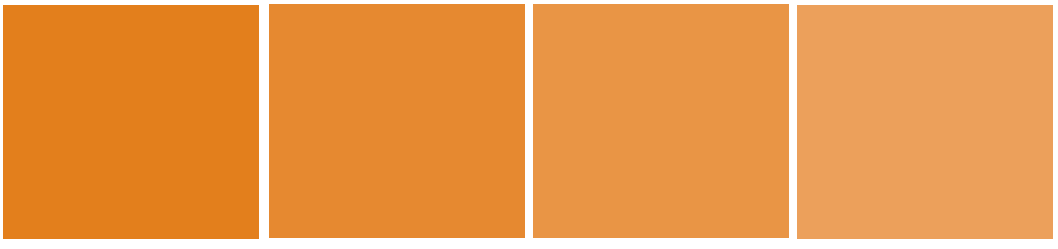
Energy Policies

2009 - 2010

As the most diverse and most influential business group in the province, the Ontario Chamber of Commerce works closely with governments, labour, academia and various other groups to create a stronger and more vibrant economy in Ontario and the surrounding regions.

The OCC represents 60,000 members through 160 independent chambers of commerce and boards of trade throughout the province. The OCC has worked on behalf of business since 1911.



Energy Policies

2009 - 2010

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I. Energy Policies

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Ontario's future economic growth and prosperity will depend on our ability to remain competitive in an increasingly global energy marketplace. A stable, abundant, and affordable energy supply is fundamental to Ontario's competitiveness.

Modernizing Ontario's Energy and Infrastructure is an essential factor in the overall economic renewal of the province. The OCC has developed a number of strategic policies that, if adopted together, will help the provincial government to efficiently reform the energy sector and keep business competitive in the global marketplace.

Our recommendations are focused on crucial reform aspects:

* Providing long-term planning
* maintaining a predictable and stable regulatory framework
* Undertaking continuous efforts to diversify energy sources
* Promoting investment in new energy infrastructure
* Aggressively pursuing conservation, and adhering to effective demand management principles.

II. Electricity

LONG TERM PLANNING: AFFORDABLE, RELIABLE AND ABUNDANT SUPPLY

Ontario's prosperity and economic well-being depends on continued access to abundant, reliable and affordable energy supplies. The cost and availability of electricity in Ontario have become important concerns for businesses and citizens.

Since the 2003 blackout, businesses have realized how unstable our energy supply has become. Hydro demand will continue to grow while the additional capacity coming online in the near future is feared by our members as being insufficient. Members are concerned about possible blackouts and brownouts should demand start to exceed capacity in the years to come.

The province must ensure that the demand for electricity is met while keeping prices stable and affordable for all consumers. Electricity prices are an important part of business operational costs. Energy intensive industries, such as the forestry and mining industries are particularly vulnerable to rising electricity costs. As an incentive to investment, job creation, and to generate prosperity, jurisdictions around the

world use industrial electricity rates as an important economic development tool.

More affordable electricity prices could be achieved by increasing the share of cheaper generation sources while leaving more expensive renewable generation to serve demand peaks. All energy options have strengths and weaknesses. A diverse portfolio of energy supply choices provides the best insurance towards a reliable and affordable electricity system. In order to ensure an adequate electricity supply to meet the needs of business, Ontario should adopt a diverse electricity supply mix. (see Appendix 1, page 8)

ELECTRICITY MARKET DEVELOPMENT AND PRICING

In order to keep businesses in Ontario competitive, Ontario's electricity policy must support and encourage new investment, promote efficiency, ensure adequate capacity and foster conservation.

Ontario, like many other jurisdictions, currently has a hybrid electricity system, embracing both private and public market players, and an independent regulatory body. Due to several factors, including the reality that the bulk of available generation is still in public hands, the electricity market is rather limited and dysfunctional. There is significant and ongoing debate about how to achieve a reliable and affordable competitive market for electricity that will bring real benefits for consumers.

In light of the increasing cost and future uncertainty of supply of energy in Ontario, it is imperative that private investment is encouraged and fostered in Ontario's energy market. Currently, the share of public generation is still too large (close to 80 percent) to allow for a truly competitive market. The business community needs the government to ensure there is a significant role for the private sector in Ontario's electricity system. At a minimum the private sector should contribute 50 percent of the energy supply.

The OCC believes that the private sector should continue to play a significant role in the electricity system. (see Appendix 1, page 8) In the long term, Ontario should explore options for creating competitive markets for electricity that will benefit consumers, while ensuring electricity prices reflect the true cost. (see Appendix 1, page 8)

The OCC acknowledges that the government has recently implemented some incentives for private investors through the Green Energy Act such as allowing "clean renewable" energy companies easier access to the grid. The Green Energy Act also commits to a feed in tariff that guarantees specific rates for energy generated from renewable sources. The province should expand this further and encourage private investment and competition

in the energy sector by stabilizing the energy market and providing appropriate incentives. (see Appendix 1, page 9). Creating an environment of regulatory certainty and stable policies are incentives that will help to encourage investment and ensure an appropriate level of supply to satisfy the long term electricity needs in the province.

Energy prices must reflect the true value of energy consumed in order to motivate consumers towards conservation and motivate businesses towards investment in new generation.

Business needs a stable policy and regulatory environment for investment, especially in the electricity sector where many investments have high capital costs and long lead times.

ENSURING TIMELY CONSTRUCTION OF NEW GENERATION FACILITIES

Ontario's current generation infrastructure is not sufficient to cover our future demand for energy. Aging infrastructure should be replaced in a timely manner and new construction of generation facilities should be planned expeditiously to avoid any power shortages.

The OCC recommends the provincial government form a strategic alliance with private enterprises representing the generating industry that will ensure the timely construction of new generation facilities. (see Appendix 1, page 8)

Brownouts and drops in supply damage equipment and output on industrial production lines. Therefore, a system should be put in place for at least large industrial electrical consumers to ensure that areas with frequent brownouts and drops in supply are upgraded to protect against loss of productivity and equipment damage. (see Appendix 1, page 11).

III. Diversified energy supply

ELECTRICITY SUPPLY MIX

The continued strength and growth of our economy depends on maintaining a stable energy supply mix providing competitively priced electricity for both industry and consumers.

Ontario should meet two important criteria to effectively address energy supply problems. The first is ensuring abundance of supply while the second is maintaining affordability. Adequate supply alone is not sufficient to meet the province's energy requirements. It must be combined with cost effectiveness and affordability for consumers.

The Ontario Chamber of Commerce is fully supportive of a balanced energy portfolio that includes renewable and green energy.

However, we must ensure that our base load electrical supply is met with a reliable, sustainable and affordable energy supply.

To ensure that Ontario's energy demands are met, the government must consider and include all supply options when developing a long term, stable regulatory framework. (see Appendix 1, page 8)

NUCLEAR OPTIONS FOR SUPPLY OF ELECTRICAL POWER

The nuclear industry is in need of stable, predictable planning and regulatory regime to remain viable. A nuclear energy strategy is needed to ensure that the province has the energy it needs at affordable prices in the years ahead.

Maintaining and expanding nuclear energy as a power source will allow Ontario residents to continue to benefit from its ability to provide large amounts of reliable, uninterrupted power, while not impacting air quality. There is an urgent need to plan now and move quickly and decisively to implement such a strategy.

Ontario must become a leader in helping create a national nuclear energy strategy, one that will benefit Ontario's and the Canadian economies. In consultation with all stakeholders including the Federal government, the government must ensure that Ontario and Canada has a Nuclear Energy Strategy that will continue to provide jobs, investment and economic strength for the Ontario and Canadian economy in the coming decades. (see Appendix 1, page 23)

Nuclear power produces zero emissions, is excellent base load power and produces economic spin-offs, both in the construction and operation phases. By maintaining nuclear energy as a power source, Ontario residents can continue to benefit from its ability to provide large amounts of reliable, uninterrupted power — even during periods of extreme weather — while not impacting air quality.

EDUCATING COMMUNITIES

Unfortunately, important electricity infrastructure projects have received much opposition from communities over the years. NIMBY (Not-in-My-Back-Yard) describes the common reaction of residents when they discover that a transmission/ generation project may be built in their neighbourhood. The OCC notes that the new Green Energy Act identifies the issue surrounding NIMBYism and the Premier has recently been quoted as saying he's "not prepared to tolerate NIMBYism regarding renewable-energy projects when community concerns go beyond health, safety and environmental concerns." The OCC is encouraged by this laudable initiative and urges the Government of Ontario to take a strong leadership role and not allow "NIMBYism" to

delay or stop projects that have gone through the appropriate EA process. (See Appendix 1, page 10)

The exchange of information, community education, public meetings and strong leadership and determination in building priority infrastructure could substantially diminish residents' opposition and expedite the approval process.

Arguably, consumers have been isolated from the "realities" of the electrical market and need to promote responsibilities: including the commitment to support a diversified supply mix. Consumers should be aware that delayed or cancelled generation projects could ultimately result in brownouts and blackouts in high demand areas.

The Ontario Chamber of Commerce urges the Government of Ontario to conduct open and honest consultations and provide public education on the realities of electricity supply in Ontario. (see Appendix 1, page 9)

II. Appendix: Policy Resolutions

Electricity Pricing, Supply and Market Development

(adopted on May 5, 2007)

ISSUE:

Electricity pricing, supply and market development are key to maintaining the economic competitiveness of Ontario businesses.

BACKGROUND:

A reliable and affordable electricity system is key to Ontario's economic prosperity and the competitiveness of Ontario businesses. Policies that enhance affordability and reliability can contribute to the province's economic strength and help to maintain and create jobs.

The right government policy choices can keep Ontario's electricity price affordable. At the same time, Ontario needs to ensure that electricity prices reflect the true cost. Ontario's electricity policy must support and encourage new investment, promote efficiency, ensure adequate capacity and foster conservation.

Business needs a stable policy and regulatory environment to grow and prosper. This is especially true in the electricity sector in which investments often have a high capital cost and require long lead times.

Regulatory requirements and NIMBYism can play a role in unnecessarily delaying needed projects. Government policy needs to ensure adequate regulatory review and oversight, but should also ensure no undue delay to necessary electricity system investments.

In ensuring adequate electricity supply to meet the needs of business, Ontario should adopt a diverse electricity supply mix. All energy options have strengths and weaknesses. A portfolio of energy supply choices provides the best insurance toward a reliable and affordable electricity system.

Sound environmental policy should be a key component of electricity policy, resulting in an environmentally sustainable system. All economic energy efficiency and conservation investments should be encouraged.

Ontario, like many jurisdictions, currently has a hybrid electricity system. There is significant and ongoing debate about how to achieve a reliable and affordable competitive market for electricity that will bring real benefits for consumers. The Chamber believes that the private sector should play a significant role in the electricity system and that over the long term, Ontario should

explore options for creating competitive markets for electricity that will benefit consumers.

RECOMMENDATIONS:

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

1. Work towards establishing a competitive market for electricity in the long term.

2. Immediately start creating conditions for a competitive environment in the mid-term, including developing instruments to help facilitate market liquidity forward exchange, long-term contracting, and long-term price predictability.

3. Ensure that its policy choices result in affordable electricity to help keep Ontario business competitive;

4. Promote a diverse supply mix as a way of ensuring that Ontario's electricity prices remain affordable over the long-term.

5. Ensure an adequate supply of electricity in Ontario to meet the needs of Ontario businesses.

6. Ensure a reliable electricity supply for Ontario businesses.

7. Ensure that the price of electricity reflects the true costs.

8. Ensure a significant role for the private sector in Ontario's electricity system.

9. Promote stability in the electricity system, since business needs a stable policy and regulatory environment for investment, especially in the electricity sector where many investments have high capital costs and long lead times.

10. Promote environmental sustainability by ensuring that all economic energy efficiency and conservation investments are made.

11. Work with Ontario large energy users to ensure that areas with frequent brownouts and drops in supply are upgraded to protect against loss of productivity and equipment damage.

Security of Electricity Supply

(adopted on May 5, 2007)

ISSUE:

The cost, availability and security of electricity are matters of growing concern to businesses and citizens.

BACKGROUND:

Because of the 2003 blackout and the increasing incidence of brownouts, businesses have realized how fragile our energy supply is and with deregulation how costly it has become. Such problems are very disruptive to business and discourage investment and growth. A secure supply of reasonably-priced electricity that is sufficient to accommodate growth forecasts is essential if Ontario is to continue to grow and prosper. At the same time, Ontarians are legitimately concerned about the environmental effects of some types of generation and about the location of new power generation facilities, transformer stations or high-voltage power lines in their municipalities.

RECOMMENDATIONS:

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

1. Expedite the long term development and implementation by approving the Integrated Power System Plan and develop short- and medium-term targets needed to achieve longer term objectives.

2. Support distributed generation that involves locating generation capacity closer to electricity load centers.

3. Reduce the politics and bureaucracy around electrical generation and transmission that delay decision-making and discourage innovation and streamline the approval process to ensure adequate electricity supply.

4. Conduct open and honest consultation and provide public education on the realities of electricity supply in Ontario.

5. Examine the current and future challenges and propose alternative solutions for further deregulation supported by most advantageous cost –benefits ratios.

6. Further promote aggressive conservation and consumer demand management programs.

7. Encourage private investment and competition in the energy sector by stabilizing the energy market and providing appropriate incentives to investors.

8. Take a strong leadership role and not allow "NIMBYism" to delay or stop projects that have gone through the appropriate EA process and are important for the future of Ontario.

9. Support development of cogeneration projects (i.e., the simultaneous generation of electric power and recovery waste heat) to displace purchased fuel wherever cogeneration generators can be located proximate to industrial/ commercial thermal loads.

A Healthy Ontario Electricity System

(adopted May 3, 2008)

ISSUE:

Ontario businesses need an electricity system that provides a reliable supply of power at an affordable price to maintain and enhance their competitiveness, create jobs and contribute to the province's economic strength.

BACKGROUND:

The security, reliability and affordability of electricity supply are critical to the competitiveness of Ontario businesses and the province's economy. Ontario needs a diverse mix of electricity generation to ensure a reliable supply of electricity is available to meet demand at a competitive price. The provincial government cannot do this alone. The private sector has an important role to play. Increased participation by private investors will result in:

* System users carrying all electricity costs, including any price increases (due to over-run costs, supply shortages, or wrong investment decisions, etc);

* Risk to taxpayers for future capital investments in infrastructure being minimized;

* Avoidance of debt accumulation as under the previous Ontario Hydro regime;

* Taxpayer resources being freed for other much needed social and infrastructure programs, particularly those that are less amenable to private-sector investment; and

* The option of moving to a more robust competitive electricity market kept open.

Conservation and demand management programs (including demand response) are important but will only address a part of Ontario's challenges in ensuring an adequate and reliable supply of electricity. To meet rising demand, Ontario must have a diverse mix of supply, including hydro, nuclear, oil, gas, coal,

renewables and imports. A variety of generation sources is invaluable because this model:

* Recognizes that different sources are best suited to servicing Ontario's base load, intermediate load and peak load requirements;
* Moderates severe price swings;
* Enhances the reliability of the province's electricity system by minimizing reliance on a single or dominant source of electricity; and
* Promotes environmental stewardship without economically disadvantaging the province.

The government's ultimate goal should be to ensure an adequate and reliable supply of electricity at a reasonable price. For this reason, the province should not eliminate electricity generation from any source as long as it meets stated environmental standards. Currently, coal powered electricity generation accounts for approximately 25 percent of the province's electricity supply and is a source of relatively inexpensive electricity. The provincial government's decision to shut down these plants by 2014 will lead to a significant increase in the price of electricity unless steps are taken to ensure an adequate alternative base load supply at an affordable price before coal plants are shut down. Ontarians should not be subjected to unnecessary price increases.

To ensure the development of alternate new supply in the context of responsible environmental stewardship, Ontario should focus on the development of new and innovative energy sources. The Ontario Centre of Excellence for Energy can best perform this function. The Centre brings together private sector companies, academics and the government to, among other things, undertake research into and assist in the commercialization of leading edge and emerging energy sources and technology.

To ensure the effective implementation of alternative energy supply technologies, the province should focus on upgrading the transmission and distribution systems in urban and rural areas. There should be a concentrated effort to facilitate the connection capability for new distributed supply, to accelerate the application of "Smart Meter Technology" and to install the automation required to create a smart grid environment.

Consumers also have a useful role to play in helping Ontario develop a healthy electricity system. Ontarians must be empowered and provided with the information necessary to make informed choices as consumers, which includes providing

them with an understanding of the tools available to them to assist Ontario in conserving electricity.

RECOMMENDATIONS:

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

1. Encourage greater private sector participation in the generation of new electricity supply from a variety of sources by creating an environment of regulatory certainty, adopting long-term supply contracts from multiple sellers resulting in electricity prices that reflect the true cost of power.

2. Recognize the technical reality of phasing out coal generation and guarantee security of electricity supply by ensuring adequate alternative base-load supply is available before cutting the coal plants from the grid.

3. Upgrade the provincial transmission and distribution systems to ensure system security, reliability, efficiency and congestion reduction as well as the integration of new supply, and use of renewable energy resources.

4. Focus on the development of new and alternative energy sources through entities such as the Ontario Centre of Excellence for Energy.

5. Enhance consumer education by providing electricity users with the information they need to make informed choices and take advantage of tools available to them to conserve electricity.

The Need for More Nuclear Energy in Ontario

(adopted on May 5, 2007)

ISSUE:

The use of new and refurbished nuclear capacity will support and augment the provincial power generation capability. The province must adhere to the concept that new nuclear be Canadian, which is the lowest lifetime cost option, and is reliable and safe.

Ontario needs to reduce its dependence on imported carbon-based fuels, and it needs cleaner air. With nuclear energy, we get both.

BACKGROUND:

Ontario is the industrial heartland of the country, needing large quantities of energy for its economy.

Ontario is a “have-not” province when it comes to fossil fuels (namely coal, oil, and natural gas) yet it is dependent on them for about three quarters of its total energy requirements. Most of this energy runs Ontario – the industrial and commercial sectors. Large quantities are required, and Ontario has no control over the price it must pay for these fuels. Most of the coal comes from outside of the country, and as far as the electrical portion of the Province’s energy needs is concerned, the Ontario Government has committed to phasing out the use of coal-fired technology for health, environmental and strategic reasons.

Ontario has only two large energy resources of its own: hydroelectric, and nuclear energy, based on uranium. Ontario uranium remains available in the northern part of the Province. At present, we use Saskatchewan sources for economic reasons. (Saskatchewan has some of the richest uranium deposits in the world).

Nuclear- and hydroelectric form the backbone of the current Ontario electric energy mix, providing three-quarters of our electricity. The hydroelectric portion has limited additional potential (and what is practical to be harnessed should be, in our view) but the nuclear portion could be increased substantially, to help support other energy needs which, up until now, have depended on imported fossil fuels.

Carbon-based fuels are subject to price swings based on events beyond the Province’s control. These prices have a direct impact on the competitiveness of Ontario’s industry with that of other jurisdictions. Two of the most important areas are electricity production and transportation.

Our current provincial electricity generating capacity is about 30,000 Megawatts (MW), with a peak demand of more 27,000 MW established in 2006. Traditionally, Ontario

has planned for and maintained a capacity of roughly 10 – 15 percent above the peak, to allow for planned and forced outages.

The load growth in Ontario was over 2 percent in 2005. (It averaged ~1.7 percent per year in the 1990s). If Provincial electricity demand grows at just half that rate over the next 10 years, we will need approximately 2500 additional MW of capacity --- the equivalent of more than one Canadian Niagara, or five Pickering units, or about three Darlington units, just to remain in the energy-strapped situation that we have now. That situation requires importing power regularly and buying on an emergency basis (at very high prices) on occasion, assuming we do nothing else.

Since an Environmental Assessment for a new plant takes four years, and building a new nuclear plant now takes six, we believe that we must begin the process immediately.

We have needed a strategic energy plan for Ontario, incorporating new nuclear and other sources (as well as transmission / distribution improvements), for many years. The last plan was written over 15 years ago and was shelved by the government of the day. Now, political will and foresight is required to expedite the production and implementation of a viable system plan incorporating conservation, load shifting, nuclear and other sources, without delay.

The nuclear industry needs a stable, predictable planning and regulatory regime to remain viable. Substantial commitment of financial and human resources are required to sustain this high tech industry, but the returns to users --- in terms of security of supply, reliability, affordable price, price stability and clean air --- are demonstrated to be well worth the effort.

The Ontario Government, through its various organizations and agencies, is seeking to re-establish a safe, secure, reliable and economic electric power system. A diverse generation mix is desirable, to maximize the advantages and minimize the disadvantages of the energy sources available.

Recognizing the importance of energy diversity, nuclear should remain at least 50 percent of the electricity mix in Ontario, and preferably more due to larger economy of scale returns. The rest of the mix should be filed with other energy sources, as well as an ongoing effective energy conservation and load management effort.

Government policy makers and leaders have to look to the future opportunities that nuclear can provide for Ontario. Nuclear is ideal for base load, and could also work well generating hydrogen off-

peak for transportation (the largest human source of greenhouse gases) in the foreseeable future.

We note that France's electricity capacity is 100 percent fossil-free: 80 percent nuclear and 20 percent hydroelectric. France sells surplus power to its neighbours cheaper than they can generate it themselves, something Ontario once did to the benefit of its own citizens and to neighbouring jurisdictions.

The government should also commit to realize nuclear energy's economic competitiveness and reliability by planning and regulatory certainty both in medium and long term, acknowledging the long-term nature of the nuclear investments.

As the industrial heartland of Canada, we have an opportunity to make history in a positive way for our citizens. With planning, with political courage and foresight, Ontario could be a "have" province when it comes to energy, for the first time in a long time.

RECOMMENDATIONS:

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

1. Provide planning certainty and regulatory certainty for this industry.

2. Remove its 14,000 MW / 40 percent cap on nuclear energy's share of the generation mix in the Ontario Power Authority's planning process. Look to expanding the nuclear role in Ontario's energy sector while exploring diversification within the energy mix.

3. Support the refurbishment of existing nuclear plant where practical, and the construction of new nuclear plant capacity for domestic use, as a high priority.

Energy from Waste

(adopted on May 5, 2007)

ISSUE:

Ontario is missing the untapped value of Energy from Waste (EFW) technologies, which use residential and commercial waste to generate electricity and reduce the amount of waste sent to landfill sites. As part of an integrated waste management system, EFW is a viable alternative to landfills.

Only three percent of Canada's solid waste is processed to generate electricity, compared to

thirteen percent in the US. It is time now for Ontario communities to start considering a solution.

BACKGROUND:

Energy recovery from Waste describes the process in which energy is recovered from the combustion of waste, and used to generate electricity, which is then fed back into the electricity grid, or provide both electricity and heat (combined heat and power) to nearby communities or other uses. Wastes represent an increasingly important fuel source. Using wastes as fuel can have two fold benefits: maintaining a cleaner environment and providing an alternative energy source for the local economy.

Waste may be in the form of an individual waste stream, generally from a commercial or industrial activity, which is used in existing plant as a fuel; it may be the residue once recyclables are separated from a general waste stream; or it may be a specially produced refuse-derived fuel (RDF) which must meet certain standards to be burnt in certain plants such as cement kilns or, potentially, power station furnaces.

Today there have been developed some innovative technologies, which have the potential to increase the efficiency of energy recovery. Besides, ETW facilities can reduce the volume of a landfill site by 90 percent and reduce the weight of solid waste by 70 percent. Fly ash produced by a WTE facility can be re-used for landfill cover, road-base, or other such construction materials.

The environmental benefit of EFW generation is that it can help reduce CO2 emissions, through displacement of fossil fuels that are 23 times more damaging than CO2 for global warming. If biodegradable waste is diverted from landfill, methane emissions can be avoided.

New energy-from-waste plants give off no odour, effectively dispose of garbage that would otherwise go to landfills, and generate considerable amounts of eco-friendly electricity, and sometimes steam as a by-product. Although new technologies still generate some emissions, their level is substantially lower compared to older technologies.

A number of well-established technologies are available for generating heat or power from wastes: combustion with energy recovery, thermal technologies, gasification, pyrolysis, anaerobic digestion, pelletization, thermal cracking etc (see below).

Examples of Energy from Waste Technologies *

Combustion with energy recovery

Energy from combustion technology decreases the volume of the municipal waste and allows for recovery of metals and other potentially recyclable

fractions. Plants that generate electricity can typically process between 20,000 and 600,000 tonnes of waste per year, generating from 1 to 40 MW of electricity. Power is produced from wastes by using the steam raised in the combustion process to drive a steam turbine to generate electricity, in a similar manner to a conventional coal fired power station. Any residue that is landfilled is biologically inactive and does not generate potentially harmful emissions. The heat recovered from these plants can be used to generate electricity, or can be used for industrial heat applications, where there is a market for the heat.

Advanced thermal technologies

Where the waste stream is of a uniform nature, for example if it has been processed into a homogenous fuel, it is better suited to the more "advanced technologies", such as gasification or pyrolysis. Wastes that are not uniform in composition, for example municipal wastes, are less suited to treatment by advanced technology, although the technology is rapidly developing to handle more challenging wastes.

Gasification

Gasification is a thermo-chemical process in which biomass is heated, in an oxygen deficient atmosphere to produce a low-energy gas containing hydrogen, carbon monoxide and methane. The gas can then be used as a fuel in a turbine or combustion engine to generate electricity. Gasifiers fuelled by fossil sources such as coal have been operating successfully for many years, but they are now increasingly being developed to accept more mixed fuels, including wastes. New gas clean-up technology ensures that the resulting gas is suitable to be burnt in a variety of gas engines, with a very favourable emissions profile.

Pyrolysis

Pyrolysis is an emerging technology, sharing many of the characteristics of gasification. With gasification partial oxidation of the waste occurs, whilst with pyrolysis the objective is to heat the waste in the complete absence of oxygen. The pyrolysis technology converts virtually all hydrocarbon waste streams (including tires, hospital waste, and carbon based waste) into highly purified virgin hydrocarbon and advanced material nanocarbons. Gas, olefin liquid and char are produced in various quantities. The gas and oil can be processed, stored and transported, if necessary and combusted in an engine, gas turbine or boiler.

Anaerobic digestion

The biological processes that take place in a landfill site can be harnessed in a specially designed vessel known as an anaerobic digester to accelerate the decomposition of wastes. Anaerobic digestion is typically used on wet wastes, such as sewage sludge or animal slurries but the biodegradable fraction of municipal wastes can be added to wetter wastes to increase the

biogas output. The biogas can then be used in an engine or turbine for power generation, or used to provide heat for industrial processes situated near the landfill site, such as in a brickworks.

Pelletization

The technology allows processing of Municipal Solid Waste by selecting appropriate materials to mix with purchased high BTU materials in the production of a high BTU pellet that can be used either to replace coal or coke in industrial processes, or for use in an acceptable combined combustion/gasification and local energy recovery system the manufacture.

*NOTE: The EFW technologies are not limited to the ones described in the table.

The air emissions from EFW plants as compared to traditional use of fossil fuels are also significantly cleaner. For example, the table below shows use of trash to generate one megawatt of power instead of coal:

Air Emissions of Waste-to Energy and Fossil Fuel Power Plants (pounds per megawatt hour)			
Facility Type	Carbon Dioxide	Sulfur Dioxide	Nitrogen Oxides
Coal	2,249	13	6
Oil	1,672	12	4
Natural Gas	1,135	0.1	1.7
Waste-to-Energy	837	0.8	5.4

[Source: www.wte.org]

Canada in general and Ontario in particular has lagged behind both Europe and the United States in the development of ETW sites. Historically, Ontario has enjoyed relatively low energy costs and ample room to locate landfill sites, both factors being impediments to the development of ETW facilities. However, with growing concern over the environment, an integrated waste management system, including recycling and ETW facilities, should be given greater priority as a viable and responsible solution.

There are only a few EFW plants in operation in Canada. The Brampton facility, Ontario, operated by Algonquin Power Energy From Waste Inc., burns 500 tonnes of waste a day and generates up to 15 megawatts of electricity. In Burnaby, just outside Vancouver, French-owned Veolia ES Waste-to-Energy Inc. operates a plant for the municipality that burns about 720 tonnes a day and feeds the electricity it generates to the electrical grid. There are two other small plants in Quebec City and Charlottetown.

Many EFW facilities have been closed for different reasons including the London and Hamilton Waste to Energy plants. Several municipalities -- including Vancouver, Ottawa and several regional municipalities in the Toronto area -- are considering new energy-from-waste plants.

The planning process is under way in Halton region, just west of Toronto, where the municipal government is starting to look at the business

case for a new garbage-burning power plant. Durham, and York regions are assessing their options on waste disposal and energy recovery.

Development of new EFW facilities is a burdensome and lengthy process. The approval process may take years. The EFW projects also require of companies to acquire permits, comply with environmental standards, make financial arrangements and deal with the NIMBY (not-in-my-backyard) concerns from residents. The process gets even more cumbersome because future facilities must acquire also contracts with municipalities on waste supply and connect to the local power grid.

Acknowledging the challenge, the government approved in March 2007 a streamlined environmental assessment and waste management approval procedure (O. Reg. 101/07) for small energy to waste projects that could save municipalities up to 18 months.

In order to deal with the public concern over the location of EFW sites, EFW facilities should be located in existing landfill sites especially where an energy consumer is located in close proximity to the EFW facility or a grid connection is readily accessed.

EFW facilities should be constructed and financed under public private partnerships not unlike Infrastructure Ontario in order to achieve design, quality and cost consistencies across the Province.

Government policy consistency is crucial as the approval process for new EFW facilities may be carried over several government mandates. Larger EFW plants could cost as much as $500 million. At the same time, government has recognized the benefits associated with these plants, considering the rising costs of shipping and disposing of waste, the pressure to diminish emissions to the environment and the untapped capacity of alternative electricity going into the grid.

The government's recent Energy Directive on Ontario's supply mix has emphasized concerns over the future security and diversity of the energy resources which are used to generate power. Energy from Waste plants could play a limited, but increased role in generating electricity and providing heat to communities and a practical waste disposal solution. With fossil fuel prices rising in recent years, the attractiveness of an Energy from Waste component of the portfolio is likely to grow.

RECOMMENDATIONS:

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

1. Review by 2008-2009 the experience in other jurisdictions and, considering the

environmental and economic efficiency, estimate what of the available Energy from Waste technologies (combustion with energy recovery, advanced thermal technologies, gasification, pyrolysis, anaerobic digestion, pelletization, etc) have the highest rate of return for Ontario.

2. Assess the costs of erecting EFW facilities and estimate the benefits for Ontario by considering the environmental effects, avoided waste disposal, land filling/ development costs and promotion of alternative energy generation.

3. Assess increasing the share of the efficient Energy from Waste generation technology in the supply mix and develop by 2010-2011 an integrated waste management plan, prioritizing on EFW.

4. Educate the public on the importance of 5-Rs: (1) Reduce (waste, packaging etc); (2) Reuse (beer bottles, etc.); (3) Recycle (new product from waste ie: sewer pipe from used car dashboards etc); (4) Recover (energy, oil); and (5) Retain (landfill issues). Also educate Ontarians of the importance and safety of advanced EFW technology for their communities.

5. Commit to create a stable streamlined regulatory environment, an electricity market guided by prices reflecting true costs of power and pursue consistent EFW policies.

6. Stimulate development of EFW facilities, where appropriate and strategically feasible at existing landfill sites.

7. Engage private sector in the development, construction and financing of WTE facilities.

Natural Gas Permit Fees

(adopted May 3, 2008)

ISSUE:

The bills of over three million natural gas consumers across the province are about to increase as a result of new municipal fees approved by the Ontario Government.

In the 2007 budget, as part of its ongoing efforts to provide municipalities with more revenue, the Ontario government gave Ontario's municipalities and the City of Toronto the power to charge natural gas utilities municipal permit fees when they work on their assets and also when they make road-cuts.

BACKGROUND:

Natural gas utilities pay municipal property taxes on their assets in the municipal roadway.

These unique property taxes on natural gas pipes were put in place decades ago to provide municipalities with a reliable source of revenue and to cover any and all costs they might have for having pipes in the municipal roadway.

Consumers' natural gas bills already provide both substantial municipal revenue and municipal cost recovery. The natural gas utilities and their 3 million customers pay over $80 million per year in municipal property taxes on their system of underground pipes.

The Ontario Government's policy is that municipal costs are paid through a cost-recovery user fee or the costs are covered through property taxes.

Natural gas utilities have standard legally binding province-wide operating agreements that guarantee proper clean-up and road restoration to 100 percent municipal satisfaction and cost to the local gas utility.

Natural gas utilities do not require any of the traditional municipal services.

Natural gas is helping to fuel Ontario's economic growth and is used to provide for the new generation of gas-fired power plants and represents a significant source of environmentally preferred energy for the province's clean air plans.

This measure will not impact municipal revenue streams. It was a revenue stream that they had been prevented from using as previous governments recognized the municipal property taxes the natural gas utilities paid on pipes.

RECOMMENDATIONS:

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

1. Immediately reinstate the permit fee protection that over three million natural gas customers enjoyed and prevented unnecessary added costs to their natural gas bills.

2. Enforce fair policy on rights-of-way for natural gas utilities and their three million customers - homes and businesses, farms and factories province wide – that is that natural gas utilities pay a user fee or pay municipal property taxes, but not both.

National Nuclear Energy Strategy

(Submitted by the Oshawa Chamber of Commerce)

ISSUE:

Ontario must become a leader in helping create a national nuclear energy strategy, one that will benefit Ontario's and the Canadian economies.

BACKGROUND:

The nuclear industry is in need of stable, predictable planning and regulatory regime to remain viable. A nuclear energy strategy is needed to ensure that the province has the energy it needs at affordable prices.

Maintaining and expanding nuclear energy as a power source will allow Ontario residents to continue to benefit from its ability to provide large amounts of reliable, uninterrupted power, while not impacting air quality. There is an urgent need to plan now and move quickly and decisively to implement such a strategy.

There are many benefits supporting the expansion of nuclear energy. Nuclear power produces zero emissions, is an ideal base-load power source and produces economic spin-offs, both in construction and operation phases. Ontario's manufacturing sector has been hard hit over the last couple of years. Investing in a national nuclear strategy would assist in bringing new high paying jobs to the province as well as creating significant tax revenues to both the federal and provincial governments.

Around the world we are seeing a nuclear renaissance as the many strengths of nuclear energy are being recognized. Billion of dollars will be spent on hundreds of new plants around the world over the next 10-20 years. The developing powerhouses of China and India are looking to new nuclear capacity to help secure the energy they will need to fuel their economic growth. In 2006, the United States implemented an Energy Policy Act encouraging construction of new nuclear plants as part of a diverse energy-production portfolio. Many other countries such as France, the United Kingdom and Japan have also adopted nuclear energy in their public policy positions. It is imperative that Canada also develop a national nuclear strategy in order to remain globally competitive.

There are many opportunities that nuclear energy can provide to Canada and Ontario. Canada and Ontario's nuclear industry have a demonstrated track record of safety, innovation and environmental stewardship. The Canadian innovative design and manufacture of nuclear reactors has proven to be competitive in world markets.

The government needs to look to the future opportunities that nuclear can provide Ontario

and Canada. Nuclear is ideal for base -load, and could also work well generating hydrogen off-peak for transportation (the largest human source of greenhouse gases) in the foreseeable future. For example, France's electricity capacity is 100 percent fossil free: 80 percent nuclear and 20 percent hydroelectric. France sells surplus power to its neighbours at a lower rate than they can generate it themselves - something Ontario once did to the benefit of its own citizens and neighbouring jurisdictions.

Uranium is the key ingredient for nuclear energy and Canada is the world's leading producer of uranium, accounting for over 30% of total production. The uranium mined in Canada contains more energy than does all of our annual oil and natural gas production combined. Ontario has only two large energy resources of its own: hydro-electric, and nuclear energy, based on uranium. Nuclear and hydroelectric currently form the backbone of Ontario's electric energy mix, providing three-quarters of our electricity. Hydro-electric has limited additional potential whereas nuclear could be increased substantially to help support other energy needs, which up until now have depended on imported fossil fuels. Carbon-based fuels are subject to price swings based on events beyond the Province's control. These prices have a direct impact on the competitiveness of Ontario's industry. Expanding the usage of nuclear energy could therefore result in lower fuel prices while providing a reliable secure energy source.

RECOMMENDATIONS:

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

1. 1. In consultation with all stakeholders including the Federal government (i.e. business, education and labour) ensure that Ontario and Canada has a Nuclear Energy Strategy that will continue to provide jobs, investment and economic strength for the Ontario and Canadian economy in the coming decades.

2. 2. Ensure the strategy framework is national in scope and encompasses but not be limited to:

* Research and Development and commercialization of technology
* Fiscal Policy
* Skills Policy for the education of the Canadian workforce
* Intellectual property rights
* Innovation Policy
* Trade and Infrastructure issues

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