

# Plugging Ontario Into A Green Future

## A RENEWABLE IS DOABLE ACTION PLAN

### Executive Summary

**Ontario's potential for renewable energy is much greater than our energy needs. The Renewable Is Doable portfolio is feasible and requires no significant upgrades to the current transmission system.**

**O**n September 17, Ontario Energy Minister George Smitherman directed the Ontario Power Authority (OPA) to “revisit” its 20-year electricity plan to see how the contributions of renewable energy, conservation and distributed generation could be “enhanced”.<sup>1</sup>

*Plugging Ontario Into A Green Future* (available from [www.renewableisdoable.com](http://www.renewableisdoable.com)) lays out an action plan for achieving this goal and shows how doing so will assist Ontario in meeting its climate targets and create new green jobs. It also identifies the major barrier to achieving these goals: the province's commitment to nuclear power.

Despite the intent of the McGuinty government's original supply mix directive which set a minimum target for renewable energy, the OPA's electricity plan effectively “caps” the development of renewable energy because of its focus on large, centralized generation stations, particularly nuclear generators.



PHOTO:  
NATIONAL RENEWABLE  
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David  
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CANADIAN ENVIRONMENTAL LAW ASSOCIATION  
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<sup>1</sup> George Smitherman (Ontario Minister of Energy and Infrastructure), *Amendment to the Supply Mix Directive*, Issued September 17, 2008. Available on-line at: [http://www.powerauthority.on.ca/Storage/83/7831\\_Ministry\\_Directive\\_PSP\\_Sept\\_18\\_08.pdf](http://www.powerauthority.on.ca/Storage/83/7831_Ministry_Directive_PSP_Sept_18_08.pdf)



## The Opportunity

**There is a better option: Replace end-of-life nuclear reactors with quick to deploy green energy sources and conservation.**

PHOTO: SAULT STE. MARIE WIND FARM. COURTESY WWF-CANADA

INSET PHOTO: PICKERING NUCLEAR STATION. COURTESY OF GREENPEACE

The best opportunity to ‘get more green’ into Ontario’s electricity supply mix is to allow clean, sustainable sources of power to replace ageing nuclear reactors when they reach the end of their operational lives.

According to the OPA, the Ontario government must decide early in 2009 whether to rebuild or replace the Pickering B nuclear station scheduled to come offline in 2013. A similar decision about the Bruce B nuclear station must be made within the mandate of this government as well.<sup>2</sup> However, by framing these two decisions as “either rebuild or replace” nuclear stations, the OPA has failed to consider the option of expanding renewable energy beyond the minimum in the supply mix directive.

Instead, the OPA has given the government an unpalatable choice: rebuild old reactors at high cost and high risk or build new nuclear plants by 2020. Both options increase fossil generation until reactors are refurbished or built, resulting in the likelihood of higher greenhouse gas emissions.

There is a better option: Replace these aged nuclear reactors with quick-to-deploy green energy sources and conservation.

2 According to the Ontario Power Authority’s electricity plan, the four Pickering B reactors will reach the end of their operational lives between 2013 and 2016. The four Bruce B reactors reach the end of their operational lives beginning in 2015. The OPG will make a recommendation to rebuild or close the Pickering B reactors in the first quarter of 2009. Nuclear generating schedules based on MW data provided by the OPA in IPSP document EB-2007-07-07 Exhibit D Tab 6 Schedule I. Refer to Greenpeace Canada, *Better Never Than Late*, October 2008, Appendix A for a detailed breakdown nuclear schedules including reactor shutdowns.

# The Renewable is Doable Portfolio

**The portfolio of green resources provides more than enough generation to replace effective baseload capacity.**

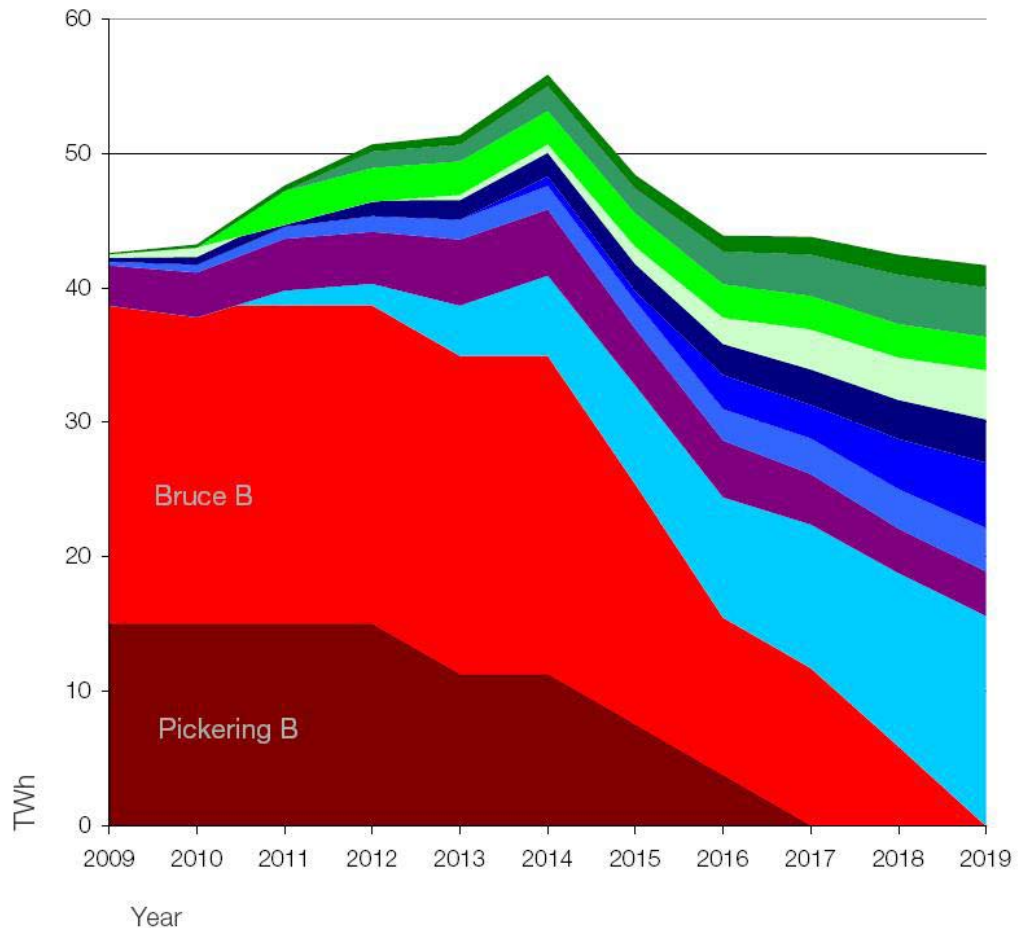
**R**enewable is Doable presents a portfolio of green energy options which can replace the generating capacity of both the Pickering B and the Bruce B stations as they retire beginning in 2013.

By immediately ramping up clean energy options, Ontario can reduce reliance on natural gas generation and coal-fired imports and avoid the well established pattern in refurbishing old nuclear reactors: cost overruns and lengthy delays.

Figure I below shows the schedule for retiring the units at the Pickering B and Bruce B (red and orange wedges) and presents a suite of green resources that can fill this gap. These green resources are in addition to the clean options currently in the OPA plan, demonstrating that Ontario can go far above and beyond what the OPA is proposing for conservation, renewables, combined heat and power and other clean, quick to deploy sources.

The portfolio of green resources provides more than enough generation to replace effective baseload capacity.

**FIGURE I**  
Filling the Gap with Quick-To-Deploy Green Energy Options



## A Seven-Step Action Plan for Green Energy

### REPLACE

1

**T**he McGuinty government is serious about expanding green energy in Ontario. To do so, however, it must take the following seven steps over the next 24 months:

#### **Make room for renewables by choosing green power over dirty energy**

Replace Pickering B and Bruce B nuclear reactors with green power, as these reactors come to the end of their lives over the next decade.

### REDUCE

2

#### **Start first with all cost effective conservation to reduce baseload**

Direct the OPA to acquire all cost effective Conservation and Demand management (CDM) resources as per the intent of the Supply Mix Directive, rather than treating the minimum target for CDM as a cap. And direct the OPA to change its approach to conservation from going after the “low hanging fruit” to acquiring deep energy efficiency savings as per the recommendations submitted to the Ontario Energy Board hearing on behalf of the Green Energy Coalition.

### RENEW

3

#### **Then increase renewable energy sources**

Transform the Renewable Energy Standard Offer Program (RESOP) into an effective Advanced Renewable Tariff system (ARTs) to include: prices differentiated by technologies, tiered pricing within technologies, prices set according project costs and reasonable return on investment, 20 year contracts, no caps on project size or the program, and guaranteed access to the grid.

4

Use ARTs as the primary procurement mechanism for renewable energy, empowering all Ontarians to become generators and conservers at a fair price.

5

Direct Hydro One to develop and implement a Smart Green Grid Upgrade Plan which gives renewable energy priority in Ontario’s transmission and distribution system. In parallel, enable a regulatory regime that encourages local distribution companies to acquire the technical and financial resources to upgrade their systems to accommodate distributed energy from clean and renewable sources.

6

Embed these items in legislation via a Green Energy Act that includes an obligation for grid connections for green energy.

### RECYCLE

7

#### **Use conventional fuels more efficiently with more CHP and waste heat recovery**

Implement the Clean Energy Standard Offer Program for cogeneration and recycled energy but without capacity limits and with a feed in tariff that provides a reasonable return for investors.

For additional information and to download the full report visit [www.renewableisdoable.com](http://www.renewableisdoable.com)

