

Hydro One's Draft
Supply to York Region
Environmental Study Report

**Response to Regional Council
Resolution June 24/04**

Timeline

- Final Notification given Oct. 19, 2004
- Draft ESR issued Oct. 21, 2004
- 60-day comment period/time to request "bump-up" to full Environmental Assessment ends Dec. 21, 2004

Summary of Issues re: Hydro One Draft ESR

- Hydro One has ignored key concerns of Regional Council, as well as of Markham and Aurora Councils and residents
- Hydro One refused to consider reasonable long-term power supply alternatives, & paid lip-service to EAA
- Only a proper examination of long-term alternatives will prevent years of controversy & potential litigation
- Clear interim methods are available to ensure adequate York Region power supply for 5-10 years

GOWLINGS

Markham Task Force Consultant Identified Clear Interim Power Options

- The Town's Electrical Engineering Consultant, David Richmond, has identified practical options which can provide 5-10 year power supply accommodating future growth while long-term alternatives are properly considered and a preferred solution built

GOWLINGS

David K. Richmond, P. Eng.
Markham Engineering Consultant

- Electrical Engineer with over 30 years experience in the power industry
- Specialization in transmission, distribution and substations
- Former VP, Toronto Hydro, Stations and Engineering Services
- Former Ontario Hydro transmission & station design engineer

GOWLINGS

**Interim Option A- Install
Intermediate Capacitor Station**

- Would add 50 MW of load capacity and provide 5 years of projected power demand increases
- Cost is less than \$ 2 million - no EA required
- Can be built and then connected to existing double circuit lines – no interruption in power supply
- Hydro One is proposing same technique in its 10 Year Plan

GOWLINGS

**Interim Option B - String 1 or 2 new
Distribution Lines on Existing or New Poles**

- Provides for 3 to 6+ years of growth in demand
- New 44 kV line(s) can be installed on existing poles or new standard poles (Buttonville to Armitage)
- One line provides 30-35 MW – enough for 3 years growth
- Cost is \$2.5-3.0 million – no EA required
- No municipal or other approvals required
- Time: less than 1 year

GOWLINGS



GOWLINGS



GOWLINGS



GOWLINGS

Major issues raised by Regional Council June 2004 resolution have been ignored

**The draft ESR fails to carry out the “fully
documented...assessment of all possible routes and
alternatives” as requested**

Hydro One used self-selected screening criteria which guaranteed that only the two existing Hydro corridors in the Region were studied and new ones suggested by others were immediately rejected.

The result: alternatives Hydro purported to add to its Class EA in response to overwhelming public concern were immediately eliminated, using Hydro criteria, and without public consultation. They were screened out at the outset, and never environmentally assessed as required under the EAA.

GOWLINGS

Hydro Had Unjustifiable Bias to Use Existing ROWs

- Identification & evaluation of only alternatives actually assessed was wholly based on alleged need to use existing ROW
 - Improper interpretation of Ontario policy
 - No such Ontario or Hydro policy exists

GOWLINGS

Self-Serving “Screening” Process

- Hydro added 5 new alternatives to Class EA based on stakeholder concern
- Each had been prematurely eliminated during Supply Study
- All 5 were promptly eliminated in ESR using criteria Hydro arrived at, without consultation
- Criteria carefully designed to leave only Hydro's two original alternatives (Options 1 and 2)

GOWLINGS

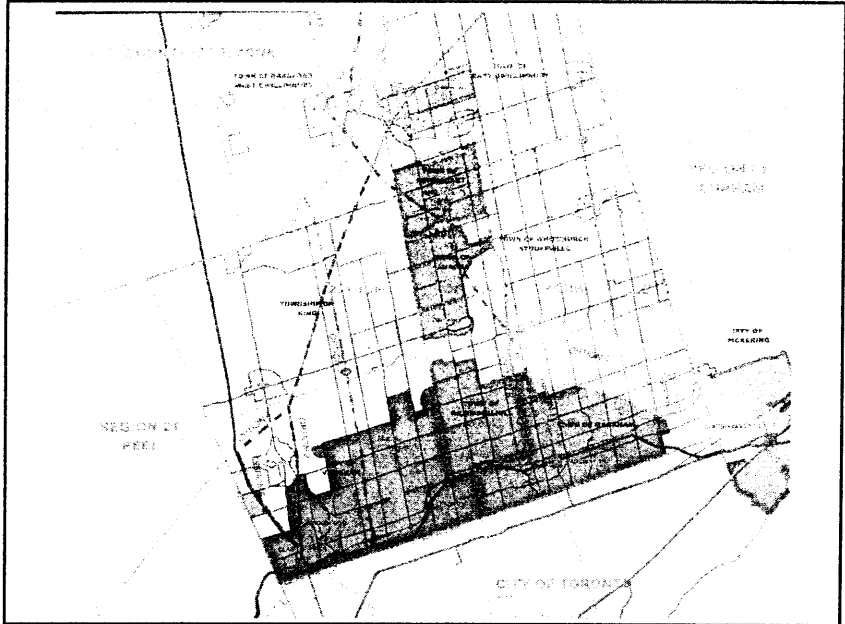
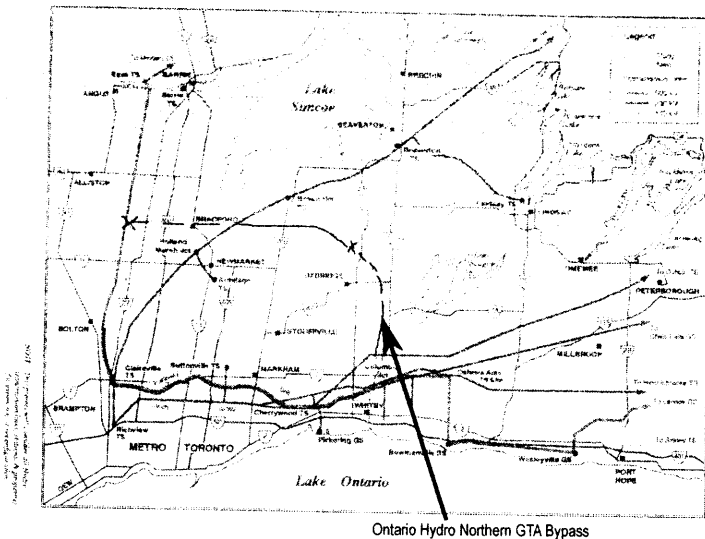


Figure 1
Existing Bulk Electricity System and Study Area



Minimum ROW Width Constraint Ignored

- Proper EA would have indicated that the standard ROW width is 150 feet, with a minimum of 120 feet
- Existing ROW for Option 1 at most supports 115 kV – cannot support 230 kV

GOWLINGS

Hydro Refuses to Mitigate EMF Impacts in York, but Does So Elsewhere

- Serious EMF impacts – such as school closure - could be mitigated through burial of lines
- Hydro has used this approach in Toronto, Windsor, Ottawa and London
- Cost should be shown as system cost – not local cost – and have minimal impact on rates

GOWLINGS

Hypocritical Position on “Undergrounding”

- Hydro One currently proposing 230 kV undergrounding in downtown Toronto
- In Toronto and throughout other urban areas incremental underground transmission line cost considered system benefit and costs spread across system. Incremental cost in Toronto: \$.02 change in rates.
- However in York Region Hydro One insists that local municipalities must pay for undergrounding costs

GOWLINGS

Hydro ESR Outcome Predetermined

- Key decisions on transmission options & preferred route made prior to EA process
 - York Region Supply Study (2003)
 - Hydro's 10 Year Transmission Plan (2004)

GOWLINGS

Major issues raised by Regional Council June 2004 resolution have been ignored

Hydro One also failed in its draft ESR to consider Regional request to “give greater consideration to environmental, social and economic impacts on existing and future urban areas and established and future residential communities, including schools adjacent to and in close proximity to the proposed transmission lines, and a lesser consideration to the factor of cost”

GOWLINGS

**Major issues raised by Regional Council
June 2004 resolution have been ignored**

Hydro One also failed in its draft ESR to include the requested “assessment of the potential economic impact on homeowners and the loss of enjoyment of residential yards that are in proximity to the hydro corridors”

GOWLINGS

**Major issues raised by Regional Council's
June 2004 resolution have been ignored**

Hydro One:

- cavalierly dismissed concerns about property values stating that “the relative value of homes backing on rights of ways is a subjective matter”
- ignored Ontario Joint Board precedent ordering Ontario Hydro to offer to buy any residence within 75 metres of a proposed 230 kV transmission corridor because of perceived impacts on the use and value of the property

GOWLINGS

Major issues raised by Regional Council's June 2004 resolution have been ignored

Rather than carrying out the requested & required assessment of property and social impacts, Hydro One rejects doing so, blaming the Town and Region:

- Hydro One says Town and Regional planning are at fault for allowing development to occur in proximity to the ROW: "It is important to note that the existing transmission facilities were in place long before the surrounding development in the area. The Town of Markham was advised of the plans for redevelopment of the corridor over 20 years ago."
- However, our review of subdivision applications over the last 20+ years indicates neither Ontario Hydro nor Hydro One ever sought a warning on title regarding proposed subdivisions adjacent to this corridor, or otherwise commented adversely on such proposed development.

GOWLINGS

Major issues raised by Regional Council's June 2004 resolution have been ignored

The Region requested:

"Provide information on the effects of electromagnetic fields (EMFs) on human health; disclose the relative EMF strength emanating from the proposed 230 kV line; undertake a health risk assessment of the proposal in relation to adjacent urban land uses, in particular residential uses, schools and parks; and identify mitigating measures that would ensure that any proposed changes in transmission capacity will not increase the public's exposure to EMFs;"

GOWLINGS

Major issues raised by Regional Council's June 2004 resolution have been ignored

- Hydro One's draft ESR takes the position that "a health risk (from EMF) has not been established".
- Hydro One advances no specific measures it would take regarding what it admits to be "the seriousness of this issue and the associated public concern" other than to use its usual optimal phasing of conductors to reduce EMF and steel poles in place of lattice towers "where possible to reduce visual effects"

GOWLINGS

Hydro One Ignores Hydro Commissioned Report on EMF Health Hazards

- Hydro One acknowledges that Ontario Hydro funded "several million dollars of peer-reviewed research under the guidance of the Royal Society of Canada...to contribute to the scientific understanding of potential health effects resulting from EMF exposure" – but
- **Hydro One fails to quote from or acknowledge the findings and recommendation of the resulting Royal Society of Canada Report, published in 2000, prepared for Ontario Hydro (and by that time Hydro One).**

GOWLINGS

Hydro One's EMF Position Contradicted by Royal Society of Canada Report

- The Royal Society of Canada reviews health studies of Hydro employees and children exposed to EMF
- The Royal Society finds there are health effects from EMF exposure and recommends "prudent avoidance"

GOWLINGS

Royal Society of Canada EMF Report

- "Despite their limitations, epidemiological studies now appear to show a small increase in risk of leukemias and perhaps brain tumors associated with EMF exposure. Similarly, genetic studies, though at present not rigorously replicated, demonstrate that EMFs can have deleterious effects on mammalian cells, presumably through induced electric fields.
- Recent calculations of induced electric fields in the human body indicate that fields sufficient to effect genetic damage could occur, though rarely, in environments in which employees of Ontario Hydro and the public are exposed."

GOWLINGS

Royal Society of Canada EMF Report

7.4 Employees of the Electrical Utilities

- "Overall then, despite the limitations, there appears to be some small increase in risk of leukemias and perhaps brain tumors associated with EMF exposure. We note that in a number of studies brain tumors and leukemias are each observed to be increased, providing replication not seen for other cancers. The pattern, while not entirely consistent, seems clear, although the increased risk is small." (pg 40, emphasis added)
- "In conclusion, we note that these cases of leukemia and brain tumors occurred over the 19 years in the study so that the incidence rate is roughly 1-2 extra cases a year attributable to EMF exposure in this large cohort of workers, leavers and retirees." (pg 41, emphasis added)

GOWLINGS

Royal Society of Canada EMF Report

7.5 Leukemia in children

- "Finally, it appears again that, despite the limitations, there is some increase in pediatric leukemia associated with EMFs although the magnitude of the increase is still difficult to assess." (pg 42, emphasis added)

GOWLINGS

Royal Society of Canada EMF Report

8. Conclusions

8.1 "In general these investigations are part of, and consistent with, the comments and conclusions of the Working Group of the National Institutes of Environmental Health Sciences [2]. That is, they support their conclusion that 60 Hz electromagnetic fields are possibly carcinogenic to humans."

GOWLINGS

Royal Society of Canada EMF Report

8.2 "The evidence for a concern about possible cancer risk being associated with these fields comes from three Ontario Hydro sponsored studies."..."Second are the studies of malignancies among employees of Ontario Hydro, examined alone and together with similar studies at Hydro Quebec and Electricite de France (see Section 5.3). These studies suggest, albeit with some inconsistencies, a relationship between magnetic and electric fields, and the risk of leukemia and possibly brain tumors. These results are consistent with the meta-analyses of other studies as reported by the Working Group.

GOWLINGS

Royal Society of Canada EMF Report

- "Third is the study of pediatric leukemia in Ontario.
- **This study used a wide range of methods of assessing exposure and the results suggest an increased risk associated with increased magnetic field exposure (see Section 6.2).**"

GOWLINGS

"Prudent Avoidance" of EMF Advised by Royal Society of Canada

- "The Panel of the Royal Society agrees with this [U.S.] proposal to reduce exposure."
- "These studies and others suggest that *passive regulatory action*, or... "**prudent avoidance**", should be directed to reducing exposure to the higher fields identified by the ICNIRP guidelines."

GOWLINGS

Hydro One's Position on EMF is Untruthful and Shows Callous Disregard for Health & Community Impacts

- Hydro One has been fundamentally disingenuous and deceitful in stating, as they do in their draft ESR, that "a health risk (from EMF) has not been established."
- This statement is clearly contradicted by the findings of the Royal Society of Canada Report commissioned by Ontario Hydro and Hydro One, using Ontario Hydro employee statistics

GOWLINGS

Empty Consultation

- Public participation process a sham
- Hydro unilaterally determined:
 - Which options could be considered
 - Which criteria would be used to evaluate each

GOWLINGS

Manufactured Urgency

- Urgency issue used as a pressure tactic to rush the Class EA process
- All alternatives, apart from rebuilding existing York Region lines, were screened out
 - Legitimate alternatives were eliminated
 - Date of "in service" need has shifted over time

GOWLINGS

Manufactured Urgency

- Interim solutions exist to ensure adequate power supply in northern York Region for 5-10 year period
- Would permit Hydro necessary time to properly consider alternatives
- And to construct preferred alternative

GOWLINGS

Improper Use of Class EA

- Hydro erred in not carrying out a full EA
 - Use of Class EA process inappropriate
 - Range of alternatives not within scope of applicable parent Class EA

GOWLINGS

Inadequate Consultation

- Inadequate & flawed consultation process
 - ESR claims “extensive” consultation
 - PIC #1 announced process, and PIC #2 announced preferred route
 - Only attempt at real consultation through the PAG process was aborted after first meeting

GOWLINGS

Oak Ridges Moraine Legislation Ignored

- ESR claims ORMCP is “not relevant” to the two alternatives that survived screening
- But ORMA 2001 prohibits new *facilities* unless necessary & the only reasonable alternative
- Hydro screened out viable alternatives too early – cannot justify preference under ORMA 2001

GOWLINGS

Hydro Rejects Precautionary Principle

- Internationally accepted, federally endorsed – urges caution in face of incomplete understanding of risk
- Dismissed by Hydro on grounds that it cannot be applied at project level
- No such restriction exists - arguably of greatest relevance at project level

GOWLINGS

Hydro Failed to Warn New Residents

- Hydro admits intention to rebuild was formed and announced as early as 1983
- Yet Hydro failed to include any warning clauses in subdivision agreements along Option 1 ROW
- Omission particularly glaring in face of warnings registered along east-west Hydro ROW

GOWLINGS

Biased & Incomplete Social Impact Analysis

- Hydro's ESR considers displacement of homes and business for new ROWs only
- Overlooks impacts of communities surrounding existing ROW when voltage increases
- Displacement & disruption as residents and school move to avoid EMF impacts

GOWLINGS

Considering Only Existing ROWs Misbased – No Timing Advantage

- Urgency and in-service dates used to screen out all alternatives not on existing rights of way
- This factor misbased: Buttonville-Armitage Option 1 will require renegotiation of easements and expropriation proceedings
- This misbased assumption eliminated all but one other alternative

GOWLINGS

Conclusions

- Draft ESR fails to address key concerns of Regional Council as well as Markham and Aurora Councils and residents
- It is clear that:
 - Hydro One has used a biased approach which mocks the purpose of environmental assessment
 - Alternatives have not been assessed
 - Health and community impacts have been ignored
- The process is illegal and must be properly redone

GOWLINGS