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January 12, 2009

Director, Environmental Assessment & Approvals Branch  
Ministry of the Environment  
2 St. Clair Avenue West  
Toronto, Ontario  
M4V 1L5

Dear Director:

Re: CPV NANTICOKE ENERGY L.P. (Proponent)  
NANTICOKE ENERGY CENTRE  
ENVIRONMENTAL REVIEW REPORT  
HALDIMAND COUNTY, ONTARIO

The CAE (Clean, Affordable Energy) Alliance is an energy ratepayers' organization representing the environmental and economic interests of Haldimand County residents, businesses and area workers, as well as the larger interests of the residents and ratepayers of Ontario.

The CAE Alliance is requesting that the Director refuse the request for Approval for the above noted project on the basis that the proposed project does not conform to existing Ontario laws and regulations; is premature in respect of the competitive process outlined in the Integrated Power System Plan (IPSP) now before the Ontario Energy Board (OEB); and that the public consultation process - a necessary component of this EA process - was deficient.

Should our request to reject the request for approval of this project be out of scope, we request Elevation of this process to a full Individual Environmental Assessment (EA).

Although we appreciate that dialogue with the Proponent could allay some of the CAE Alliance concerns - and it is in the best interests of process to attempt to do so prior to requesting elevation of the project to full Individual EA - the CAE Alliance only received notification of the completion of the Environmental Review Report on December 13, 2008, and not formally until December 16, 2008, although we had requested to be informed of the progress of this project in January, 2008, over one year ago.

**1.** Our request for rejection of approval for this project is based on:

- (i) Non-compliance with existing Ontario laws and regulations;
- (ii) Non-compliance with the Procurement Process for new power generation in Ontario;
- (iii) Non-conformity with requirements of the Integrated Power System Plan (IPSP);
- (iv) Insufficient public consultation process contrary to Guide to EA Requirements;
- (v) Incorrect and misleading information provided to the public;
- (vi) Non-compliance with the Guide to EA Requirements for Electricity Projects (Guide);
- (vii) Non-conformity with the Provincial Policy Statement (2005).

**2.** Our request for elevation to Individual EA is based, in addition to the above, on the following environmental concerns:

- (i) Air contaminant issues;
- (ii) Water contaminant issues;
- (iii) Volume of water for cumulative, consumptive purposes;
- (iv) Inefficient use of Non-Renewable Resources
- (v) Greenhouse gas emissions;
- (vi) Social, economic and cultural concerns;
- (vii) Fire and safety concerns;
- (viii) Potential Canadian Environmental Assessment Act triggers;
- (ix) Other.

### **1. REJECTION OF APPROVAL FOR THE PROJECT**

According to the Proponent, the proposed power plant is to be developed in response to the government's Integrated Power System Plan (IPSP). However, new natural gas-fired generation in Ontario will be procured through contract with the OPA, unless otherwise directed.

#### **(i) Non-Compliance with existing Ontario laws and regulations**

◆ According to the Electricity Act, as amended, the Ontario Power Authority (OPA) is the legislated agency that has the right and responsibility to "*enter into contracts relating to the adequacy and reliability of electricity supply, and to enter into contracts relating to the procurement of electricity supply and capacity in or outside Ontario*".

The Proponent does not have a contract with the OPA to supply power to the province.

◆ According to the Electricity Act, the OPA must apply to the Ontario Energy Board (OEB) for approval for its plans for its procurement processes for new electricity projects. This matter, currently before the OEB, has been adjourned pending information from the OPA in relation to a new Directive from the Minister of Energy.

◆ Ontario Regulation 424/04 specifies that the OPA shall ensure that for each electricity project which requires an environmental assessment under the Environmental Assessment Act, that there is an analysis of both the impact on the environment of the project, and an analysis of the impact of a reasonable range of alternatives to the electricity project. The reasonable alternatives for generation in the Nanticoke area, if any new generation is anticipated, are many and varied. The Proponent is presumptuous in proceeding with this project.

## **(ii) Non-compliance with the Procurement Process for new power generation in Ontario**

◆ According to Ontario Regulation 426/04, the OPA must follow guiding principles in selecting project developers. These principles ensure selection criteria that must be fair and clearly stated; a process that is open and accessibility to a broad range of interested bidders; must be competitive; and there must be no unfair advantage allowed in the selection process. Should the Ministry of the Environment grant approval to proceed with this project, it would be interfering in what must be a competitive and open process, would grant an unfair advantage to this Proponent and would negatively impact other criteria for project selection.

## **(iii) Non-conformity with requirements of the Integrated Power System Plan (IPSP)**

According to the Electricity Act, the OPA shall develop appropriate procurement processes for managing electricity supply, capacity and demand in accordance with its approved integrated power system plans.

◆ Ontario Regulation 424/04 directs the OPA to develop the IPSP within the parameters of identifying "*opportunities to use natural gas in high efficiency and high value applications in electricity generation.*"

◆ "*Natural gas in the IPSP is being planned in accordance with the 'smart gas strategy'; recommended in the supply mix advice, which places priority on maintaining the ability to use natural gas capacity at peak times and pursuing applications that allow high efficiency and high value use of the fuel.*" (OPA)

◆ "*The intent is not to use gas for baseload generation but the smart gas strategy does contemplate its use as a high efficiency resource (such as with cogeneration or fuel cells), or its use for targeted purposes (such as with peaking units to relieve transmission constraints).*"(OPA)

◆ "*Under a smart gas strategy gas-fired generation is used primarily in peaking applications and for local reliability.*" (IPSP - Scope and Review)

This project does not qualify according to the criteria proposed in the IPSP in respect of natural gas for electricity use.

◆ The IPSP promotes the use of new natural gas-fired generation in the areas of greatest need, that is, "*Northern North York, Kitchener-Waterloo-Cambridge-Guelph and Southwest GTA Regions*" (OPA). The IPSP has not addressed the need for new gas-fired generation in the Nanticoke area.

◆ The consultant's report to the OPA notes that "Most of the natural gas transmission, storage, and distribution facilities needed for the 4,300 MW of committed gas-fired capacity included in the IPSP are currently available or in construction." There will be insufficient infrastructure to accommodate all of the remaining gas-fired facilities that the OPA proposes for the areas of greatest concern. Allowing this project to proceed will divert resources from the locations proposed and preferred under the 20 year power plan to the detriment of the reliability of the Ontario power system.

#### **(iv) Insufficient public consultation process contrary to Guide to EA Requirements**

◆ According to the Guide to EA Requirements for Electricity Projects (Guide), A.6.2.1 Public Consultation, "*The purpose of public consultation in the Environmental Screening Process is to allow the Proponent to identify and address public concerns and issues and to provide the public with an opportunity to receive information about and make meaningful input into the project review and development. ... Consultation is necessary for the Proponent to: ... identify and assess the range of environmental and socio-economic effects of the project; and address the concerns ... interest groups and members of the public that may be directly affected by some aspect of the project. ... Failure to carry out adequate public consultation or to address public issues or concerns may result in requests to elevate the project.*"

"Public consultation should be commenced early in the screening process and continue throughout the process as necessary."

"While mandatory public notification requirements are specified in the Environmental Screening Process, other methods of public consultation used are at the discretion of the proponent. The proponent's public consultation program, including methods used to obtain public input and efforts to address or resolve public concerns and issues, may be considered by the Director of the EAAB in the event of a request to elevate the project."

According to the Guide, the Proponent is to "*Determine additional studies, assessment of effects needed in consultation with public and agencies; Consult and address issues and concerns*". This is to take place between the time that the Notice of Commencement has been issued, and the Notice of Completion is published, during the Environmental Review stage. The Proponent has not done so. The CAE Alliance requested information regarding this project, in January, 2008, from both the Proponent, and the County of Haldimand. No information was provided to, and no solicitation was sought from the CAE Alliance until we received notification of a public meeting for zoning and official plan changes from the County of Haldimand early December, 2008.

The CAE Alliance, contact person Carol Chudy, is listed on the formal mailing list contained in Appendix B, The Public Consultation Summary Report. Further, Mr. McEachern of the Proponent company confirms the CAE Alliance request for information regarding the project. (The email from Carol Chudy, Co-Chair of the CAE Alliance requested of the Proponent, via email, "*Would you kindly ensure that we are on your mailing list to receive all materials regarding this proposed facility?*")

The CAE Alliance therefore requests elevation of this project to an Individual EA.

◆ According to the Guide, "*The notice (of Commencement) (or an equivalent letter or information package) must be mailed or delivered to:... other potentially interested or affected parties (such as local interest groups, businesses, and members of the public that may be directly affected by some aspect of the project).*"

Likewise, "*The proponent should also mail or deliver the notice (of Completion) to other potentially affected agencies, municipalities, landowners, residents, businesses, and local interest groups, even if they have not previously expressed an interest.*"

According to the Guide, *"The proponent's approach to conducting the Environmental Review should be reviewed with key agencies, parties and the affected public, to ensure it will meet the objectives and requirements of the key stakeholders and the proponent."*

The Proponent is a registered Intervenor with the Ontario Energy Board in respect of the Board's review of the IPSP delivered to it by the Ontario Power Authority. According to the Proponent's application to the OEB for Intervenor status, "CPV has taken an active interest in regulatory proceedings in Ontario ... as a potential developer of generating assets in Ontario, CPV will be impacted ..." Mr. McEachern of CPV thereby requested that *"all documents and correspondence"* related to the IPSP proceedings be provided to him.

As such, the Proponent would have been aware of other potentially interested groups, including other Intervenor groups such as the CAE Alliance, Energy Probe, Canadian Chemical Producers, AMPCO, the Power Workers Union, the Ontario Federation of Agriculture, the Industrial Gas Users, etc.. It would appear from the mailing list included in the Report that this was not done.

The Proponent failed to follow the encouragement in the Guide to *"circulate a draft of the Environmental Review Report, or relevant sections of the report, to the appropriate agencies and key stakeholders for comment prior to the formal review periods."* The Proponent claims that *"In completing this ERR, a draft report was prepared and circulated to the municipality and key regulatory agencies."* The mailing list does not appear to include any of the above noted Intervenor groups, nor the 12 local industries in the local Industrial Park, Stelco, Esso or Ontario Power Generation. These industries are within 5 km of the subject property site, would be impacted by the project and would reasonably be considered "key stakeholders".

◆ The Environmental Review Report is to include, *"a summary of public and agency concerns or issues, and how they have been resolved or addressed."* The CAE Alliance asserts that the Environmental Review Report is incomplete in that it does not address concerns, because those who have legitimate issues were not consulted or apprised of information regarding this project.

◆ The Proponent states that, *"Public and agency consultation is a key component of the EA process for the proposed Nanticoke Energy Centre Project. From the initial proposal of the Project and throughout the EA process, emphasis has been put on consultation with area residents, community organizations and government agencies."* The Proponent claims that *"CPV has conducted comprehensive public consultation throughout the screening process for the Project."* The CAE Alliance refutes this assertion.

◆ The Proponent states that *"Participants (open house) were encouraged to add their names to the Project mailing list to obtain updates on the Project via direct mail."*  
Did the Proponent provide "updates on the Project" only to those who attended the open house?

◆ Information provided to the public during the Open House indicates that *"As part of the requirements of the Environmental Assessment, continuous consultation with the public and relevant stakeholders will be held. For this purpose, CPV plans to hold several Open House events to inform the community and members of the public of the overall progress of the Environmental Assessment and other components of the project."*

The Proponent failed to follow through on those commitments.

## **(v) Incorrect and misleading information provided to the public**

Members of the County of Haldimand Council, and some who expressed interest in/concern regarding this facility supported the proposed project in hopes that it would encourage job creation, economic enhancement and growth in the County.

◆ Handouts provided by the Proponent at the Open House, (Appendix D, Community Open House Presentation) to which residents and members from municipal and provincial government attended, contain the following information:

### ***"What will be the impact on the Nanticoke Generating Station?"***

*The Ontario Power Authority has determined that significantly more baseload and intermediate electricity generation will be needed in Ontario, to accommodate population and economic growth and to support existing and future conservation efforts. Nanticoke GS is one of the most important assets in our electricity system, providing 4000 megawatts of baseload supply. To ensure the long-term sustainability of power generation infrastructure in the Haldimand County area, we believe that a mix of supply will be indeed – including clean, natural-gas fired generation. The proposed combined-cycle facility can easily co-exist with Nanticoke GS, to meet existing and future growth needs."*

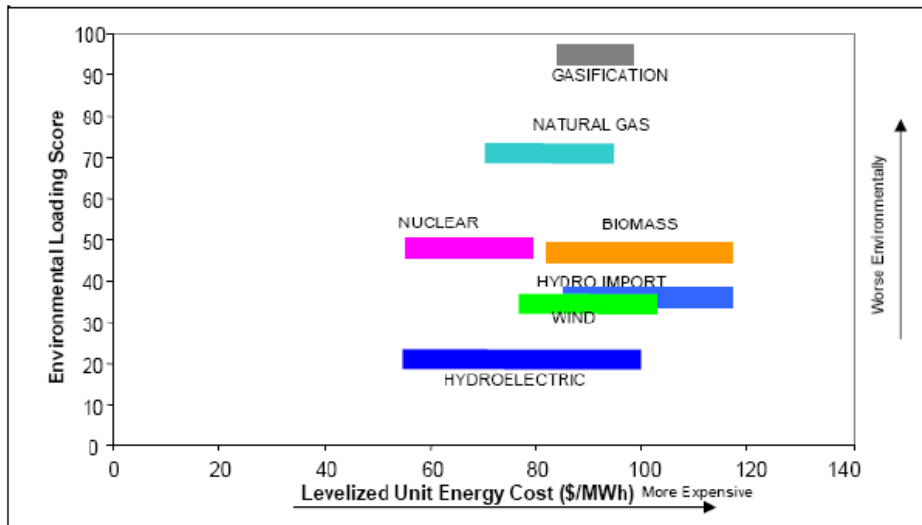
As an Intervenor at the IPSP process, the Proponent is aware that the government has proposed natural gas-fired generation, in conjunction with new renewable power, to replace Ontario's coal-fired generating facilities. The information provided to the public is disingenuous and intended to imply that the proposed facility will augment the presence of Nanticoke GS in the community. The host communities of Haldimand and Norfolk are supportive of retaining the Nanticoke Generating Station. Were the question posed, above, answered differently, public sentiment, community and municipal support would likely prove opposed.

### ***"What about a nuclear facility in Haldimand County?"***

*The Nanticoke Energy Centre is being proposed to address a need for intermediate and new baseload electricity supply. While a new nuclear facility can accommodate the same need, a combined cycle gas alternative is much more cost-effective and can be built faster to ensure the stability of Ontario's electricity system.*

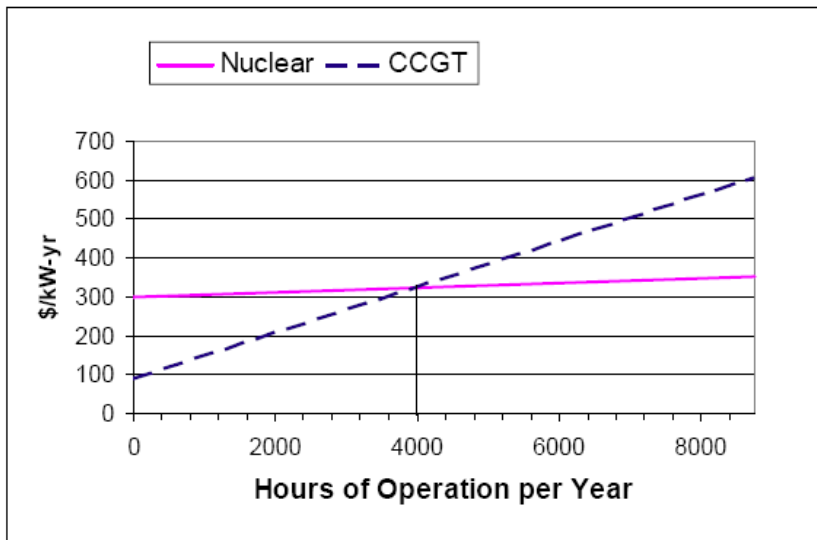
The proposed IPSP is clear in stating that natural gas-fired generation NOT be utilized for baseload power needs. According to the OPA, "...nuclear generation would provide an excellent alternative to the volatility of price and uncertainty of supply that are major drawbacks to gas-fired generation for baseload." Also, "Do not use natural gas for base-load generation, since this use results in higher exposure to natural gas price risks." OPA analysis "confirmed the merits of nuclear generation for baseload, natural gas-fired generation for peaking ..." also, "The "smart gas strategy" regards gas as a supplemental resource. Whereas nuclear will provide baseload power and renewable energy will contribute additional grid-based energy, natural gas will balance the unpredictable availability of renewable supplies and meet peak load demands." (OPA) The following OPA charts demonstrate the cost differences between natural gas-fired generation, and nuclear power. The first is specific to baseload and demonstrates both the cost and environmental advantage of nuclear over natural gas-fired generation.

**Figure 1.2.11: Combined Environmental Impacts and Cost Ranges – Base Load**



Source: OPA, CERI and SENES; Note: Levelized Cost based on 11% discount rate.

**Figure 1: Breakeven Hours of Operation on a \$/kW Year Basis**



Source: OPA

*"The variable costs for a CCGT plant are relatively high, and therefore the total cost expressed in \$/kW-year does increase significantly as the hours of operation increase."* (OPA)

◆ In the information provided by the Proponent regarding Open House queries, an attendee asked the question, "Why not build the plant where more electricity is required? Staff for the Proponent replied that, "Power projects can only be developed where there is adequate transmission line capacity." The attendee asked a legitimate question, one that the OPA has addressed in planning for new gas-fired generation to be located near to load requirements. This answer did not address the question, rather the answer was designed to mislead.

◆ Information provided in the "handout" to the public notes that *"The facility is proposed in response to the Government of Ontario's anticipated need for intermediate and new baseload electricity supply, and to support the existing transmission infrastructure in Nanticoke."*

Would the Proponent advise what is meant by supporting the existing transmission infrastructure in Nanticoke?

◆ The Notice for Public Open House attendance did not indicate the size of the project - 1,200 MW - 1/3 the capacity of Nanticoke, which is significant.

◆ The map of the proposed site location provided to the public during the Open House meetings did not show the location of Nanticoke Generating Station, and its proximity to the proposed power plant, although the site map did include Esso and Stelco.

◆ Information provided at the Open House noted that *"It is anticipated that at peak construction approximately 900 workers would be on site."* The Report indicates 600 and elsewhere 700 workers.

The Proponent states, that in selecting this site, their criteria included "technical development and feasibility, environmental impacts, **community acceptance** and capital cost". The CAE Alliance asserts that there was not sufficient public involvement in the environmental assessment process, and that certain information was provided in such a way as to generate community acceptance and support, which might not otherwise have been forthcoming.

#### **(vi) Non-compliance with the Guide to EA Requirements for Electricity Projects (Guide)**

A Notice of Commencement of Environmental Screening was issued in local newspapers by the Proponent, in the Haldimand Press, on January 3, 2008 and in the Regional News This Week on January 9, 2008. In accordance with the Guide, the project would proceed to an Environmental Review stage if it was determined that there are potentially significant negative environmental effects or public issues that warrant more detailed study and assessment. It is apparent that the Proponent has determined that the project warrants an Environmental Review, but has not issued the subsequent notice, as required. The Guide states that, *"Upon commencing an Environmental Review, the proponent must issue a public notice. The 'Notice of Commencement of an Environmental Review' must be placed in a local newspaper(s) with circulation in the vicinity of the project."*

This latter notice, unlike the Notice of Commencement of Environmental Screening, is to include *"... a statement that the project is entering the Environmental Review stage of the Ministry of the Environment's Environmental Screening Process for electricity projects; a brief description of the issues/concerns that will be subject to more detailed study during the Environmental Review stage..."*

The Proponent has not followed proper procedure for notice of the Environmental Review.



## **(vii) Non-conformity with the Provincial Policy Statement (2005)**

According to the Guide to EA Requirements for Electricity Projects, the proposed project must be consistent with the Ontario Provincial Policy Statement (PPS).

### **Economic Impacts of Natural Gas for Power Generation**

◆ The PPS "... supports the provincial goal to enhance the quality of life for the citizens of Ontario." It "is more than a set of individual policies. It is intended to be read in its entirety and the relevant policies are to be applied to each situation".

The vision of the PPS is contained in the statement that "*The long-term prosperity and social well-being of Ontarians depend on maintaining strong communities, a clean and healthy environment and a strong economy.*" The policies support "*commitment to building livable and healthy communities that provide a higher quality of life for all Ontarians.*"

The land use patterns encouraged in the PPS "*support the financial well-being of the Province*". "*Healthy, livable and safe communities are sustained by promoting efficient development and land use patterns which sustain the financial well-being of the Province and municipalities over the long term...*"

*"Strong communities, a clean and healthy environment and a strong economy are inextricably linked. Long-term prosperity, environmental health and social well-being should take precedence over short-term considerations."*

◆ When viewed in the context of the PPS, the CAE Alliance asserts that the use of natural gas for power generation in Ontario contravenes the Policy Statement and the goals it sets to achieve. The use of natural gas for electricity will cause a detrimental rise in costs for power, for home heating, for industry and for agriculture.

◆ The significant, negative impacts arising from the use of natural gas for power generation are summed up in information provided by AMPCO (Association of Major Power Consumers) on behalf of the industrial/manufacturing and agricultural sectors which represent the primary employers, the backbone of the Ontario economy.

*"The Alliance of Energy Consumers has submitted to the OEB several studies indicating increasing prices for both natural gas and electricity generated by natural gas-fired power plants. These higher prices would negatively affect the provincial economy and diminish future prospects for growth.*

*The studies, completed by the Canadian Energy Research Institute and the Centre for Spatial Economics, show that a number of important economic indicators would all be hurt by higher natural gas and electricity prices. These include such essential indicators as GDP, inflation rates, unemployment rates and government budgets.*

*The Alliance further concluded:*

*The negative impact of the plan would be felt hardest over the next 5 years.*

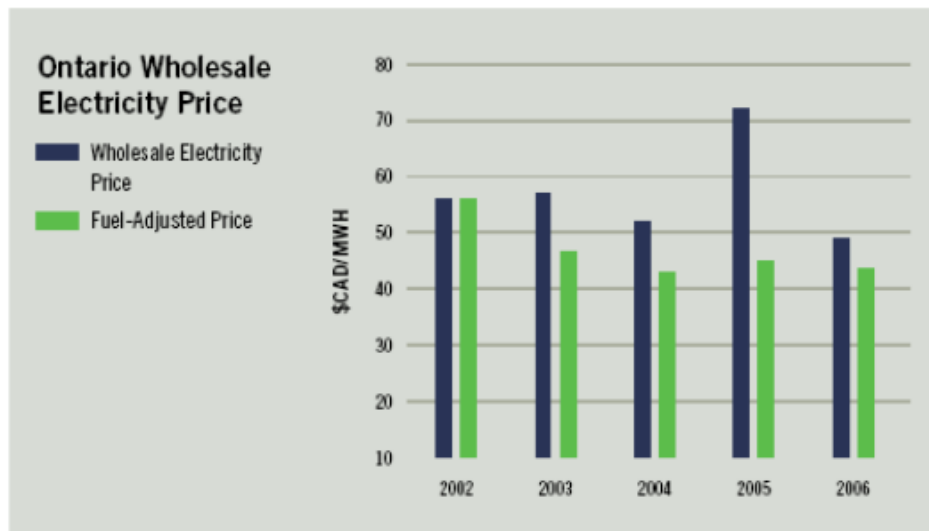
*Industries such as mining, primary metals, machinery, plastics and forestry industries will see the largest reductions in real GDP.*

*Adverse impacts will be disproportionately borne by the relatively poor, rural and Northern consumers.*

*The Alliance includes: AMPCO, the Ontario Mining Association, Canadian Chemical Producers Association, Cement Association of Canada (Ontario), Industrial Gas Users Association, Ontario Federation of Agriculture, Ontario Forest Industry Association and the Stone, Sand and Gravel Association of Ontario. "*

◆ The full impact of the coal replacement with natural gas-fired generation was captured in the CIBC World Markets Report of July, 2007, which estimates that this move would cause electricity prices to rise 60%-70%, or roughly 6.5% per year. ("Can Ontario Shutdown Coal and Keep the Lights On?", Benjamin Tal, CIBC World Markets Inc.)

◆ The following chart demonstrates the impact of higher natural gas costs on electricity prices. *"The substantial increase in the hourly prices in 2005 is attributed to the increase in the price of natural gas following hurricanes Katrina and Rita, with those prices being 40 per cent higher in 2005 than in 2004. ... This also illustrates how in a market model, changes in fuel prices such as natural gas, a major component of the cost to produce electricity, have an immediate and direct impact on the price of electricity." (IESO)*



(IESO - 2007 Market Outlook)

◆ "... electricity prices in Ontario dance very closely to the tune of natural gas. The surge in natural gas prices during Katrina led to a 40% increase in electricity prices in Ontario. On average, a one percentage point increase in natural gas prices leads to 0.5 percentage point increase in electricity prices in Ontario." (CIBC World Markets Inc., July 18, 2007)

◆ Navigant Consulting advises, "Higher than forecast natural gas prices have been a primary contributor to higher than forecast electricity prices in the spot market. Preliminary analyses show that for every 10% increase in natural gas prices, Ontario electricity spot market prices would increase by approximately 6%. It is notable that both the natural gas price and the electricity spot market price have each increased by 32% relative to forecast." (Monthly Variance Explanation April/05 – October/05)

◆ The following chart from the OPA shows that natural gas-fired generation is the most costly, with the exception of solar power. (The median range is shown here - gas generation costs are more expensive in the upper and lower scenarios as well).

**Table 5: Commodity Costs (\$/MWh) – Median Scenario**

	2010	2015	2020	2025
Non-Prescribed Hydro	37	43	43	38
Non-Prescribed Coal	37	43		
Prescribed Hydro	38	38	38	38
Beck Tunnel	69	69	69	69
Prescribed Nuclear	52	52	52	52
Refurbished Prescribed Nuclear	74	74	74	74
Bruce A	74	74	74	74
NUGS	98	112	103	72
Renewed NUGs	137	127	116	109
CES Contracts	177	142	128	145
RES Contracts	81	74	68	63
New Nuclear	86	86	86	86
New Renewables	85	85	85	85
New Gas	200	152	126	151
Standard Offer	105	97	90	84
Standard Offer Solar	404	366	331	300
Uncontracted Supply	37	43	43	38
Imports	37	49	47	49

Source: OPA

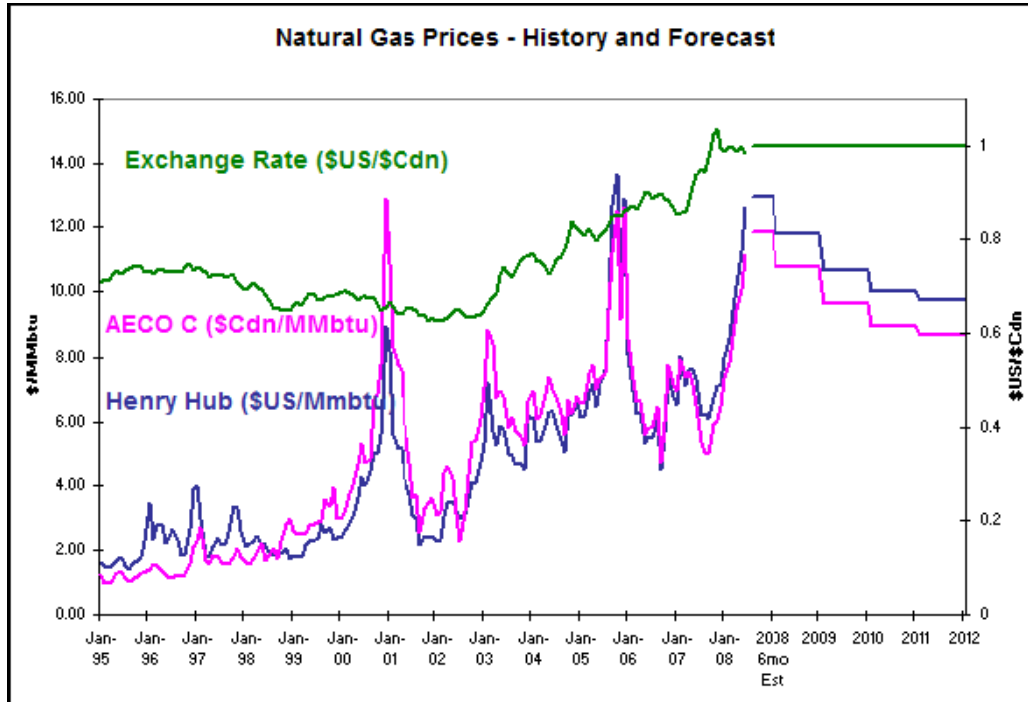
◆ “Where the province contracts for gas-fired generation under a commercial arrangement that is indexed to the price of natural gas, Ontario’s electricity ratepayers are fully exposed to the volatility of natural gas prices.” (Atomic Energy of Canada, August 2005)

◆ The impact on pricing is not so elementary as removing coal-fired generation and putting natural gas in its place. The true cost impacts are felt as a result of market setting price. Traditionally coal sets market price about 55% of the time; natural gas at 25% of the time. According to the National Energy Board, “When gas generation set the price, it is more than twice as high (about \$78/MW.h, versus about \$33/MW.h for coal”. When coal-fired generation is removed from the system, natural gas-fired generation is expected to set market price about 85% of the time - at double to triple the price. This price is paid to all other power producers generating for the Ontario market at that time.

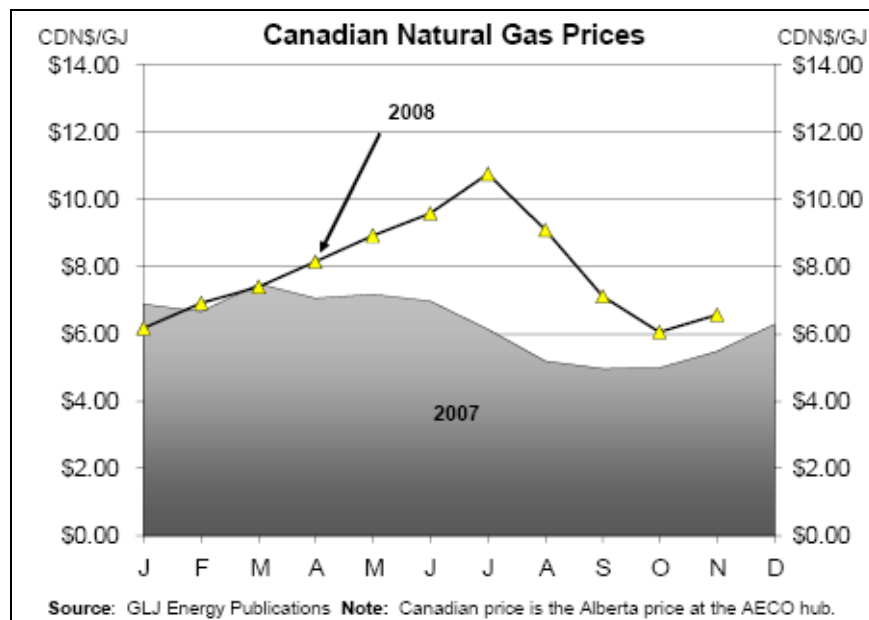
◆ The National Energy Board also notes that “Not only will electricity prices be influenced by that of natural gas but, with power generation becoming the fastest growing sector of natural gas demand, natural gas prices will also be increasingly influenced by electricity markets. This growing interdependency may contribute to higher costs for natural gas and electricity that will have to be absorbed by a range of energy consumers.” Also, “The growing share of electricity produced from natural gas will increasingly tie the price of the electricity to that of natural gas.” (National Energy Board, “Natural Gas for Power Generation: Issues & Implications, June 2006)

◆ “... expectations of higher gas and electricity prices combined with the risk of diminished reliability raise the question as to whether there should be a debate or expanded discussion on the impacts of increasing the use of natural gas to generate electricity. Other consumers of gas,

whether small residential and commercial customers or large industrials, may face higher energy costs as a greater portion of natural gas demand becomes increasingly weather sensitive. Further, some of these consumers may be challenged to compete with gas-fired generators for supplies of natural gas and related transportation services.” (National Energy Board)



Note the significant, continual trend upward since 2002, and the volatility of the market.



◆ According to the OPA, “By 2017, natural gas prices are expected to rise until 2020 due to depletion of conventional gas resources in the Western basin.” More than 95% of the gas consumed in Ontario comes from outside the province, mostly from the Western Canadian Sedimentary Basin. These conventional resources will need to be replaced by more costly supplies from coal-bed methane, the Mackenzie Delta and liquefied natural gas (LNG), which are uncertain, more costly and have higher environmental impacts.

#### Summary

Approval for this proposed gas plant will violate the mandate of the Provincial Policy Statement, the goals of which are strong local and provincial economy, financial well-being and long term prosperity for all Ontarians.

The provincial economy will suffer if this project receives approval to proceed from the Ministry of the Environment. Every product and service utilizes electricity, so the impact of higher energy costs has a compound and domino effect. Higher energy rates hurt those on lower incomes, reduces consumer spending and impacts the ability of business and industry to remain competitive in the global market.

*"An increase in electricity prices may have adverse macroeconomic effects on the provincial economy in terms of employment losses and may hinder the effectiveness of Ontario businesses that compete outside of the province."* (OPA) According to the former Minister of Finance, the slowing of the Ontario economy is due in part to “*higher energy costs*”. Likewise, higher energy prices are deemed a risk to any hoped for turn around in the economic outlook.

The short term gains stemming from temporary construction work on the facility will be overshadowed by the long term results of utilizing natural gas-fired generation for power in the province.

The additional concerns relating to the socio-economic impacts, discussed in Part 2 of this Request to the Director, augment the information provided above, demonstrating overall long term degradation of local and provincial economy and quality of life.

*"Ontario's long-term prosperity, environmental health, and social well-being depend on protecting natural heritage, water, agricultural, mineral and cultural heritage and archaeological resources for their economic, environmental and social benefits."*

(Provincial Policy Statement)

### Water Use

According to the PPS, land use planning must "*promote water conservation and water use efficiency*".

◆ "*Planning authorities shall protect, improve or restore the quality and quantity of water by:*  
- *implementing necessary restrictions on development and site alteration to protect, improve or restore vulnerable surface and ground water ...*  
- *promoting efficient and sustainable use of water resources, including practices for water conservation and sustaining water quality*"

◆ "*Negative impacts*" as it refers to water resources, is defined in this Policy Statement as "*degradation to the quality and quantity of water...*" "*Quality and quantity of water: is measured by indicators such as minimum base flow, depth to water table, aquifer pressure, oxygen levels, suspended solids, temperature, bacteria, nutrients and hazardous contaminants, and hydrologic regime.*"

◆ The cumulative, consumptive use of approximately 30,000,000 to 43,000,000 litres per day of water - 90% of which is lost to evaporation - is in conflict with the provincial policy statement.

◆ The Proponent has not alleviated concerns regarding substances that would be discharged from the facility. Some are already high and in excess of provincial limits. The Wastewater Discharge Assessment indicates that "*elevated phosphorus in discharge water has the potential to stimulate plant growth and thereby affect the aesthetics of Nanticoke Creek.*" The Proponent fails to provide information regarding the consequences of excessive plant growth, and the resulting impacts on oxygen concentrations and aquatic and vegetative changes that may occur.

The Proponent has downplayed the degradation that will occur to the quantity and quality of water resources as a result of the project, and over the approximate 20 year life of the power plant. Most of the negative impacts listed above from the PPS are either unresolved in the information provided, or will remain as negative impacts if this project proceeds, contrary to the PPS guidelines. (See Pages 23-25 for further information related to water contaminant issues.)

### Natural Heritage

◆ According to the PPS, "*Development and site alteration shall not be permitted in: significant habitat of endangered species and threatened species; significant wetlands ...*"

◆ The Nanticoke Hemlock Slough is located adjacent to the study site and is a Life Science Site and a Provincially Significant Wetland. Project site maps show this area to be central and north east of the site, and directly adjacent to the banks of cooling towers. As winds generally blow from the south west, the potential impact of cooling water contaminants in the form of droplets from the towers must be considered. (See section on air quality, below) The designated 30 m buffer would not be sufficient to offset the impacts from this.

◆ The Ministry of Municipal Affairs and Housing has stated issues regarding the wetlands, and *"seeks assurance that the proposed works will not result in negative impacts to the wetland complex. ... The report should clearly demonstrate that the proposed works will not result in negative impacts to the PSW in order to be supported by provincial policy."*

The CAE Alliance does not believe that the Report satisfies these additional concerns regarding potential cooling water issues.

◆ There is one rare plant species that has been reported on the study site which is *"provincially significant"* and *"considered imperiled"* in Ontario.

◆ The Proponent must clarify what is meant by the information that *"Table 3-2 outlines the species that are currently waiting for reassessment by COSEWIC (Committee on the Status of Endangered Wildlife in Canada). They are currently listed as Special Concern, Schedule 3 (Environment Canada, 2007) and have been detected within 5 km radius of the study area. Table 3-3 lists the provincially significant species within the vicinity (5 km) of the study area.*

*The species listed in Table 3-2 may be upgraded or de-listed on the SARA species list depending on the outcome of their evaluation by COSEWIC, thus, their status should continue to be monitored. Similarly, species listed in Table 3-3 may have their status upgraded or downgraded in the future by the Committee on the Status of Species at Risk in Ontario (COSSARO) and their status should continue to be monitored as well."*

What is the time frame for this investigation? What is the determination of the project if endangered or imperiled species are located? Is the PPS not sufficiently clear in its directive?

◆ The Monarch Butterfly is considered a species of special concern; the Meadow Crayfish provincially vulnerable. Both were observed on the proposed power plant site.

◆ The Eastern Ribbonsnake is a species of Special Concern both provincially and federally. It is noted that there is available habitat for this species on site.

These unresolved concerns regarding development on or near areas that may impact wetlands and endangered species, are contrary to the PPS.

### Natural Gas Use

*"Minerals and petroleum resources shall be protected for long term use."* Petroleum resources as defined in this Policy Statement include natural gas.

In addition to the PPS, the Screening Criteria indicates that the Proponent must determine whether the project will *"have negative effects on the availability of petroleum resources."*

◆ Natural gas-fired generating plants typically require relatively large quantities of gas and high gas delivery pressures."

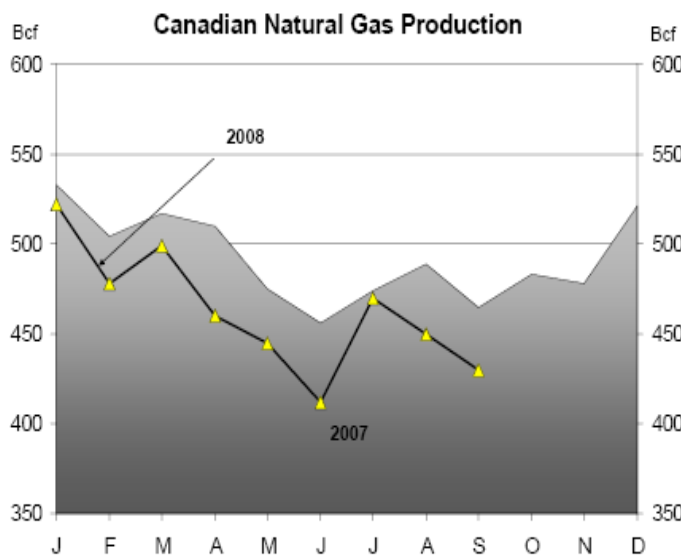
The Proponent has not provided any estimate of the volume of natural gas that would be consumed at this facility.

◆ The Ontario Energy Board indicates that the volume of natural gas required for power generation to replace coal-fired power will be more than the volume currently consumed by all residential consumers combined. (75% of Ontario homes heat with natural gas)

◆ Power generation production in natural gas plants utilizes gas at about 40%-50% efficiency. That would certainly not be considered a high efficiency or high value use when compared to home heating or industrial uses of natural gas at a 95% efficiency rate.

◆ All credible government and energy agencies, Canadian and international, confirm that North American natural gas production is in decline. Increasing demand for natural gas is now outpacing supply.

◆ The following charts, from the Canadian Natural Gas Monthly Market Update, November, 2008 (Natural Resources Canada) show the cost increases for natural gas over the past year as well as the continuing decline in production. Although drilling increased 7% in 2008, natural Gas storage is down 3% from last year.



Source: Statistics Canada Note: Most recent month is a preliminary figure

Natural Gas	Percentage Change	
	Year-to-Year	Month-to-Month
Market Fundamental		
Prices	20%	8%
Heating Degree Days	2%	255%
Production	-8%	-4%
Sales	-4%	15%
Exports	-11%	-4%
Imports	-16%	-4%
Storage	-3%	4%
Drilling	7%	2%

PRICES: CDN \$6.56/GJ in November 2008; an increase of 20%

HDDs: 103 in September 2008; an increase of 2%

PRODUCTION: 430 Bcf in September 2008; a decrease of 8%.

◆ Recent National Energy Board (Canada) estimates suggest that nearly 2/3 of Canada’s discovered resources have been consumed leaving only 7.5 years of proven reserves and another 5 years of possible reserves. British Petroleum estimates Canada’s 2004 reserves to production ratio to be 8.8 years. BP’s estimate for the United States’ reserves to production ratio is only slightly higher at 9.8 years.

◆ “North America’s natural gas market has entered a new era. Higher natural gas prices, which are now seen as a feature of the natural gas market, at least over the medium-term, primarily reflect the inability of North American natural gas production to keep pace with ever-increasing demand.” (Natural Resources Canada – Canadian Natural Gas Review, January, 2006)



◆ The MacKenzie Valley pipeline was supposed to have been completed this year. It's bogged down in the approvals process, and the price has ballooned to \$16 billion. An LNG terminal will be completed this year in Saint John, New Brunswick only to ship the gas to the U.S.

◆ The National Energy Board studied the use of natural gas for power generation in relevant parts of Canada and the U.S., with the conclusion that there will be increased competition for dwindling supplies, and that new resources in western Canada will not be sufficient to meet the growing needs. *“The growing gas demand and uncertainty in future gas supply have meant high and volatile natural gas prices and have led to greater and renewed focus to develop other non-gas generation.”* (National Energy Board, “Natural Gas for Power Generation: Issues and Implications, June 2006) *“High natural gas prices resulting from the tight balance between North American gas supply and demand has been a key factor in encouraging more gas drilling. ... the producing sector needs to drill more wells each year just to keep production flat.”*

◆ Ontario will rely increasingly on LNG supplies, primarily from countries that are now developing a cartel similar to OPEC.

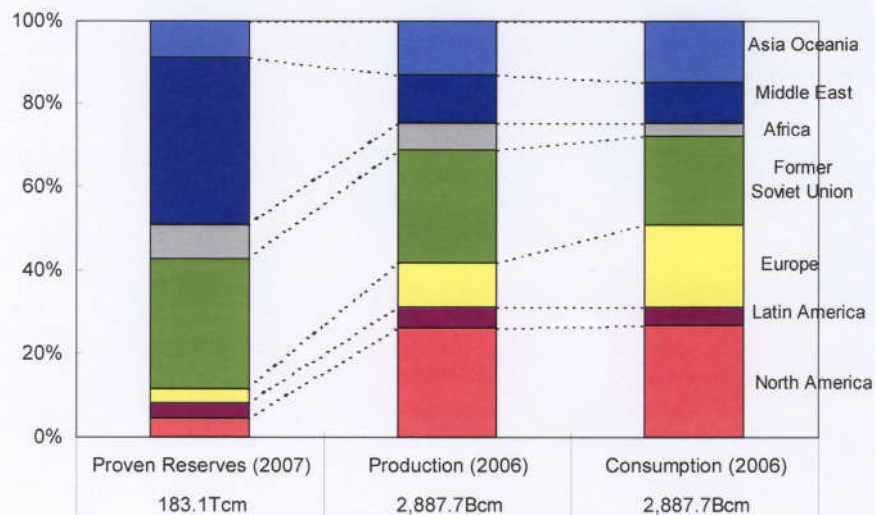
July, 2008

[Chart 1] World Natural Gas Reserves, Production and Consumption

	Proven Reseraves (2007)		Production (2006)		Consumption (2006)	
	(Tcm)	Share(%)	(Bcm)	Share(%)	(Bcm)	Share(%)
North America	8.0	4.4	753.2	26.1	769.9	26.7
Latin America	6.9	3.8	147.0	5.1	130.8	4.5
Europe	6.3	3.4	305.4	10.6	568.3	19.7
Former Soviet Union	57.2	31.2	778.7	27.0	616.4	21.3
Africa	14.5	7.9	191.7	6.6	88.5	3.1
Middle East	73.9	40.4	334.8	11.6	287.1	9.9
Asia Oceania	16.3	8.9	377.0	13.1	426.7	14.8
Total	183.1	100.0	2,887.7	100.0	2,887.7	100.0

Source: *Natural Gas in the World*, Cedigaz

[Chart 2] World Natural Gas Reserves, Production, and Consumption by Region



Source: *Natural Gas in the World*, Cedigaz

## Energy

The Proponent claims that the "*Provincial Policy accepts the location of alternative energy systems on agricultural lands. Natural gas fired generation is considered an alternative energy system, as per the Provincial Policy Statement.*"

However, the definition of "alternative energy systems" included in the PPS "*means sources of energy or energy conversion processes that significantly reduce the amount of harmful emissions to the environment (air, earth and water) when compared to conventional energy systems.*"

Throughout the IPSP documents natural gas is referred to as a conventional energy source. For example, "*The IPSP will refine supply mix advice estimates for the conventional generation energy contributions from nuclear and natural gas ...*"

(It is clear from the information contained in the Haldimand County report in support of by-law and official plan changes, that the County erroneously considered natural gas as an "alternative energy source.)

The CAE Alliance disputes the inclusion of natural gas fired generation as an alternative energy source and claims that it is more accurately described as "conventional energy". (If natural gas were be considered "alternative" then so could nuclear, or coal-fired power utilizing available emissions reduction technologies.)

## Summary

The CAE Alliance asserts that the proposed natural gas-fired power plant does not conform to the vision, goals or objectives set out in the Provincial Policy Statement. It does not serve to enhance the community, nor the good of the Province. It will increase energy costs to all consumers and divert depleting natural gas supplies from more vital and efficient uses.

## Request

According to the Guide, "*In all situations where review under the Environmental Screening Process is required, it is the responsibility of the proponent to ensure that the planning process as set out in the Environmental Screening Process is undertaken. Failure to follow the process outlined in the Environmental Screening Process places the proponent in contravention of the Environmental Assessment Act. Offences and penalties are dealt with in section 38 of the Environmental Assessment Act.*"

For the reasons contained in this section of our Request to the Director, we ask that the Director notify the Proponent of the failure to follow the process as required, and to impose such penalty as is fitting. We further request that the Director disallow approval for this project on the basis that it does not comply with existing Ontario laws and regulations and is contrary to the provisions for natural gas-fired generation, as well as the competitive process for procurement, as outlined in the IPSP currently before the Ontario Energy Board.

## **2. REQUEST FOR ELEVATION TO AN INDIVIDUAL EA - ENVIRONMENTAL CONCERNS**

In addition to the information supplied in the above section, the CAE Alliance provides the following in support of our request for elevation of this project to an Individual EA.

- (i) Air contaminant issues;
- (ii) Water contaminant issues;
- (iii) Volume of water for cumulative, consumptive purposes;
- (iv) Inefficient Use of Non-Renewable Resources
- (v) Greenhouse gas emissions;
- (vi) Social, economic and cultural concerns;
- (vii) Fire and safety concerns;
- (viii) Potential Canadian Environmental Assessment Act triggers
- (ix) Other.

The definition of Environment contained in the Guide to EA Requirements for Electricity projects includes:

- air, land or water;
- plant and animal life, including man;
- the social, economic and cultural conditions that influence the life of man or a community;
- any building, structure, machine or other device or thing made by man;
- any solid, liquid, gas, odour, heat, vibration or radiation resulting directly or indirectly from the activities of man, or;
- any part of combination of the foregoing and the interrelationships between any two or more of them.

*"Negative environmental effects include the negative effects that a project has, or could potentially have, directly or indirectly on the environment at any stage in the project life cycle. Negative environmental effects may include, but are not limited to, the harmful alteration, disruption, destruction, or loss of natural features, flora or fauna and their habitat, ecological functions, natural resources, air or water quality, and cultural or heritage resources. Negative environmental effects may also include the displacement, impairment, conflict or interference with existing land uses, approved land use plans, businesses or economic enterprises, recreational uses or activities, cultural pursuits, social conditions or economic structure."*

The following concerns associated with air and water are in addition to the issues raised by the Ministry of the Environment in consultation with the Proponent.

### **(i) Air contaminant issues**

◆ Throughout the information provided (with the exception of the air quality report), the Proponent and the Proponent's consultant AMEC Earth & Environmental (AMEC) advise that *"The proposed facility will be designed for providing intermediate electricity with the potential for baseload electricity to the electricity supply if required."* However, in the Air Quality Assessment Report, the Proponent advises that *"The proposed facility will be designed for providing baseload electricity to the power grid."*

The CAE Alliance is concerned that the air quality assessment provided is based on baseload production, not on intermediate load requirements. There is a significant difference in emissions from a plant that ramps up and down to load follow, is dispatchable for rapid load changes, etc. as is characterized by intermediate generation.

◆ The Proponent has advised that, *"AMEC has prepared emissions estimates of the power plant for different operating scenarios based on information supplied by the equipment manufacturers"*. It is also noted that *"... calculation of estimated air emission rates for each contaminant from each emission source. Site emissions were then developed based on operation conditions and specific application of different pieces of equipment"*.

What "different operating scenarios" was the report based on?

◆ The information provided in the air quality report from Siemens regarding the SGT6-5000F Gas Turbine includes the disclaimer that "Performance is based on new and clean condition. All data is estimated and not guaranteed." Also Siemens advises *"that the information ... has been prepared and is being transmitted per customer request specifically for information purposes only. Such information is not intended to be used for evaluation of plant design and/or performance relative to contractual commitments. Data included in any permit application or Environmental Impact Statement are strictly the customer's responsibility".*

The CAE Alliance would like to know whether the turbines that will be used are in fact Siemens SGT6-5000F, and whether these and all other equipment to be used in this project are in fact in new, unused condition.

The manufacturer Siemens indicates that data included in any permit application or in an environmental impact statement are the customer's responsibility. The CAE Alliance maintains therefore that the Proponent must accordingly not rely on information provided by the manufacturer but produce more detailed and specific calculations of emissions based on all equipment in a variety of intermediate generating scenarios.

◆ The air quality report notes that *"Emission estimates were based on estimated gas turbine performance data supplied by Siemens for a simple cycle, dry low NOx natural gas combustor"*.

Project information states, *"Thermal power generation and combined-cycle combustion turbine technology in particular is an essential component of the overall mix of generation necessary to meet Ontario's current and growing needs. A combined-cycle combustion turbine firing natural gas is highly efficient and one of the cleanest forms of thermal power generation."*

There is some confusion here. Is the Proponent using a simple cycle gas turbine, or a combined-cycle combustion turbine? The Proponent must clarify and provide more detailed evaluation of how emissions would differ using a single cycle turbine in a combined cycle facility. The CAE Alliance asserts that emissions calculations provided are not sufficiently detailed.

◆ The Air Quality report notes, "*As the Siemens performance data did not include SO<sub>2</sub>, emission estimates for SO<sub>2</sub> were calculated based on AP-42 emission factors for Stationary Gas Turbines (US EPA AP-42, Chapter 3, Table 3.1-2a).*" What type of gas turbine was used in these calculations?

*"The air quality assessment followed a number of distinct steps: Assessment of the equipment to determine the type of emissions that could be expected. ...*

We are concerned with this method of determination of SO<sub>2</sub> emissions and the CAE Alliance therefore requests independent, expert review of the information provided.

◆ According to the Air Quality report "*Calculation of estimated air emission rates for each contaminant from each emission source. Site emissions were then developed based on operation conditions and specific application of different pieces of equipment...*" and that, "*For completeness, NOX emissions from the operation of the emergency diesel fire pump have also been modeled and the results presented separately...*"

What other equipment was included in the emissions calculations? Did the Proponent include emissions from duct burners, the auxiliary heater, the auxiliary boiler, the emergency diesel engine, and the cooling tower?

◆ We understand that operation of the gas turbines at less than base load rating is very inefficient. The heat rate of the turbine will increase and output from the HRGS will go down as the CTG exhaust temperature will go down. Emissions will increase and be effected by the gas turbine as well by duct firing, if that is to be included in the plan.

◆ Regarding stand-by position of the plant, will the units be shut down completely? If so, the units require 3-4 hours to bring it to full load. During that time, the gas turbine will be operating at a low load and plant efficiency will be less than 25%. (This is the way the plant has to run the gas turbine at very low load to bring steam up to pressure and temperature and flow in the HRGS with the loading of the steam turbine.)

◆ Has the Proponent determined the general pattern of operation that would be required, from the load profile and power production of the coal fired generating stations it will replace? Can the gas-fired units vary output by 50% per unit and maintain fairly constant plant efficiency? It is our understanding that the gas turbine train efficiency would go from 42% to 20% (HHV), if the load were varied by 50% per unit.

◆ The CAE Alliance has been advised that as natural gas-fired units are ramped up and down, there are emissions impacts of cold starts of units and emissions impacts of gas-fired turbines operating at low load. At lower loads emissions rise and may not meet Ontario regulation. NOx emissions increase because the units operate on regular, not low NOx burners. We are concerned

that information provided in the air quality report provided by the Proponent represents gas-fired facilities operating at maximum potential, fully loaded.

The CAE Alliance has discussed these issues with a natural gas generation expert. The CAE Alliance wishes to retain this consultant for an independent review of the air quality emissions report produced by the Proponent. Had we been consulted earlier on in the process we would have obtained that review by this time. This Review process is a proponent driven self-assessment by a merchant power company that is eager to proceed in order to generate revenue for owners and shareholders. We are requesting an extension of the deadline for input to this process in order for us to obtain an objective, professional, formal report to verify the air quality information provided by the Proponent.

◆ Air quality information does not include the adverse impacts from benzene, toluene, xylenes, polycyclic aromatic hydrocarbons, formaldehyde, and many other organic compounds associated with the combustion of natural gas that will be released into the atmosphere.

◆ The Proponent does not include emissions of pollutants and particulate matter emitted with the cooling tower drift. Cooling water towers use additives to prevent corrosion and algae build-up. These substances are described as “acidic and caustic”. Solids left behind are corrosive products from build up and increase in concentration when water is evaporated. These substances become air borne through the cooling water plume and drift. It is our understanding that secondary particulate associated with cooling water towers - point sources of PM<sub>10</sub> - are almost equivalent to that of primary particulate.

◆ For example, in other jurisdictions it appears that cooling tower particulate is included as a separate item. California *"limits cooling tower PM emissions to 1.6 lb/hr based on a 0.0005% drift rate with a maximum circulation rate of 130,000 gallons per minute and a maximum total dissolved solids (“TDS”) content of 5,000 ppm. The proposed PSD Permit requires an annual source test for cooling tower PM emissions."* How would this project compare?

◆ The Wastewater Discharge Assessment lists a number of minerals, chemicals and pollutants present in Lake Erie, harmful substances which include aluminum, arsenic, lead. Large volume of process water will be taken from the Lake, with much evaporation of that water. The Report states that *"The quality of the water supply will have a direct impact on the wastewater quality of the discharge from the facility."*

What is the potential impact of the substances becoming airborne by way of water droplets formed from the cooling tower drift? With 90% of the estimated 43,000,000 litres/day of water evaporated, there must be concern with the dispersion of these substances.

◆ Information contained in the air quality assessment report notes that *"Air quality in the vicinity of the proposed Nanticoke Energy Centre is influenced by the surrounding community, including local industry as well as distant sources to the east."*

Elsewhere in this report the Proponent notes that *"The data shows dominant wind directions are from the western region ... The wind rose shows the predominance of westerly winds."*

The Proponent includes in the estimation procedure for emissions that *"Development of a representative meteorological data set, providing hourly data for wind speed, wind direction, temperature and atmospheric stability. ..."*

The Report also includes information regarding wind direction stating that the winds are predominantly from the west, at 9.25% of the time, from the south 5.39% of the time. However the information from the south-west is noted at 23.52% of the time. (SSW 6.71%p; SW 7.79%; WSW 9.02%). This information is confirmed on the map, below, sourced from the Ontario Ministry of the Environment, which demonstrates that over 50% of the background emissions originate in the US and are transported from the south west."

How does this affect the emissions assessment if the impact to local air quality is based on the predominance of westerly winds?

In particular, what is the impact of PM when combined with these ambient air contaminants?  
What is the impact downwind of the facility?





◆ With regard to the information provided by the Proponent on PM (particulate matter), *“Scientists point to the smaller particulates — those that measure less than 10 microns - and the smallest particulates - those that measure less than 2.5 microns - as being particularly of concern. These particulates can reach deep within the lung or can enter the bloodstream and cause damage throughout the body.”* (Ontario Clean Air Alliance)

A report prepared for the Ministry of Energy states that *“The scientific evidence demonstrating that the PM<sub>2.5</sub> fraction accounts for many health damages has increased substantially over the last five years. Accordingly, health damages were forecast largely based on PM<sub>2.5</sub> concentrations.”* This report also states that *“All particulate from gas turbines is on the order of 1 micron, hence all PM is assumed to be PM<sub>2.5</sub>.”* (natural gas combined cycle facilities) (Cost Benefit Analysis: Replacing Ontario’s Coal-Fired Electricity Generation, prepared for the Ministry of Energy, April 2005)

The Proponent concurs in the air quality report with the statement that, *“... all gas turbine particulate emissions including duct burners were considered to be in a PM<sub>2.5</sub> range.”*

◆ The Report notes that *“Construction will cause a temporary increase in dust levels at the Project site. Most activities that could result in increased dust levels will be limited to a short period of the initial construction stage ...”*

However, the Proponent has not provided information regarding increased PM (particulate matter) from the site, and whether there will be exceedances as a result of the removal of soil, use of construction equipment, and the number of vehicles to and from the site, particularly if unpaved roads are used.

## **(ii) Water contaminant issues**

◆ *“The plant will meet Provincial Water Quality Objectives (PWQO) for all parameters with the exception of concentrations of phosphorus, aluminum, cadmium, chromium, copper, iron and zinc. The increased metal concentrations are a result of evaporation of water from the cooling towers that concentrates the Lake Erie water. ... Elevated concentrations of these inorganics do not necessarily indicate adverse impacts to ecological receptors in the receiving stream (Nanticoke Creek).”*

This is an insufficient response to concerns regarding concentrated and elevated levels of metal concentrations. To say they *“do not necessarily indicate adverse impacts”* is tantamount to saying that they may well indicate adverse impacts.

◆ *“If the discharge is via the on-site drainage swale ...It is likely that concentrations of inorganics in the discharged water will be somewhat diminished prior to the confluence with Nanticoke Creek...”*

What is meant by “somewhat diminished”?

◆ *“If the discharge is directly to Nanticoke Creek, the process water will be diluted upon mixing. The level of dilution will depend on the flow in Nanticoke Creek, which will vary according to time of year, precipitation, etc. ... While the predicted worst case concentrations of parameters exceed PWQOs under the 10-cycle scenario ... ”*



◆ The Proponent notes the impact of hard water in the Creek that will mitigate some of the above noted concerns. Are there chemicals in the discharge water that would have a "softening" affect on the water, thereby increasing negative impacts of discharge?

◆ The Proponent's assessment of risk is less than satisfactory, concluding that "*phosphorus in the discharge water may not significantly affect the overall quality of Nanticoke Creek ... Based on the predicted concentration of aluminum in the discharged water under the 10-cycle scenario (446 µg/L), there is a potential for some adverse effects to aquatic organisms in Nanticoke Creek ... regarding cadmium, chronic effects may be possible in sensitive species ... the likelihood of adverse effects in aquatic organisms in Nanticoke Creek from chromium is low ... On the basis of the USEPA chronic values adjusted for the very hard water in Nanticoke Creek, it appears there is minimal risk to aquatic receptors from copper in discharged water*". Comments regarding impact of iron and zinc are also dependant upon anticipated hardness of water.

◆ The Proponent has charted the "mean" monthly flows of the Nanticoke Creek in comparison to the average discharge from the proposed generating facility. In the summer months, the discharge would make up 20%-30% of the creek flow, based on these averages. However, the Proponent also notes that "*low flows often fall below 0.2 m<sup>3</sup>/s in the late summer (August/September).*" This would indicate that the discharge to the Creek would "*often*" be as high as 82% of the Creek flow.

Presumably the plant would operate more in the summer months to accommodate for increased air conditioning. Would the plant more likely operate at 10 or 3 cycles?

What would be the impact on these statistics if the facility were to operate to provide baseload power to the provincial grid?

◆ The Proponent has provided information regarding aquatic life that could potentially be impacted by the effluent and discharge from the proposed facility. However, the Proponent has not fully discussed the impacts of the temperature of the discharge. The Wastewater Discharge Assessment indicates that the effluent wastewater temperature will not exceed 10 degrees C. above the receiver water temperature. That may be acceptable when the water is being discharged into a large body of water such as directly into Lake Erie. However, the assessment indicates a low flow of water at the discharge area. The Proponent fails to discuss or evaluate the significance of the higher temperature as a result of this volume of warm water - 129,600 l/h - 590,400 l/h (36 l/s - 164 l/s) moving into this low flow receiving area. Also, as the receiving area is a shallow area, the temperature will be warmer. If the effluent temperature is based on this shallow water temperature, it would technically allow for warmer discharge, resulting in greater impact to aquatic life downstream.

◆ The Report indicates that a 6"-8" diameter process wastewater discharge line will carry cooling water to Nanticoke Creek, or an unnamed tributary of Nanticoke Creek which originates on site. The lack of clarity on the receiving location for discharge is problematic, as noted above.

◆ The Proponent has not discussed the possibility of adverse impacts arising from the mixing of effluent from the proposed site with that originating from other industries (Stelco, Esso) or farming operations near the location, in/or along the flow of Nanticoke Creek or any of its tributaries, or where the Creek empties into Lake Erie 5 km to the south of the site.

◆ Due to the uncertainty expressed in terms of other substances that exceed provincial guidelines, and the resulting impact on aquatic life, the CAE Alliance asserts that the Proponent must seek federal approval under the Department of Fisheries and Oceans, thereby triggering a Federal Environmental Assessment.

◆ *"As the cooling tower rejects heat predominantly through evaporation, a steady supply of incoming raw water (from Lake Erie) will be needed as make-up. This process of evaporation results in the concentrating of any minerals present in the incoming water supply. To prevent chemical scale build-up in the cooling water system due to an over accumulation of calcium salts, a small portion of the circulating cooling water is constantly being discharged as wastewater (blowdown)."*

The Report has not fully addressed concerns other than aquatic life, regarding the impact of the chemicals, minerals and other substances present in the discharge that will flow to the Nanticoke Creek. The Report describes the area as having various winding tributaries and poor soil drainage. The discharge water will leach into the soil and will travel and deposit in other areas.

What is the potential for impact on nearby agricultural crops - is water accessed from this source for irrigation?

What is the potential impact on residential water users who obtain water by way of well or cistern?

What is the impact of concentrations of those that exceed the provincially acceptable limits, including phosphorus, aluminum, cadmium, chromium, copper and iron? The Proponent has not defined the health and safety risks associated with elevated levels of these substances on human health.

◆ The Proponent has not addressed the impact of chemicals used in the cooling system to reduce corrosion and biofouling, and to control the formation of mineral scale, including the use of sulphuric acid. For example, the Proponent indicates an average of 1,600 kg of sulphuric acid use per day.

What percentage of these chemicals are released to the atmosphere in the form of water droplets resulting from the condensed cooling tower vapour?

What is the impact on adjacent farm land, vegetation and wildlife?

◆ The Wastewater Assessment determines that *"there was not significant aquatic habitat change due to the variable quantity flow conditions"*.

Will the project cause a change in aquatic habitat with the increased water flow?

Would there be adverse impacts?

◆ According to the Wastewater Discharge Assessment, *"The removed solids (from cooling tower blowdown) will be settled in a decant tank with the supernatant returned to the wastewater collection tank. The settled solids will be collected, dewatered and disposed of in an appropriate approved landfill facility."*

Has the Proponent determined that there is an appropriate, approved landfill facility prepared to accept these wastes? What arrangement has been made to deliver these solids to the appropriate facility?

◆ It is noted that there is soil contamination from agricultural uses. What is the impact of the mixing of effluent and discharges from the facility with chemicals, fertilizers, etc. from agricultural use?

◆ The Report notes that a "process wastewater discharge line will carry cooling water to Nanticoke Creek. ... CPV is also evaluating a process water discharge to an unnamed tributary of Nanticoke Creek which originates on-site"

Also, "A stormwater management system will be constructed comprising catch basins, detention pond, and discharge system to the drainage swale which leaves the site to the south and eventually enters Nanticoke Creek to the north of Concession 2."

Compare with the information, "Blowdown from the cooling towers will be discharged via pipeline to Nanticoke Creek or to a drainage swale which exits the site and connects to Nanticoke Creek just north of Concession Road 2." ... "The Site includes a system of swales which provide drainage for the Site and culminate in an intermittent tributary to Nanticoke Creek. The tributary originates as agricultural field drainage approximately one km west of the proposed Project Site."

When these statements are compared it appears that the wastewater and the stormwater may actually be flowing to the same place - "drainage swale" - on site. If that is the case, what is the potential for overflowing the stormwater system? Information provided regarding soil indicates poor drainage on site, combined with the potential for erosion in the area.

The Report separates the 2 sources of water, i.e. stormwater and wastewater but it appears that both will collect into the Nanticoke Creek if not on the property site, then not far off. The Report addresses some of the issues individually, but not collectively.

What is the impact on surrounding lands should the combination of the two sources of water combine to overflow?

(From the figures provided for both these water sources, it appears that the point of exit from the site is the same for each, if the drainage swale on site is used.)



### **(iii) Volume of water for cumulative, consumptive purposes**

◆ According to the Wastewater Discharge Assessment, *"The proposed facility will be designed for providing intermediate electricity with the potential for baseload electricity to the electricity supply if required."* The Proponent has provided an assessment for average water withdrawal for, and discharge from the facility.

Are these figures based on a supply of intermediate power production?

What hours of production per day are these assessments based on?

What would be the increase in water consumption and discharge if the facility was to provide baseload power?

◆ From the information provided, water demand will be 32,079m<sup>3</sup> per day with an effluent discharge of 3,148m<sup>3</sup> per day utilizing 10 cycles of concentration; 43,099m<sup>3</sup> per day and have an effluent discharge of 14,168m<sup>3</sup> per day, utilizing 3 cycles of concentration. Expressed in litres/day, demand would be 32,079,000 l/day - 43,099,000 l/day.

Is this demand total inclusive for all facility uses, including the potable water?

◆ According to the Ontario Water Resources Act, *"Despite any other Act, a person shall not take more than 50,000 litres of water on any day by any means except in accordance with a permit."*

The Proponent indicates that potable water, raw water and sanitary services will be provided by the municipality. This will require an application for an amendment to existing permits to take water by the municipality.

The Ontario Water Resources Act stipulates that *"A Director who is considering an application under section 34 of the Act for a permit to take water shall ensure that Ontario's obligations under the Great Lakes Charter with respect to the application are complied with."* The Charter indicates that *"It is the intent of the signatory States and Provinces that no Great Lakes State or Province will approve or permit any major new or increased diversion or consumptive use of the water resources of the Great Lakes Basin without notifying and consulting with and seeking the consent and concurrence of all affected Great Lakes States and Provinces."* Notice and consultation will apply to any new or increased consumptive use of the water of the Great Lakes Basin which exceeds 5,000,000 gallons or 19 million litres per day average in any 30 day period. Will these measures be taken to comply with this requirement, for both the municipality's water permit for increased consumptive use, and the permit on behalf of the Proponent to take water from municipal facilities?

In making application for appropriate permits, the Proponent and municipality must also fulfill all responsibilities under the Great Lakes-St. Lawrence River Basin Water Resources Compact, the Great Lakes - St. Lawrence River Basin Sustainable Water Resources Agreement, and all applicable notices to all States and Provinces party to these agreements.

◆ The daily demand are noted as approximately 32,000,000 - 43,100,000 litres/day. What is the impact on all other County users, including the industrial and agricultural users, of this volume of water which will be taken from the Haldimand County pump house on Lake Erie? Have they been contacted for input and comment regarding water consumption?

◆ Is the Proponent covering all of the costs of the water infrastructure changes, including permitry, required to accommodate the proposed natural gas-fired generating plant?

#### (iv) Inefficient Use of Non-Renewable Resources

◆ Natural gas is a non-renewable resource.

◆ The Screening Criteria provided in the Guide to EA Requirements indicates that the Proponent must consider the negative effects on the availability of petroleum resources. (Natural gas is considered a petroleum resource.) We have provided information in this Request to demonstrate the concern with the depleting natural gas resources in Canada. 75% of the homes in Ontario are heated with natural gas, industries in Ontario use natural gas (and have expressed concern regarding increased use of natural gas for electricity in Ontario). This project will consume large volumes of natural gas, having a negative impact on its availability for other more efficient uses.

◆ The Screening Criteria provided in the Guide to EA Requirements indicates that the Proponent must consider the inefficient use of a non-renewable resource. The definition of efficiency is *“the ratio of output energy to input energy, where output energy includes electricity produced plus useful heat captured. Inefficient use is considered that which occurs at less than 40%.”* The Report does not provide information as to the efficiency of the fuel use of natural gas. Does this exceed 40%?

(The Report notes that the Native communities also expressed concern about the use of non-renewable natural gas for electricity generation.)

#### (v) Greenhouse gas emissions

◆ The Screening Criteria included in the Guide to EA Requirements for Electricity Projects indicates that the screening criteria to be applied to every project being reviewed to provide responses to the question *“Will the project cause negative effects from the emissions of greenhouse gases (CO<sub>2</sub>, methane)?”*

The response is noted in the following chart copied from the Environmental Review Report.

3	Air and Noise			
3.1	have negative effects on air quality due to emissions of nitrogen dioxide, sulphur dioxide, suspended particulates, or other pollutants?	√		See Sections 2.9.3, 4.3.2, 4.4.2
3.2	cause negative effects from the emission of greenhouse gases (CO <sub>2</sub> , methane)?	√		See Section 4.4.2

However, the section 4.4.2 does **not** address greenhouse gases, CO<sub>2</sub>, methane. There is merely the statement that, *“The predominant emissions from natural gas combustion are: ... CO<sub>2</sub> – Carbon dioxide, from natural gas combustion. There are currently no limitations on CO<sub>2</sub> emissions ...”* In other words, the Proponent chose to disregard the question which the Proponent is required to answer.

In addition to the lack of reporting for CO<sub>2</sub>, the Proponent has not included any information regarding nitrous oxide (“N<sub>2</sub>O”) from combustion processes, and methane (“CH<sub>4</sub>”) from unburned natural gas, and from leakage from the natural gas pipelines. Other greenhouse gas emissions associated with the Project could include sulfur hexafluoride (“SF<sub>6</sub>”), which is used as a gaseous insulator in the Project’s high-voltage circuit breakers, and hydrofluorocarbons (“HFCs”) and perfluorocarbons (“PFCs”) which are used in its refrigeration/chiller equipment

- ◆ In responding to the question, it is reasonable to conclude that the project will cause negative effects from the significant lifecycle emissions of natural gas, primarily methane associated with production, flaring, processing and transport of natural gas.
  
- ◆ Natural gas emits about 55% - 63% the CO<sub>2</sub> of coal generation at point of combustion. (63.06% the CO<sub>2</sub> of coal at point of combustion. - Carbon Dioxide Emissions from the Generation of Electric Power in the United States, July 2000, staff of the U.S. Department of Energy and the U.S. Environmental Protection Agency; Natural Resources Canada, 56.67%).
  
- ◆ *“Burning gas instead of coal also sounds good and green since it cuts CO<sub>2</sub> emissions in half. In practice it may be the most dangerous energy source of all, because natural gas is 23 times as potent a greenhouse gas as CO<sub>2</sub>. ... even a 2 percent leak of the natural gas from the production sites to the power stations makes it as bad as burning coal. In practice, the leak rate is 4 percent, so it may be more than twice as bad as burning coal or oil.”* (Mr. James Lovelock - address to the Canadian Nuclear Association Annual Seminar, March 10, 2005)
  
- ◆ *“The contribution of natural gas generation to climate change is only slightly less than coal (on an energy basis). ... Even using the best-case scenario shows that natural gas is a deficient strategy to address climate change.”* (David Suzuki Foundation – Submission to the OPA)
  
- ◆ Natural gas GHG emissions are about 25% less than coal, on a lifecycle basis. (IAEA Spadaro et al. 2000). This gap could be closed by burning biomass with coal.
  
- ◆ *“If life cycle analysis was used and other greenhouse gases were taken into account, electricity generation from fuels other than coal would show similar or even higher GHG emissions ...”* (World Energy Council)
  
- ◆ *“In Canada ... natural gas is a larger source of carbon dioxide emissions than coal. Natural gas 29.0%; Coal 19.2%”* (Carbon Dioxide Fact Sheet, 2004)
  
- ◆ Considering the significant amount of new gas fired generation proposed for Ontario, and the future supply concerns, *“...liquefied Natural Gas (LNG) is expected to play a critical role in addressing the forecast supply gap.”* (Navigant Consulting Report to OPA) There are greenhouse gas implications of using LNG. LNG entails an energy loss of 15% - 30% in the transport, liquefaction and regasification processes.
  
- ◆ Greenhouse gas emissions have increased in Canada from 1990 to 2003. ...42% of the increase is as a result of *“fugitive releases (e.g. methane leaks from pipelines)... most of this increase is the result of greater traffic through energy pipelines...”* (Environment Canada – Summary of Canada’s Greenhouse Gas Inventory)
  
- ◆ The federal government is proposing greenhouse gas regulations that will impact the cost of natural gas from the point of source through to combustion for electricity generation. The CAE Alliance asserts that the full lifecycle emissions associated with the production, refining, transport and use of natural gas for power generation must be calculated and provided as part of the Environmental Assessment Review.

## (vi) Social, economic and cultural concerns

◆ The Socio-Economic conditions described in the Guide to EA Requirements for Electricity Projects, Appendix “C”, Screening Criteria indicates, The screening criteria are to be applied to every project being reviewed under the Environmental Screening Process. The Proponent must provide response to each of the following questions: Will the project have:

- negative effects on neighbourhood or community character?
- negative effects on local businesses, institutions or public facilities?
- negative effects related to increases in the demands on community services and infrastructure?
- negative effects on the economic base of a municipality or community?
- negative effects on local employment and labour supply

◆ According to the Guide to EA Requirements for Electricity Projects, "*Environment means: ... social, economic and cultural conditions that influence the life of man or a community*" and "*Negative environmental effects include the negative effects that a project has, or could potentially have, directly or indirectly on the environment at any stage in the project life cycle. ... Negative environmental effects may also include the displacement, impairment, conflict or interference with existing land uses, approved land use plans, business or economic enterprises, ... social conditions or economic structure.*"

And elsewhere, "*... neighbourhood or community character, local businesses, institutions, increases in the demands on community services and infrastructure, negative effects on the economic base of a municipality or community, negative effects on local employment*".

The CAE Alliance maintains that this project will have negative repercussions on all of the above.

◆ The Proponent claims that "*the construction and operation of the plant will cause no significant adverse effects on the environment. Project advantages clearly outweigh the Project disadvantages. The main project advantages are significant contributions to the local economy and a stable supply of clean and efficient electricity to the province. The Project will provide municipal tax revenues and economic spin-off effects.*" However, the Proponent has refused to consider the consequences of the project on the local economy, as well as the province, as we have noted earlier in our expressed concerns regarding the Provincial Policy Statement.

◆ The Report notes that "*peak construction work force on-site is estimated to be up to 700 workers per day.*" What is the average amount of time that number of workers would be required? Overall, what is the average number of workers required on a daily basis?

The "handout" provided to the public indicates that "*It is anticipated that at peak construction approximately 900 workers would be on site. Precise man-hours of construction employment generation will be assessed in the socio-economic portion of the Environmental Assessment.*"

This was not done.

◆ The Proponent advises that "*The construction phase is **not** expected to lead to a measurable and lasting change in the population base of Haldimand County due to the temporary character of the construction activities.*" and "*Project effects on the population base are expected to be neutral, low in magnitude, and short term in duration*"

◆ A similar statement summarizes community impact as *"Project effects are expected to be moderate in magnitude, regional in scope and short-term in duration."*

◆ In order to assess community impact, the Proponent conducted a study on the demographics of Haldimand County, although the CAE Alliance believes that a wider area should have been included to capture the truest impact of this project. **40%** of the working population (other than agriculture) were employed in the industrial/trades group; another 20% employed in management, business and finance; 22% in sales and service. Loss of trades workers will be felt more particularly in this location.

◆ The Proponent has failed to consider and assess the full impacts to the community, in that the proposed natural gas-fired facility will hasten the closure of the Nanticoke Generating Station. Haldimand County and surrounding communities will lose 600 highly skilled, well-paying jobs. These 600 workers represent families, many with dual income earners. Therefore, there will be a much higher number of lost incomes when these families relocate. The job losses will be further compounded by the loss of contractor positions and temporary trades workers, numbering in the hundreds.

The "30 full time" positions at this proposed gas plant will not compensate.

◆ The shut down of Nanticoke GS *"has the potential to adversely affect the population and economic base, community infrastructure, community services, municipal finances and residents" of the area. The economic effects of station shutdown will not only be felt by the (municipality) but also by communities across Ontario, Canada and the United States. The social consequences of the shutdown will be most keenly felt by those individuals who lose employment or income and by their communities.*" (Preliminary Community Impact Analysis, Gartner Lee Limited)

◆ *"Nanticoke employees also have a long tradition of volunteer service and fundraising for the community. ... the station also supports a variety of local environmental, educational and community projects. In recent years, OPG has donated more than \$200,000 to community hospital foundations, environmental conservation projects, community events, youth sports programs, cultural organizations and other community initiatives. In addition, through the employee Charity Trust campaign, Nanticoke employees set high standards of giving by donating to local charities of their choice."* (opg.com) The "30 full time" employees at this proposed gas plant cannot compensate, regardless of how dedicated they may be.

◆ The 600 families purchase goods and services in the community, and "OPG annually purchases more than \$6 million in goods and services from regional businesses". (opg.com)

◆ Nanticoke Generating Station makes a significant contribution to the local tax base. No information has been provided regarding the contribution that the proposed Nanticoke Energy Centre would make to the community in terms of tax revenue.

◆ There are promising results of using Nanticoke GS for the burning of biomass, alone and in conjunction with coal. This would positively impact the agricultural and forestry sectors. The proposed natural gas-fired facility would negate these positives.



◆ This project would impact the potential for nuclear energy in the area. A nuclear facility would employ many more workers for both the construction and operations phase, enhancing the economy of the general area.

◆ As of April, 2009 the "MUSH" sector (municipalities, universities, schools and hospitals) will be required to pay the wholesale price of electricity. This means that this sector, currently protected under the province's regulated rate protection plan will no longer be eligible for price protection. As noted earlier, natural gas-fired generation will raise the wholesale price of electricity. That will directly impact the Haldimand County budget.

◆ The market price for electricity, the OPG rebate or global adjustment available to consumers will all be significantly impacted by the inclusion of higher priced natural gas-fired generation. (For more information, see CAE Alliance submission to the Ontario Energy Board, available at [www.caealliance.com](http://www.caealliance.com)) The cost implications are not so simple as merely replacing 20% of the provincial power production from coal-fired to natural gas-fired. The higher priced gas-fired power will set market price 85% of the time (up from the current 23%). The excess revenues from the capped coal-fired generation assets are rebated back to consumers. When private power generators produce power the revenues are pocketed, not put back into the public coffers.

◆ Industries in Haldimand County will be impacted by higher wholesale electricity prices. The CAE Alliance has been actively involved in the provincial power planning process over the past 4 years, most recently with Intervenor status of the Ontario Energy Board's review of the proposed 20 year power plan. We have seen and heard the concerns from the industrial and manufacturing sector regarding higher energy costs and the impact on the competitiveness of Ontario industries. November 2008 saw 66,000 lost jobs - 42,000 in the manufacturing sector alone! For every dollar invested in the manufacturing sector there is an additional \$3.05 in economic activity. Haldimand County will suffer additional losses as an indirect result of natural gas for electricity use.

◆ The Environmental Review Report (Report) indicates that water required for the power plant *"will be obtained from the Haldimand County Water Treatment Plant at the end of County Road 55 via new pipelines. ... Municipality will own and operate the infrastructure and be the proponent for the Class EA. ... Sanitary sewage will be managed either by a new sewer forcemain ..."*

The CAE Alliance requests information regarding who will bear the costs of the required infrastructure, including the costs of obtaining necessary approvals.

◆ Likewise, the CAE Alliance requests information regarding the costs for the required new pipeline to transport natural gas from the main gas transmission in Hamilton to the project site, including the cost for applicable approvals.

The OPA reported in 2006 that gas pipeline costs to the Nanticoke area would likely be in the order of \$300 million to \$350 million. The CAE Alliance asserts that these costs should not fall to natural gas consumers, electricity ratepayers, or the Ontario taxpayer, but should be borne by the proposed merchant power generator.

- ◆ The CAE Alliance requests information regarding whether the Proponent will bear all the costs associated with tie in to the provincial grid, including all associated costs for necessary approval.
- ◆ The CAE Alliance asserts that the costs of the required infrastructure, as noted above, should be borne by the Proponent, not added as a burden to the taxpayers of Haldimand County, or the provincial ratepayers.
- ◆ The Proponent states that "*Consultation with government agencies, local authorities, other stakeholders and the public at large is an integral component of the environmental review process.*" This is particularly important regarding the socio-economic impacts of this project on the Members of the public who attended the open houses expressed interest in the impact that this project would have on the economy of the area. However, the Proponent failed to notify members of the community, including business and industry of the project, those who would be most severely impacted by this project. Misleading information was provided to those who did attend.

#### Summary

This project will not add significantly to the local economy, nor to the provincial good. The purported benefits will not offset the many negative impacts that will result from this power project.

#### **(vii) Fire and safety concerns**

- ◆ What is the potential for fogging and icing on the nearby county roadways? Water vapour from the turbine stacks and the cooling towers could impact visibility at ground level, ie fogging; fallout of tower droplets; and accretion of ice on roads. This will cause dangerous conditions for those traveling at an expected speed at least the 80 km/h posted speed allowance. These roads are likely well travelled by employees of the nearby Esso Refinery, the employees and Stelco and others in the Industrial Park, as well as OPG Nanticoke.
- ◆ What is the potential for ice buildup on near by power lines as a result of the cooling tower plume?
- ◆ "*CPV will train local fire and police in the layout and operation of the plant, including safety systems, to facilitate local emergency response.*" (Report)  
 What is the distance to the nearest fire station?  
 Does that station employ full time fire crews, or are the fire fighters volunteers?  
 Has the Proponent had any interaction with emergency, police and fire persons to determine how well equipped they would be to handle a fire of the magnitude that could occur at a natural gas-fired generating facility?  
 What safeguards are in place to stop the flow of gas to the facility should an emergency/fire occur?
- ◆ The power plant will use hydrogen for generator cooling. Are safety issues associated with this volatile fuel addressed with the local fire department?

- ◆ Has an Emergency Preparedness Plan been developed in conjunction with local agencies?
- ◆ Malfunctions and accidents, i.e. fuel spills, lubricant or other waste materials, could cause odour and leakage to soils which would impact water from drainage and surrounding agricultural crops. What response plan is in place to address this?
- ◆ Will harmful substances such as sulphuric acid and scaling inhibitor solutions be stored on site in large volumes?  
Will they be stored outside or be enclosed in buildings?  
What is the effect of an onsite spill of chemicals or hazardous materials due to a malfunction or accident?

**(viii) Potential Canadian Environmental Assessment Act triggers**

The CAE Alliance believes there are aspects of this project that would trigger a federal environmental assessment under the Canadian Environmental Assessment Act (CEAA). From Appendix F: Information of Triggers and Federal Authorities Under CEAA, Table F-1, this project:

- ◆ *"is likely to affect a line or property, regulated by the NEB (National Energy Board), that is used for the transmission of oil or gas"* in accordance with the National Energy Board Act. This will be triggered by the development of a pipeline of sufficient size to transport natural gas from the Hamilton area to the proposed power plant;
- ◆ *"is likely to affect the operation of a railway company or property"*, Canadian Transportation Act. The Proponent has noted that some equipment and components of this project will be shipped via rail. This section will apply if the Proponent seeks any adjustment or amendment to the rail crossing to accommodate additional traffic, or requests a rail stop for the purposes of unloading equipment. (According to the Report, *"Oversize loads can either be delivered by rail or transported overnight."*);
- ◆ *"is likely to affect fish or fish habitat, affect the quantity or quality of water available for fish or result in the destruction of fish."* Approval will be required from the Department of Fisheries and Oceans, under the Fisheries Act;
- ◆ will impact the provincial and federal socio-economic conditions and therefore will require input from Health Canada and Agriculture Canada;
- ◆ will impact socio-economic and the use of natural resources requiring input from Natural Resources Canada;
- ◆ requires approval/permit from Transport Canada, a federal agency regarding an aeronautical obstruction, i.e. height of stacks and lighting.

## **(ix) Other**

◆ The Six Nations of the Grand River (Six Nations) are located within proximity to the Project Site. The main reserve is located approximately 25km away from the project site. The territory consists of approximately 18,000 ha.

Although the Environmental Review indicates there are no claims from Native peoples the Report notes that the site exhibits potential for the presence Aboriginal archaeological resources. Considering the difficulties that have ensued in the Caledonia area, the CAE Alliance requests that the Proponent obtain legal verification of no claim status to the subject property.

◆ The Proponent notes that approval is required as the Environmental Protection Act with respect to "*solid and hazardous waste generation*" regarding "*wastes from maintenance shop*". The Proponent has not addressed what these wastes consist of nor the proposed method of disposal.

◆ The Proponent has not conducted an assessment as to the impact of large volumes of natural gas being diverted from the industrial community of Hamilton.

◆ The Proponent has not conducted an assessment of the impact of diverting large natural gas supplies to this facility, when the OPA has determined that gas supplies and infrastructure will be required for new gas-fired facilities proposed for the south-west GTA and the Kitchener-Waterloo-Cambridge-Guelph area.

◆ It is premature to seek approval from the Ontario Energy Board for the transmission of natural gas, for the gas connection associated with this project before the OEB has had opportunity to complete its review of the IPSP and the use of natural gas as one of the components of it.

◆ The Proponent states that the Hydro One transmission line to the east of the site will be intercepted and a connection made to the plant switchyard to connect to the provincial grid. The Proponent advises that the site of the interconnection will be "owned and operated by Hydro One Networks Inc.", but has not confirmed whether the Proponent or Hydro One will bear the costs of this connection.

◆ The Project Schedule (page 12) of the Report states that construction will start in the 1<sup>st</sup> quarter of 2011, with the plant operational by their 3<sup>rd</sup> quarter of 2013. However, the Report also notes (Page 13) that construction will commence in the first ½ of 2010. The approximate 1 year difference will impact the local work force that is anticipated for this project. Clarification is requested.

◆ We understand that some of the Certificates of Approval that are required for this Project will necessitate posting of proposals on the Environmental Registry, Environmental Bill of Rights. The CAE Alliance would like confirmation that, if the Director does not reject this Project outright, as we have requested, that we be provided with notice, in writing, of all applications for such approvals and applicable postings.

Likewise, we wish to be apprised of all applications for natural gas infrastructure, applications under the Water Resources act, and all other required permits or approvals related to this Project.

## **SUMMARY OF ISSUES AND CONCERNS**

The Proponent has not supplied information regarding 3 vital and key components of this project, namely, an assessment of the availability of large volumes water for the facility; the large volumes of natural gas for the purposes of power generation; and the impact to the Ontario electricity system, as required from the Independent Electricity System Operator (IESO).

Environmental information regarding air, water and greenhouse gas emissions are either deficient or missing.

The proposed project contravenes the Provincial Policy Statement in many areas and does not comply with existing laws and regulations.

The Proponent has failed to comply with the Guide to EA Requirements for Electricity Projects.

The CAE Alliance therefore requests that the Director deny approval for this project. Should this be out of scope for the Director, we request that this project be held in abeyance until such time as the IPSP process is completed and the Proponent be advised to participate in an RFP (Request for Proposals) in conformity to the competitive procurement processes of the OPA.

In accordance with the present Environmental Assessment process we request that the Director elevate this project to an Individual EA.

Yours truly,

Carol Chudy  
Co-Chair, CAE Alliance