

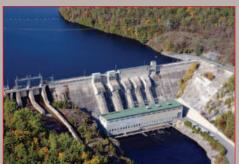
VOLUME 6 ISSUE 2

# AT WORK ACROSS ON OPG PERFORMANCE R













OF ONTARIO'S

ELECTRICITY

GENERATING

### Around Ontario



### "THIS AGREEMENT IS GREAT FOR US AND OUR COMMUNITY BECAUSE IT WILL CUT DOWN THE TIME IT TAKES TO PREPARE FOR A FIRE."

Kevin Waito, Fire Chief - Laurentian Hills Fire Department On accessing Des Joachims GS to fill the fire station's water tankers

### 100 YEARS OF CLEAN ENERGY

June 18 brought sun and blue skies to Peterborough where more than 300 well wishers celebrated the 100th anniversary of Auburn GS. OPG employees and their families volunteered, making the day a great success. The station was designed by Edward Lennox, who also designed Toronto's Old City Hall, Casa Loma and the Toronto Power generating station in Niagara Falls.

### OPG HOSTS NUCLEAR SAFETY EXPERTS

In Durham, Darlington Nuclear hosted the Nuclear Industrial Safety and Health Association (NISHA) Conference in June, bringing together 125 safety professionals from 19 North American nuclear utilities. An active member of NISHA, OPG works with these industry partners to achieve the ultimate goal of zero workplace injuries by sharing and applying industry best practices.



Paul Norris, President of the Ontario Waterpower Association; Al Reid, Manager - Central Hydro Plant Group; Peterborough Mayor Daryl Bennett; and Jeff Leal, MPP Peterborough.



The conference theme, "State of the Art – Human Error Reduction and Safety Management," highlighted the link between human error reduction and workplace injury prevention.



At Pickering Nuclear, a representative from the Ganaraska Region Conservation Authority explains how animals survive and adapt as their habitats change.

### WILD ABOUT NATURE

Every Tuesday throughout July and August, OPG hosted a variety of outdoor education programs on the Waterfront Trail at Pickering and Darlington Nuclear. Hundreds of young participants attended Tuesdays on the Trail sessions to learn about such intriguing subjects as: "Boots and Bugs," "Animal Adaptations" and "Turtle Teachings."

# Nuclear Operations Update



### "OUR CHALLENGE IS TO CONTINUE TO LEARN FROM THESE EVENTS – BY IDENTIFYING AND APPLYING THE LESSONS THEY TEACH US AND THEN MAKING THE NECESSARY CHANGES. I HAVE CONFIDENCE OUR INDUSTRY CAN DO THIS."

Wayne Robbins, Chief Nuclear Officer Speaking on the Fukushima Crisis at the Ontario Power Summit, May 10, 2011

### NUCLEAR REFURBISHMENT PROGRESS

OPG is moving forward with plans for the mid-life refurbishment of the Darlington station. This project will allow the plant to operate for an additional 25 to 30 years and is progressing well along two key avenues: the environmental and safety approvals process; and the station condition assessment and infrastructure development process.

With the help of local supporters, OPG officially broke ground for the Darlington Energy Complex on July 6. The event marked a significant step forward for OPG's Darlington Nuclear operations and the Darlington Refurbishment Project. The 250,000 square-foot building will house offices, a public information centre, security processing centre, a training centre with full-scale mockup of a Darlington reactor, and a tooling and testing 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.

### UPDATE ON OPG'S FUKUSHIMA RESPONSE

On May 27, OPG updated the Canadian Nuclear Safety Commission (CNSC) on the findings of its comprehensive station inspections and records reviews following the Fukushima nuclear accident. "Our station inspections and reviews are now complete and demonstrate that OPG nuclear facilities are safe, robustly designed, and will withstand emergencies," said Wayne Robbins, Chief Nuclear Officer.

In addition, OPG President and CEO Tom Mitchell was named Chair of the World Association of Nuclear Operators (WANO) Post-Fukushima Commission. The 14-strong international committee was formed to advise on how lessons learned from Fukushima can be applied by operators of all nuclear facilities around the world.



Artist's rendering of OPG's Darlington Energy Complex.

### NEW NUCLEAR MILESTONE

On August 25, the Joint Review Panel for the Darlington New Nuclear Project Environmental Assessment (EA) and Licence to Prepare Site Application concluded that the project will not result in any significant adverse environmental effects, with appropriate mitigation. This is a major milestone for OPG and a first in Canadian nuclear history. The federal government will now prepare its response, with a final determination on its acceptance of the EA. OPG will review the Panel's report and work with its partners to address the terms and conditions identified.



The proposed Darlington New Nuclear Project involves the construction and operation of new nuclear power reactors at OPG's existing Darlington site, in the Municipality of Clarington.

### Hydroelectric Generation



"GENERATION FROM OUR HYDRO PLANTS HELPS MITIGATE THE PRICE OF ELECTRICITY FOR CONSUMERS...CLEAN, RENEWABLE, AFFORDABLE, FLEXIBLE AND LONG-LIVED. THESE ARE ALL GOOD THINGS TO HAVE IN A POWER SOURCE."

John Murphy, Executive Vice President – Hydro Great Lakes and St. Lawrence Cities Initiative – Annual Meeting and Conference June 16, 2011

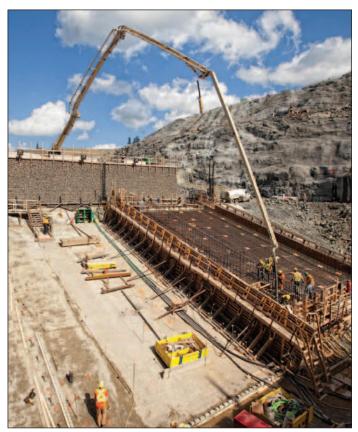
### LOWER MATTAGAMI PROJECT

Work is progressing well on the Lower Mattagami Project, the largest northern Ontario hydroelectric project in 40 years. Nearly 1,000 people are employed at the four-site project, including approximately 200 First Nation and Métis.

- Smoky Falls: On this site, where a new station is being constructed, workers are stabilizing and reinforcing the existing rock by installing rock anchors and applying concrete. Construction for the powerhouse has also started.
- Little Long: Drill and blast work is finished and work has started on building the powerhouse where the new third unit will be installed.
- Harmon: Crews are installing the temporary dam that will hold back water, allowing construction to proceed in the area of the new unit.
- Kipling: Work on the sediment pond for treating construction water is close to completion and preparations for installing the cofferdam continue.

### UPPER MATTAGAMI PROJECT

The 220-metre long Sandy Falls dam is 100 years old. OPG has rehabilitated the structure to meet modern dam safety guidelines. Work began in June and was completed in October. To complete the project in a timely manner, the contractor, Kiewit Alarie Partnership, developed an innovative technique to use the original structure as a cofferdam – a temporary structure that creates a dry area to perform the work.



Rebar instalment for the intake structure at Smoky Falls GS.



The Sandy Falls dam is the last structure to be upgraded as part of the Upper Mattagami Project.

# Thermal Conversion: Repowering the Future



### "THIS OUTSTANDING RECORD REFLECTS INDIVIDUAL AND COLLECTIVE COMMITMENT TO SAFETY PERFORMANCE EXCELLENCE."

Frank Chiarotto, Senior Vice President – Thermal, on Nanticoke reaching two years without a lost-time injury, April 26, 2011

Ontario's Long-Term Energy Plan includes the shutdown of two additional coal-fuelled units at Nanticoke GS in 2011. The plan also includes conversion of the Atikokan GS to biomass and Thunder Bay GS to natural gas. It recognizes the potential to convert some coal units at Lambton and Nanticoke to natural gas. The addition of biomass as a fuel to any coal units converted to natural gas remains an option for the future.

### **BIOMASS CONVERSION OF ATIKOKAN**

Planning and engineering activities for conversion of OPG's coal-fired Atikokan GS to biomass continue. OPG is negotiating an energy supply contract with the Ontario Power Authority. An application for a Certificate for Environmental Compliance for the project was submitted to the Ministry of Environment.

### NEW MILESTONE FOR THUNDER BAY

The Ontario Power Authority is negotiating a long-term energy supply contract with OPG for the conversion of two units from coal to natural gas. Project work is now underway including engineering for station modifications, environmental permitting, and risk and business case development. In May, Union Gas held a public meeting on the proposed gas pipeline route in May.

# CONCEPT WORK FOR LAMBTON AND NANTICOKE

Concept engineering work for the possible conversion of units at Lambton GS and Nanticoke GS to natural gas is proceeding. Union Gas continues with planning and environmental approval work, including routing options, for the installation of gas pipelines to Nanticoke and Lambton. Decisions on whether these projects proceed are expected to be made by the Ontario Government in 2012.



Atikokan GS



Union Gas representatives toured Thunder Bay GS as plans progress to repower the station from coal to natural gas.

### Environment



OPG'S NEWLY DEVELOPED WETLAND AT NANTICOKE GS IMPROVES WATER QUALITY AND PROVIDES HABITAT FOR LOCAL WILDLIFE. THE WETLAND WILL ALSO SERVE AS A SOURCE OF ENVIRONMENTAL EDUCATION.

### FISH NET PERFORMANCE

Now in its second full year of operation, the Pickering fish net has significantly reduced the amount of fish entering the nuclear facility by more than 80 per cent annually. OPG installed the barrier net at its Pickering Nuclear water intake channel to protect fish wildlife and minimize the impact of its operations. The fish net is part of a larger program that includes restoring fish habitat and wetlands at Duffin's Creek, Frenchman's Bay and Hydro Marsh.

### OPG SUPPORTS URBAN FOREST

In October, visitors to Canada's largest urban national park had one more reason to enjoy the beauty of Rouge Park - the OPG Biodiversity viewing platform. Overlooking the scenic Rouge River, the platform is the result of an ongoing partnership between OPG and Rouge Park. This is in addition to the second annual fall hike series, which features seven environmentally diverse guided walks. The platform unveiling was attended by Rathika Sitsabaiesan, MP, Scarborough-Rouge River, Corneliu Chisu, MP, Pickering-Scarborough East, members of Rouge Park Alliance and avid hikers.



OPG employees work by boat to install a fish net at Pickering Nuclear in April 2011.



Glenn Jager, OPG Senior Vice President, and Ms. Rathika Sitsabaiesan, MP, Scarborough-Rouge River.

### TOP CORPORATE CITIZEN

Corporate Knights Magazine, a major advocate of "clean capitalism" and sustainable development, recently named OPG one of the 50 best Corporate Citizens in Canada. The corporate rankings were based on environmental, social and governance indicators as well as on the management of carbon, energy, water usage and waste production. Corporate Knights President, Toby Heaps, praised the selected companies-including OPG -for their achievement: "...the Best 50 Corporate Citizens are the rocket fuel propelling Canada forward to be a more competitive and better society."



**OPG Charity Campaign Kick-Off** 

September 22, 2011

# Caring about People and Communities



OPG EMPLOYEES AND PENSIONERS DONATE TO OVER 1,400 REGISTERED CHARITIES. IN 2011, THEY CONTRIBUTED APPROXIMATELY \$1.9-MILLION TO SUPPORT CAUSES INCLUDING HEALTH, EDUCATION, SOCIAL SERVICES AND THE ENVIRONMENT.

**INSPIRING YOUNG MINDS** 

OPG is a proud supporter of Scientists in School (SiS), a leading science education charity. Scientists in School helps inspire interest in science, engineering, technology and the environment. Exposing youth to these subjects early on generates interest in these fields and career paths. In 2011, with OPG's support, SiS will reach 75,000 students in the Regions of Durham and Niagara and across Haldimand County and Norfolk County.

### PRESERVING COMMUNITY HISTORY

To help preserve history and support heritage education, OPG worked with the Atikokan Centennial Museum and Friends of the Museum to produce outdoor signage, showcasing the unique historical aspects of the community. Historical activities like gold mining and winter logging operations played an important role in the town's development and are now documented for public display.

### SUPPORTING OTHERS IN NEED

Ottawa/St. Lawrence Plant Group's Chenaux GS employees are dedicated to raising money for local charities. In August, they gathered for a barbecue and raised \$400 for Hospice Renfrew which provides end-of-life care to terminally ill patients.



OPG's Craig Wardrop, Youth Scientist Maddie, and SiS Executive Director, Cindy Adams, celebrate the program's launch in Haldimand and Norfolk Counties.



(L to R) Atikokan Station Manager Brent Boyko and Friends of the Museum representatives Joan McIntosh and Bob Tutkaluk.



Chenaux GS employees stand with Hospice Renfrew volunteer and fundraising director Jo-Anne Dowdall-Brown (R).

# Financial and Operational Highlights



# "WHEN OPG PERFORMS WELL, IT BENEFITS ALL OF ONTARIO BECAUSE OPG IS OWNED BY THE PEOPLE OF THIS PROVINCE."

Tom Mitchell, OPG President and CEO

### MID-YEAR NET INCOME (\$ M)



OPG reported a net income \$265-million for the six months ended June 30, 2011, compared to net income of \$114-million for the same period in 2010. The increase was primarily the result of higher earnings from Nuclear Funds and lower OM&A expenses, partially offset by an increase in income tax expense.

### OPG IS PINNACLE AWARD FINALIST

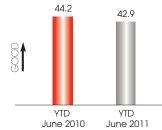
On November 6, OPG won the Association for Financial Professionals' 2011 Pinnacle Grand Prize, which recognizes excellence in treasury and finance. OPG was chosen for its unique and innovative financing structure on the Lower Mattagami Project. The two other finalists included Hewlett-Packard and Microsoft.

"The solutions presented by Ontario Power [Generation] demonstrate transformation of the treasury function, as well as forward-thinking..." said Jim Kaitz, AFP President & CEO. OPG also won in the Corporate Finance and Capital Markets category of the AFP 2011 Pinnacle Awards on August 9.

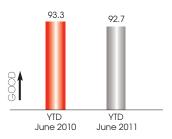


"Being the first Canadian company to win a category award is a testament to the hard work of the OPG team and their willingness to challenge conventional thinking." - John Lee, VP Treasurer

### ELECTRICITY PRODUCTION (TWH)



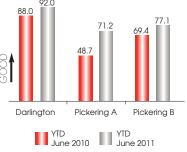
### HYDRO AVAILABILITY (%)



OPG's electricity generation was 42.9 TWh for the six months ended June 30, 2011, compared to 44.2 TWh during the same period in 2010. This decrease was largely due to a decrease in thermal generation caused by increased electricity generation from other generators in Ontario.

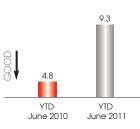
Hydroelectric availability for the six months ended June 30, 2011, was slightly lower than the same period in 2010. The decrease was primarily the result of an increase in planned maintenance and project outages, and an increase in forced outages at the Sir Adam Beck Pump generating station.

### NUCLEAR UNIT CAPABILITY FACTOR (%)



Darlington's higher capability factor for the first six months of 2011, compared to the same period in 2010, reflected a lower number of planned outage days. Higher capability factors at Pickering A and B for the six months ended June 30, 2011, were primarily due to a decrease in planned outage days.

### THERMAL FORCED OUTAGE RATE (%)



A higher number of unplanned outage days at Lambton and Nanticoke in Q1 -Q2 2011 as compared to 2010 is reflected by the higher forced outage rate for the period. This performance is also consistent with Thermal's strategy to take additional outage days in situations when a unit's capacity is not required in order to save on overtime and other costs.



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