

## Special

## ENERGY POLICY

## Ontario should move quickly to leverage a key energy advantage



By Don MacKinnon,  
President, Power Workers' Union

of dollars less than building new supply for peak demand. Both facilities enjoy solid community support, an important consideration given growing difficulties in

siting new gas plants near residential communities. Additionally, the Nanticoke and Lambton sites provide an opportunity to host research for emerging biomass and

clean combustion technologies. Ontario can continue to have one of the world's most reliable, lowest-carbon and lowest-cost electricity systems in the world.

We need bold leadership that recognizes our energy advantages and quickly moves forward with a comprehensive biomass strategy and investment plan to help achieve it.

Ontario has a clear energy advantage that deserves more attention from our decision-makers. We can harvest carbon neutral biomass from our forests and farms and use it along with natural gas to produce electricity at the Nanticoke and Lambton Generating Stations. European experience shows that substantial economic and environmental benefits can be achieved by using biomass, like straw and pellets made from wood waste in this manner.

Recognizing its heavy dependence on carbon-emitting fossil fuels – oil, coal and natural gas – the European Union (EU) issued its first Biomass Action Plan in 2005. Plan targets included reducing oil imports by 8 percent and 209 million tonnes of CO<sub>2</sub> equivalent greenhouse gas emissions (GHG) per year while creating up to 300,000 jobs in agriculture and forestry.

EU policy makers see biomass as a reliable, renewable energy source for electricity, heating and cooling, and transportation that directly replaces fossil fuels and is easily dispatched to meet both peak and base-load energy needs. As the EU's Renewable Energy Technology Roadmap notes, biomass is CO<sub>2</sub> neutral – the amount of carbon absorbed by the plants during their life cycle is equal to the amount of carbon emitted during combustion.

The first European investments focused on “re-using” existing coal stations and their associated transmission connections. This meant lower capital costs and acknowledged the significant challenges associated with siting new transmission lines and ultimately reduced the impact on electricity bills.

By 2008, biomass and waste were Europe's most important source of renewable energy, accounting for 69.1 percent of renewable energy production. In Germany and Denmark, electricity from biomass far exceeds the output from wind farms. Recently, the EU set higher targets with research and development (R&D) now focused on second-generation technologies, transportation fuels and high value bio-product innovation. Today, 23 member states have biomass R&D platforms and Europe has an active biomass commodities market stimulating a global market for more supply.

Ontario has the biomass resources, technical knowledge and infrastructure to secure similar benefits. The Ministries of Natural Resources and Agriculture, Food and Rural Affairs estimates show that Ontario has vast biomass supplies. A recent Pembina Institute Study concludes that low-grade and residual biomass could be harvested for electricity production without a systematic decline in forest carbon stocks over a 100 year planning horizon.

Investing in Ontario's biomass resources would mean new jobs in our forestry, agriculture and transportation sectors. Using biomass to reduce the need for natural gas would be good news for Ontario's GHG targets and long-term energy security. This is especially so, given wind and solar generation need back-up from dispatchable thermal generation an incredible 70 per cent of the time!

Ontario Power Generation (OPG), academics and private investors in Ontario recognize the opportunities and are making headway on supply challenges such as pelletizing biomass wastes for electricity generation. OPG has undertaken extensive, successful testing and research at the provincially supported Atikokan Bioenergy Research Centre and at its other coal stations. Although Ontario's long-term energy plan acknowledges the Nanticoke and Lambton conversion opportunity, no firm commitment has been made. By contrast, the Long Term Energy Plan commits another \$12 billion for more intermittent wind and solar generation which imposes huge costs on consumers and requires large subsidies.

Besides reusing existing transmission infrastructure, converting the Nanticoke and Lambton stations costs hundreds of millions

# BIOMASS AND NATURAL GAS AT THE NANTICOKE AND LAMBTON GENERATING STATIONS - A MATCH WITH GREAT BENEFITS

Converting the Nanticoke and Lambton Generating Stations to use renewable biomass waste and natural gas for peak supply can reduce Ontario's greenhouse gas emissions (GHG), create jobs and increase energy security.

- Conversion costs are hundreds of millions of dollars less than building new natural gas generation.
- Existing generation and transmission infrastructure already paid for is re-used.
- Willing host communities keep the jobs and economic spin-offs.
- Biomass is carbon neutral and reduces GHG emissions.
- Biomass generated electricity, unlike wind and solar generation, is available when consumers need it.
- Grown in Ontario biomass improves energy security.
- New jobs and infrastructure are created in Ontario's forestry, agriculture and transportation sectors.

Ontario has available assets, the technical knowledge, and vast biomass resources. Now we need bold leadership, a comprehensive biomass strategy and firm financial commitments.

Along with GHG emission-free CANDU nuclear and hydroelectric generation, Ontario can continue to have a clean, affordable, reliable and secure power supply with one of the lowest electricity carbon footprints on the planet.

For more information please go to [www.abetterenergyplan.ca](http://www.abetterenergyplan.ca)

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