public. In 2010, OPG became the first employer in Ontario to be awarded the ZeroQuest Platinum Award from the Infrastructure Health and Safety Association (IHSA). This award is the highest level of recognition a company can achieve in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

OPG's pursuit of Platinum began in 2005, when OPG was first recognized with the Gold Award, following detailed document reviews and employee interviews at Corporate, Nuclear, Thermal and Hydro sites. OPG succeeded in achieving Platinum by sustaining this Gold level over the next four years based on annual assessments at OPG sites.

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 more than 2,500 employees at Darlington Nuclear take personal responsibility to consistently build safety into every task they perform.

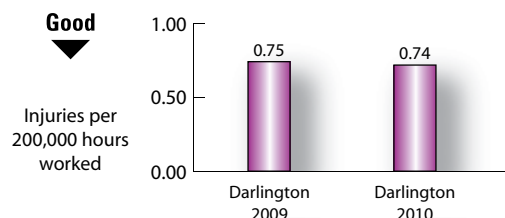
Employee Accident Severity Rate

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 2010, Darlington maintained its performance from 2009 achieving 0.00 days lost per 200,000 hours worked. This is excellent performance and better than Canadian Electricity Association (CEA) top quartile industry 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 2010, Darlington recorded 0.74 injuries per 200,000 hours worked, achieving good performance and better than CEA top quartile industry performance.

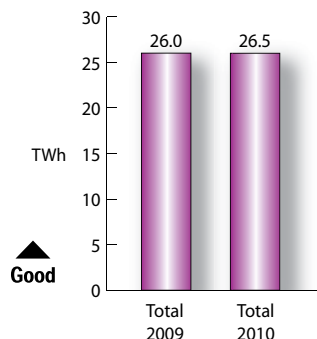


Safety Milestones

The safety of our employees, like the safe operation of our nuclear reactors is a top priority. In 2010, Darlington employees achieved over eight million hours without a lost-time injury.

Electricity Production

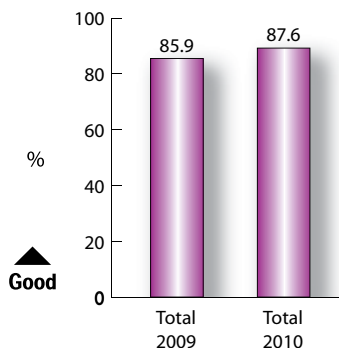
Darlington Electricity Production (TWh)



In 2010, Darlington's four units produced 26.5 TWh of electricity, a slight increase from 2009. Overall generation production was impacted by unplanned maintenance outages to allow for fuelling machine repairs. The issue was investigated and quickly and safely resolved.

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. Darlington reported an improved capability factor of 87.6 per cent compared to 85.9 in 2009.

Darlington Units 2 and 3 achieved top quartile performance compared to other CANDU units worldwide.

Protecting the Environment

During 2010, Darlington 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:

- OPG announced a two-part investment strategy for its current nuclear generating stations in Durham Region: 1) OPG will proceed with a detailed planning phase for the mid-life refurbishment of the Darlington Nuclear station, with construction expected to start in about 2016. 2) OPG will also invest \$300 million to ensure the continued safe and reliable performance of the Pickering B station for approximately 10 years. Following this OPG will begin the longer term decommissioning process as refurbishment for Pickering B station will not be pursued. The refurbishment of Darlington will take place only if it is justified by a solid business case in addition to regulatory acceptance of the Integrated Safety Review, and the Environmental Assessment as well as the Integrated Improvement Plan.
- On September 15, OPG successfully completed the Pickering Units 2 and 3 Safe Storage Project safely, ahead of schedule and under budget. This challenging and complex project was the first to permanently remove two commercial CANDU reactors from service while a multi-unit station continued to produce electricity.
- The Canadian Nuclear Safety Commission (CNSC) released its annual assessment in which "CNSC staff concluded that nuclear power plants in Canada operated safely during 2009."



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