



# Orangeville

## Summer 2006

 Reduce the Juice



### Final Report - May 31, 2007



## Acknowledgements:

- Power Up Renewable Energy Cooperative
- Orangeville District Secondary School
- Westside Secondary School
- The Ontario Ministry of Energy
- Environment Canada- Eco-Action
- Government of Canada – Human Resource and Social Development
- Orangeville Hydro
- University of Waterloo
- Fairfield Group
- Town of Orangeville
- Canadian Youth Climate Coalition
- Monday Night at the Movies
- Conservation Bureau
- Ontario Power Authority
- Ontario Energy Association
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- Mono Cliffs Inn
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## EXECUTIVE SUMMARY

Building on the success of the **Reduce the Juice project (RTJ)** in Shelburne in 2005, **Reduce the Juice Orangeville** re-piloted the project format in 2006. As in Shelburne the project consisted of two parts.



The Orangeville Green Power project (GPP) worked in cooperation with the local high schools and Orangeville Hydro to design two renewable energy projects. The Orangeville District Secondary School (ODSS) Renewable Energy Trailer (RET) was designed and built in cooperation with the ODSS tech department and staff. The trailer design incorporates 4 solar panels and a small wind turbine on a portable car trailer with a total generation capacity of 1.1kW. The trailer is now used by Orangeville Hydro as an educational and promotional tool. It has traveled to various community events around the town of Orangeville and energy shows and demonstrations throughout Southern Ontario. The Westside High School solar tracker

is planned to be a set of solar panels on the roof of the school. The project is planned to be completed in November 2007.

The RTJ Foundation has also been active in the creation of high school curricula through the GPP involving energy conservation, renewable energy generation, climate change and sustainability with eco-schools and the Pembina Institute. In August 2006 teachers from the three high schools which have hosted GPP's were invited to attend a curriculum building workshop hosted by RTJ.

The second portion of the RTJ Orangeville Project was the Reduce the Juice Community Energy Conservation Project (CECP.) This project was run on a larger scale than RTJ Shelburne. The project employed 3 university students and 12 high school students during their summer vacations to run an electricity conservation project in Orangeville. The university students began working in May organizing the prompt, pledge promote format of the project. The university students then recruited and trained 12 high school students to go door to door in town advocating energy conservation.

The door to door campaign involved the students asking home owner to participate in a residential energy efficiency survey, asking them to make a pledge to conserve their household electricity use and asking them to display an RTJ sticker on their blue box to demonstrate their commitment. In total the team visited 5300 homes in Town, collected 850 pledges for conservation and stuck over 500 blue box stickers.



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The 'team' of students also attended various community events during the summer to educate the community and create RTJ brand recognition to increase response rates ending the summer with screening of "An Inconvenient Truth"

At the end of the summer data regarding energy attitudes, levels of baseline adoption of energy conservation, household response rates, and hydro consumption were analyzed by the University of Waterloo Faculty of Environmental Studies led by Prof. Jennifer Lynes. Compared with the RTJ Shelburne project the results from the residential energy efficiency survey and pledge form indicated a much higher level of adoption of energy efficiency actions than anticipated from experiences in Shelburne. Table 1 shows the levels of levels of commitment and adoption for the different pledge options. In total the residents of Orangeville pledged to decrease 669 000 kWh of electricity use per year, this is equivalent to 1,672,000 blue barrels of carbon dioxide if the electricity was generated by coal power plants.

Table 1: Pledge Results

Action	Already Doing It	Pledge to Do It
1 Upgrade an old appliance to an energy star appliance	498 57.71%	149 17.27%
2 Put an insulating jacket on your hot water tank	469 54.35%	194 22.48%
3 Switch to LED Christmas lights	355 41.14%	394 45.65%
4 Change four light bulbs to CFL's	272 31.52%	475 55.04%
5 Install an aerator on your kitchen sink and a low flow shower head on your shower	426 49.36%	376 43.57%
6 Put your computer and it's peripherals on a power bar and turn it off for 11 hours a day	442 51.22%	269 31.17%
7 Hang your clothes to dry and use a cold water rinse cycle on your washing machine	596 69.06%	166 19.24%
8 Turn down your AC by 2°	313 36.27%	324 37.54%
9 Turn down the temperature on your hot water tank by 2 °	486 56.32%	222 25.72%
10 Other	9 1.04%	16 1.85%

Due to limitations in the data available, and specifically the inability to compensate for temperature comparison an analysis of town electricity consumption could not be compared year over year. The analysis was instead performed as a comparison of individuals in the town who pledged to conserve and the remainder of the Orangeville population. This analysis found that households which made written commitments to the project had decreased hydro consumption levels by the end of the project as demonstrated in figure 1.

# Reduce the Juice Orangeville 2006 Youth led Energy Projects



Figure 1

