

# Spotlight on Sustainability

## Your Green Team



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## Science research targets safety in clean energy production

Nuclear power provides Ontario with over half of its energy annually. Safety and efficiency of nuclear power generating stations is especially important to us, as Ontario is home to 18 of the 19 reactors in Canada.

The lifetime of a nuclear reactor is dependent on the corrosion of its metal structural components, such as carbon steel heat transport pipes, stainless steel callendria beams, or the cobalt within refueling machines. Corrosion studied in the absence of radiation cannot be applied to this metal, because of the unique ionizing redox environment radiation provides. Dr. Clara Wren studies material degradation under ionizing environments in order to help predict the lifetime of nuclear reactors. Water in the presence of radiation creates reactive species, which form a thin oxide layer on metals, inhibiting corrosion. Dr. Wren's findings of the synergistic effects of radiation and pH on water are used to better control the water environment, reduce corrosion, and enhance the operation and safety of nuclear power plants, maintaining Ontario's clean and reliable energy sources.

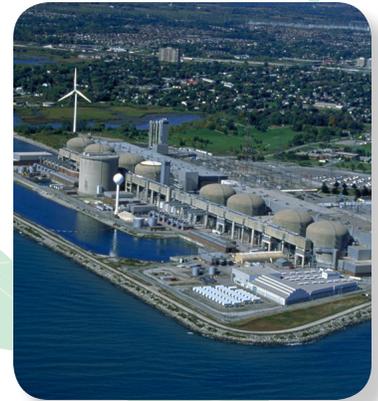


Photo credit: Ontario Power Generation

Renovating or redecorating a space? Rather than purchasing new paint, try visiting London's Household Special Waste Depot to pick up free, secondhand paint and reduce your environmental footprint. You can donate leftover paint there as well!



## Giving a second life to electronics

This *Spotlight on Sustainability* recognizes the Department of Computer Science for modelling natural resource stewardship.



Computer Science relies heavily on electronics in the research and training enterprise. To mitigate financial and environmental costs associated with the purchase and eventual disposal of the equipment, the department stores used electronics and uses them as back-ups! This year, used monitors in storage are being donated to students in need. Let's all try to reuse and recycle our old equipment!