

## **Windsor & District Chamber of Commerce New Nuclear Options for Supply of Electrical Power**

### **Issue:**

The Ontario government is committed to replace the Province's coal fired power plants out of service by 2009 and replacing the generation capacity with new clean sources of power. If these sources of energy prove inadequate, Ontario faces a looming electricity supply shortfall. Even without the closure of the existing coal-fired plants Ontario faces a shortage of electricity supply in the near future.

### **Background:**

The current electricity supply in Ontario comes from a mix of sources including coal-fired, nuclear, hydro and wind power plants. The government of Ontario is committed to phasing out all coal-fired power plants in Ontario by 2009.

According to the Ontario Power Authority (OPA), lack of investment to expand electricity capacity in Ontario in the past decade has led to a situation in which "the sector faces the loss of a major part of its current supply mix as most units of its nuclear fleet reach the end of their design life over the next several years. This loss of nuclear generation would come immediately on the heels of replacement of coal-fired stations, scheduled for completion by 2009." The OPA equivalent identified a capacity gap of roughly 24,000 megawatts (MW) by 2025, to about 80% of Ontario's current capacity.

Furthermore, according to the Ontario Electricity System Operator (IESO), "In Ontario, 80% of all electricity-generating plants will need to be refurbished or replaced in the next 15-20 years due to aging. The infrastructure investment cost is estimated at \$25 billion to \$40 billion. By 2014, up to 11,600 MW of Ontario's electricity requirements will need to be met with new supply, refurbished generation, or conservation measures."

New power generation capacity is required to replace this supply and prevent a supply shortage. The OPA presented its Supply Mix Advice Report in December 2005, which recommended that a mix of new supply, including nuclear, gas generated and renewable resource power options be pursued immediately.

The government of Ontario is pursuing a dual strategy of increasing the reliance on clean sources of energy as a replacement for the coal-fired stations and conservation of electricity. It is clear that a significant short to medium term solution is needed in order to avert a serious electricity supply crisis.

While renewable sources of electricity offer considerable potential they remain a longer-term solution. While gas-fired generation is seen as a critical source of electricity in the short run, the benefits of this supply would be greater in peak hours when generation prices are the highest. However, our economy relies on the base load power production where prices are much lower.

Natural gas prices have reached record levels in 2005 and any base load electricity generated from future gas plants will prevent electricity rates from being competitive with other jurisdictions.

Nuclear energy has been the stable supply of low cost electricity for Ontario for over 30 years. Latest-technology nuclear electricity is cost-competitive with coal and can be produced for total costs of 5-6 cents a kilowatt-hour or lower.

Among the many benefits of nuclear energy as a supply of electricity for Ontario is the fact that Nuclear energy does not pollute the air, it is a safe and reliable source of energy and it is the only proven alternative source of electricity with a capacity to meet all of the projected shortfalls. In 2005 nuclear energy supplied over 50% of Ontario's electricity without greenhouse gas emissions.

The most cited reason against nuclear energy is radioactive waste. While there is a concern about radioactive fuel waste from reactors, fossil fuel plants send most of their wastes into the atmosphere in the form of greenhouse and acid gases. In the nuclear industry, all wastes are fully accounted for and stored, with no radioactive wastes discharged, uncontrolled or unregulated to the environment.

The cost of refurbishing existing nuclear capacity and investing in new nuclear capacity, while significant, is the right choice for an economy that is dependent on a reliable supply of electricity that is competitive with other jurisdictions in North America. We cannot afford to continue with the status quo. Considering all alternatives nuclear power is the most balanced approach to address the need for an affordable base load power in Ontario.

## **RECOMMENDATIONS:**

### **The Ontario Chamber of Commerce urges the Government of Ontario to:**

1. Immediately pursue the expansion of nuclear generation in Ontario in order to provide an affordable source of base load electrical power.
2. Provide a detailed plan on future supply sources and conservation of electrical power that will maintain rates competitive with other jurisdictions in North America.
3. Operate and retrofit the existing coal fired plants to meet environmental performance standards until they are replaced with new nuclear power sources.