# TAB
# 4

# FALLIS FALLIS & McMILLAN

BARRISTERS, SOLICITORS & NOTARIES

TELEPHONE (519) 369-2515
FAX: 519) 369-2522
E-MAIL: fallaw@bmts.com

CLAUDE E. FALLIS, LL.B., Q.C. (1910 - 1996)
PETER T. FALLIS, B.A., LL.B..
ERNEST J. McMILLAN, B.A., LL.B

195 LAMBTON STREET EAST
DURHAM, ONTARIO
CANADA, N0G 1R0


September 4th, 2007

VIA E-Mail: catherine.mclennon@ontario.ca

Ministry of the Environment
Environmental Assessment and Approvals Branch
Ministry of the Environment
2 St Clair Avenue West, Floor 12A
Toronto, ON
M4V 1L5

Attention: Catherine McLennon

Dear Ms. McLennon

**Re: Application by Hydro One Networks Inc.**
**for**
**Environmental Assessment Review of the Bruce to Milton Reinforcement Project**

---

Please find enclosed the written *"Submissions to the Ministry of Environment"* by the 'Fallis Group" of landowners, (listed on Page 24 of the enclosed *Submissions*), in respect to the proposed Terms of Reference (TOR) submitted to the Ministry of the Environment by Hydro One Networks Inc.

Please confirm receipt.

Yours truly,
**FALLIS FALLIS & McMILLAN**

Peter T. Fallis

PTF:
cc;
**Hydro One Networks Inc.**
8th Floor, South Tower,
483 Bay Street,
Toronto, ON.
M5G 2P5

Via-E-Mail: glen.e.macdonald@HydroOne.com

\\Peter1\storage (d)\A.COMMERCIAL\07 COM\HYDRO ONE ENVIR. ASSESSMENT\Letter to MOE Sept 4, 2007.wpd

# SUBMISSION TO THE MINISTRY OF THE ENVIRONMENT

**BY LAND OWNER INTERVENERS, ('FALLIS GROUP"), AS REPRESENTED BY FALLIS FALLIS & McMILLAN,'**

**ON**

**TERMS OF REFERENCE, ("TOR"), SUBMITTED BY THE PROPONENT, HYDRO ONE NETWORKS INC. ("*HONI*"), ON AUGUST 3RD, 2007, TO MINISTRY OF THE ENVIRONMENT, ("MOE"), IN RESPECT OF THE PROJECT: BRUCE TO MILTON TRANSMISSION REINFORCEMENT PROJECT**

---

The Fallis Group, presently consists of those Landowners Interveners, as listed on Schedule "A" hereto, and who are the owners of land which have been identified by *HONI* as such for lands which *HONI* has made an Application to the Ontario Energy Board, ("OEB"), under OEB file # 2007-0050 for Leave to Construct a 500KV Transmission Line from the nuclear electrical generating facility, owned by Bruce Power, in Kincardine on Lake Huron, ("The Bruce"), a distance of 180 KM to a HONI switching station in Milton in the Regional Municipality of Halton.

The Fallis Group, has reviewed the TOR as submitted to the MOE by *HONI,* and submits to the MOE that overall, the TOR, as proposed by *HONI* are couched in language and words that for the most part are general, non specific as to locational issues, and which TOR of *HONI* ignore and fail to focus on the 'human' component and municipal corporation 'person' and 'land' components, the interrelation of land and human landowners and the social, economic and cultural interrelation of each to the other, and the inherent property rights therein. The TOR of *HONI are* based on presumptions that the TOR of *HONI* invites the MOE to accept as an opening premise, and which presumption the Fallis Group has determined that the MOE has now appeared to accept on its face without challenge, evidenced by the MOE approved website '*EA Project Updates*' 5 page Summary, and specifically the following statement which was made therein in paragraph # 3 on page 1 thereof:

> ***"The need for the Bruce to Milton Project has been established by the Ontario Power Authority"***

The Fallis Group submits that the MOE must not accept this presumption and therefore must include as a TOR the issues raised by the following question when it undertakes its Environmental Assessment Study for the Proposed Project.

**1. IS THERE AN ACTUAL NEED FOR THE CONSTRUCTION OF ADDITIONAL ELECTRICAL TRANSMISSION LINE CAPACITY FOR ALL CONTEMPLATED POTENTIAL ELECTRICITY TO BE GENERATED AT THE BRUCE ?**

**a)** The construction of a new 500 KV power transmission line from The Bruce to Milton

over a 180 KM length within a proposed easement corridor intended to be expropriated by *HONI* at a proposed width of 175 feet to 200 feet, will impact directly and negatively on the separate landowners of over 400 properties. Almost two thirds of those landowners already suffer from two existing easements in which a 230KV and a 500KV power transmission line already exist from the Bruce to Colbeck.

> "environment" means ***'land', 'human life, the social, economic and cultural conditions that influence the life of humans or a community, any building, structure, machine or other device or thing made by humans, and any part or combination of the forgoing and the interrelationships between any two or more of them.***'

**b)** For those owners of over 400 properties, and in fact for the other power consumers of Ontario, the proposed forecast of construction costs of $660 million dollars warrants an immediate pre-determination by the MOE by the conduct of a Tribunal hearing, that there is, in fact, an actual present need for the new construction of an additional 500 KV Line from the Bruce to Milton. In other words is the alleged statement of the Ontario Power Authority ('OPA'), correct or incorrect, and if determined to be incorrect, a public statement of concern by the MOE Tribunal on such OPA representations.

**c)** On March 29, 2007 *HONI* filed Exhibit 'B', Tab '1', Schedule'1', with the OEB Application # EB 2007-0050, in which it set out the present and future generating capacity of Bruce Power and the present and future capacity of wing generation projects:

| | | |
|---|---|---|
| **BRUCE 'A' - 4 UNITS @ capacity of 890 MW/h** | **=** | **3,560 MW/h** |
| **BRUCE 'B' - 2 UNITS @ capacity of 750 MW/h** | **=** | **1,500 MW/h** |
| **WIND GENERATION by 2009** | **=** | **725 MW/h** |
| **BRUCE 'A' - 2 UNITS by 2009 @ 750 MW/h** | **=** | **1,500 MW/h** |
| **WIND GENERATION additional by Dec. 31/2011** | **=** | **1,000 MW/h** |
| **TOTAL 'BRUCE AREA' ELECTRICAL ENERGY PRODUCTION BY 2012 (wind and nuclear sources)** | **=** | **8,285 MW/h** |

**(Say: 8,300 MW/h)**

**d)** *HONI* has presented the following information, in its submissions, which the Fallis Group challenges as being potentially an inaccurate and misleading statement made to the OEB in respect of which *HONI* now owes all interveners, the OEB and the MOE a full and complete response. On March 29, 2007 *HONI* filed as Exhibit 'B', Tab '1', Schedule'3', with the OEB Application # EB 2007-0050 in which *HONI* stated at line 25 - 28:

***"Hydro One concurs with the OPA's determination that there is a need to increase the long-term transmission capacity out of the Bruce area as quickly as possible. As indicated in the OPA materials, the present transmission system has the capability to transmit about 5,000 MW of the generation from the Bruce area"***

**e)** The Fallis Group has reviewed the submissions made by *HONI* in the *'Record of Consultation'* as filed with the MOE, and in particular, each of the letters that *HONI* sent to all Landowners (example Mar 26, 2007) and to each Chief of each "First Nation:, and the 'OPA News Release' found therein dated March 26th, 2007, and has ascertained therefrom , as quoted by the OPA:

***"The new line (500 KV) will provide transmission capability to reliably and safely deliver an additional 3,000 MW of generation capacity"***

**f)** The Fallis Group has reviewed the published Statement of the Minister of Energy, Dennis Timbrel, read to the Ontario Legislature on June 6th, 1975 about the transmission capacity of the then and present existing 230 KV power transmission lines, being a Statement made to the House announcing the Government's intention to review a portion of the then (1975) proposed 500 KV transmission line from Colbeck to Milton.

***"The present construction schedule for the Bruce 'A' Generating Station calls for Unit 2 to begin delivering power to the Provincial Grid by January 1976, Unit '1' a year later on January 1, 1977, Unit '3' by October, 1, 1977 and Unit '4' by August 1, 1978 . . . .Power from the first two Units can be transmitted by the existing 230KV system, but extra transmission capacity for the 3rd and 4thUnits is absolutely essential."***

Units '1' and '2' of Bruce 'A' were designed and constructed to each generate 750 MW/h for a total of 1,500 MW/h which the then Minister of Energy, Dennis Timbrell, indicated could be transmitted by a 230KV Line.

**g)** **<u>THE PRESENT TOTAL TRANSMISSION CAPACITY OF EACH OF THE FIVE (5) EXISTING TRANSMISSION LINES LEAVING THE BRUCE, IS CALCULATED AS FOLLOWS:</u>**

**<u>500 KV:</u>**

| | | |
|---|---|---|
| **A.** | **BRUCE to MILTON** | **3,000 MW/h** |
| **B.** | **BRUCE to LONGWORTH** | **3,000 MW/h** |

**<u>230 KV</u>**

| | | | |
|---|---|---|---|
| **A.** | **BRUCE to ORANGEVILLE** | **1,500** | **MW/h** |
| **B.** | **BRUCE to OWEN SOUND** | **1,500** | **MW/h** |
| **C.** | **BRUCE to DETWEILER** | **1,500** | **MW/h** |
| **TOTAL** | | **10,500** | **MW/h** |

**h)** The present power generation capacity, plus the anticipated additional generation capacity of all 8 Units in Bruce 'A' and Bruce 'B' appears to total 6,560 MW/h or 62.47% of present transmission capacity

**I)** When adding the Wind Power generation capacities, both the existing and potential generation capacity of about 1,740 MW/h, to the Nuclear Generation capacity of 8 Units at capacity, totals 8,300 MW/h or 79% of present transmission capacity, BUT still leaving a reserve additional transmission capacity of 21 %

**k)** The former Minister of Energy, Dennis Timbrell, advised, on June 6th, 1975, that a 230 KV power transmission line can accommodate transmission of the total production of power from Units '1' and '2' of Bruce 'A', totaling a generating capacity from those two Units of 1,500 MW/h.

**l)** The Statement of OPA and *HONI,* filed as Exhibit 'B', Tab '1', Schedule'3', with the OEB Application # EB 2007-0050, that the maximum existing transmission capacity is about 5,000 MW/h, actually arithmetically represents only 47.6% of the actual present transmission capacity presently exiting the Bruce.

**m)** The Statement of OPA and *HONI* that there is a need for an additional 500 KV power transmission line to transmit the additional 1,500 MW/h to be generated by Bruce 'A' Units '1' & '2' suggest that past Ontario Hydro executives and past Minister's of Energy were negligent and not acting with appropriate responsibility, by not then ensuring that there was a sufficient power transmission line capacity constructed to transfer and deliver all of the maximum 6,560 MW/h generation capacity from all of the 8 Nuclear Generation Units of Bruce 'A' and Bruce 'B'.

**n)** Units'1' & '2' were commissioned in 1977 and 1978, operated for their scheduled lifetime and were subsequently decommissioned as planned. That decommissioning did not reduce transmission capacity from the Bruce. To suggest that the re-furbishment of Units '1 & '2' of Bruce 'A' for a renewed 1500 MW/h generation capacity therefrom, therefore requires the construction of a new 500 KV power transmission line to transmit the 1,500 MW/h **must now be tested** in a MOE Tribunal setting and that issue must therefore be made one of the TOR by the MOE, and now heard in advance and a decision concluded by a Tribunal established by the MOE as a condition precedent before any other TOR are otherwise considered by the Minister of Energy or a Tribunal established by him.

o) To require the owners of 400 parcels of land to yet again suffer the condemnation of and taking of their lands for a purpose that has as its stated premise made by the OPA and *HONI* that stated premise must be now challenged as being knowing incorrect and wrong, and made with an intention to misrepresent. The OPA and *HONI* have represented that there is deficiency in the present transmission capacity of about 5000MW/h. The *EA Act* evaluation should not proceed without first testing, as a condition precedent to proceeding further with the rest of the Application of *HONI* to the MOE, the above stated premise of the OPA and *HONI,* and the accuracy and legitimacy of the premise itself. If determined to be an inaccurate and wrong premise such statement would constitute a gross interference in the social, economic and cultural conditions that would influence the lives of those landowners of over 400 parcels of land and the interrelationship between them and their land, and may cause the power consumers of Ontario to suffer a needless capital expense.

q) If it is determined that the present design transmission capacity of the existing two 500 KV and three 230 KV power transmission lines are able to transmit 10,500 MW/h of power, at an excess of 21% over Bruce Area future generation capacity of 8,560 MW/h the questions that must then be answered are:

- What now are the cogent reasons of *HONI* and the OPA for now proposing and propounding the construction of yet an additional 500KV power transmission line for an additional 3,000 MW/h generating capacity from the Bruce area,.

- Is this 3000 additional capacity being now proposed to be build now to serve an additional 4 Nuclear Units that might make up Bruce "C" but which have not been disclosed to the public as being now contemplated for construction ?

*The Fallis Group requests that this topic be a condition precedent additional TOR of the EA assessment to be determined in advance of all other TOR that are established by the MOE for proceedings herein*

## 2. SHOULD THE MOE NOW ASSESS THE LATITUDINAL LOCATIONS OF THE CENTRE-LINE CORRIDOR POSITIONING OF THE 500 KV TRANSMISSION TOWER WHICH *HONI* PROPOSES TO CONSTRUCT AND WHICH PROPOSED CORRIDOR IS 180 KM IN LENGTH AND ONLY 175 OR 200 FEET IN WIDTH ?

a. The Project that the MOE is being asked to environmentally assess, involves an assessment as to whether a strip of land that is 180KM in length by a width of 175 feet from The Bruce to Colbeck, and a width of 200 feet from Colbeck to Milton. (The ratio equates to a one inch rope laid out for just over 1 kilometer).

b. The OEB was requested, by a Motion made on June 25th by the Fallis Group, to state that it would entertain receiving evidence on *HONI*'s "Leave to Construct' Application #2007-0050 about alternate routing locations for the 500 KV line within 2 KM of either side of the proposed Project transmission line.

c. The OEB gave written reasons denying that Leave Motion stating that it was limited in its jurisdiction to Sec. 92(2) of the *Ontario Energy Board Act* which restricts the OEB to ;

> "*only consider the interests of consumers with respect to prices and reliability and quality of electricity service when, under subsection (1), it considers whether the construction, expansion, or reinforcement of the electricity transmission line . . . is in the public interest*"

d. Simply put the property rights of individuals, the need for any specific land for construction, and the harm or injury, (direct or indirect), that may consequentially be suffered by any of the owners of over 400 land holdings in the 180 KM project length, will not be given any regard whatsoever by the OEB under OEB Application 2007-0050.

e) All of the above issues, and in respect of which the OEB has already determined that it will not consider, involve the '*environment*', as defined under the *EA Act*, and involve each individual land owner who is represented by the Fallis Group, as well as all other landowners within the proposed 500 KV power transmission corridor.

f). The Fallis Group submits that the MOE **must** be able to evaluate alternative environmental locational land options when it assesses the merits of the Application made to the MOE by *HONI*, which options must include the following considerations, which should be included in any TOR established by the MOE

1. What additional minimum width of land in respect of which the MOE **must** have full environmental regard and which lies beyond the 175 and 200 foot transmission corridors easement widths as proposed by *HONI ?*

> *The Fallis Group requests that this topic be a TOR of the EA assessment proceedings herein*

2. Is there any cogent evidence in existence to suggest that the marrying of the proposed 500 KV power transmission corridor of a width of 175 feet or 200 feet located directly to the north or east of the existing 230 KV and/or 500 KV power transmission corridors between the Bruce and Milton, has an overall environmental advantage to all landowners and to Province, rather than a transmission line that is designed and located, **but only after** a locational

assessment review is first completed by the MOE.

*The Fallis Group requests that this topic be a TOR of the EA assessment proceedings herein.*

3. Are there any health related conditions that individual land owners may be forced to suffer and endure, (including not only the owners of approximately 400 land parcels within the 180KM lands, but other occupants within and beyond the proposed 500 KV Transmission Corridor, specifically including occupants residing and/or working at a distance beyond the 175 and 200 foot easement of the proposed Transmission Corridor), as a consequence of the use by *HONI* of the proposed 500 KV line under normal electricity load conditions after construction thereof, but within the electromagnetic pollution created by electromagnetic discharge created therefrom, and broadcast during such periods of electrical load empowerment of a/the power transmission line.

*The Fallis Group requests that this topic be a TOR of the EA assessment proceedings herein.*

4. Should the MOE require *HONI* to now identify and notify every landowner or land occupant within an established health zone of influence of electromagnetic fields that are projected to emanate from the proposed 500KV transmission line under maximum load conditions as a pre-condition of proceeding with this EA application. The MOE should require, as a TOR, that each resident of land who lives within 1,700 feet from the centre-line of a proposed 500 KV line, and 4,000 feet of the combined adjacent 230 KV and 500 KV transmission lines, now be given immediate Notice of this Application , as a condition precedent to a continuation of the EA Process on any other TOR except for the TOR also requested in Clause 1(q) above, and that the MOE shall require that such residential occupants be entitled to take full response steps within a reasoned time period.

*The Fallis Group requests that these issue topics be a condition precedent additional TOR of the EA assessment to be determined in advance of all other TOR that are established by the MOE for proceedings herein except for the TOR sought in 1(q) above.*

5. Is the health zone of electromagnetic influence of 1,700 feet on either side of the centre line of a 500 KV transmission line, or a greater measured distance Zone for a total of 1,230 KV of electromagnetic influence for a sufficient set back distance for health risk safety for residents residing near high voltage power transmission line(s), [ These recommendations of the health concerns to residents living near high voltage power transmission lines are supported by the recommendation of the, Dr. Andrew R .Marino, PhD, of Louisiana

State University, a well known expert, since 1986, on the study of the Health Effects of Electricity and Magnetic Fields on humans and , and who presented as a paper entitled, *Health Effects of Electric and Magnetic Fields,* presented in Toronto on Sept. 16-19, 1986 at the *International Utility Symposium,* with participation partners, including the *American Public Power Association.* (See *Schedule 'B'* attached hereto, which sets out the recommended set backs for residential habitation from the centre lines of transmission lines carrying different Kilovolt power loads]. The MOE should now determine to establish this health zone of influence, as a residential set back distance from the centre-line of any 500 KV transmission Line, and the specific combined 1,230 KV transmitted in the proposed 3 adjacent lines, as a TOR for this pending hearing.

*The Fallis Group requests that this topic be a TOR of the EA assessment proceedings herein*

6. It is the onus of *HONI,* and not the onus occupants of lands lying within 1,700 feet of the centre line of a 500KV transmission line, and established set-back distance for the specific combined 1,230 KV transmitted in the proposed 3 adjacent lines, to demonstrate and prove to the MOE that electric or magnetic fields from the proposed 500 KV power transmission line, and the specific combined 1,230 KV transmitted in the proposed 3 adjacent lines, do not constitute a health risk.

*The Fallis Group requests that this topic be a TOR of the EA assessment proceedings herein.*

7, It is the onus of *HONI* and not any of the landowners to demonstrate that there are no inherent problems within a particular electromagnetic discharge zone, and it is the *HONI* that has the burden of credibly showing safety. The MOE should set this onus up as a TOR

*The Fallis Group requests that this topic be a TOR of the EA assessment proceedings herein*

8. In any event in order to determine the optimal location for the proposed new 180 KM power Transmission Corridor, the Fallis Group proposes that the MOE, as a TOR, should establish a 2 kilometer latitudinal buffer on either side of the centre line for the proposed 500 KV Transmission Line in order to give the MOE sufficient latitude in ascertaining whether or not a section of the proposed 500 KV Transmission Line ought to be constructed in another location within that 2 KM latitudinal buffer zone.

*The Fallis Group requests that this topic be a TOR of the EA assessment proceedings herein*

9. The Fallis Group submits that as a TOR the MOE should require *HONI* to provide to each landowner, (within 60 days of the establishment of a TOR, in respect to the owners of each land holding where *HONI* intends to acquire a full fee simple interest therein, from each such owner and the intended land occupant thereon), **two** alternate electrical routing alternatives for the construction of 500 KV power transmission line so as to avoid any fee simple title acquisition by *HONI* from such landowner.

*The Fallis Group requests that this topic be a TOR of the EA assessment proceedings herein.*

## 3. ROBERT WATSON: LOT 36 & 37, CONCESSION A, (former Greenock Twp) MUNICIPALITY OF BROCKTON, COUNTY OF BRUCE.

a) Robert Watson, (Watson) objects to the location of the proposed 175 foot proposed right of way within which *HONI* proposes to locate a 500 KV power Transmission Line.

b) Watson operates an intensive beef cattle farming operation on his lands on which have been constructed very large and substantial cattle housing and feeding buildings. The residential home on the Property is a century and a half old structure where Watson resides.

c) Watson and his predecessors have been forced to suffer and endure 2 previous substantial power transmission lines within two separate and converging power transmission corridors. They have already been previously twice conscripted for Hydro Service and he does not now feel unlike "Private Ryan" in the movie *'Saving Private Ryan'* in this third proposed conscription of his land for electrical service.

d) The First transmission line, a 230 KV line, was constructed by the Hydro Electric Power Commission , (HEPC), in the early 1960s, to transmit nuclear generated electricity from the Douglas Point Nuclear Plant to Hanover Substation, and then on to Orangeville, where it joined the grid system operated by HEPC.

e) The Second transmission line, a 500KV line, was constructed by Ontario Hydro, a successor to the HEPC, in the 1977-78 time frame to transmit nuclear generated electricity from the Bruce 'A' and Bruce 'B' nuclear facilities from the Bruce to Milton, without any intervening power interception, where it joined the grid system operated by Ontario Hydro.

f) The newly proposed 500 KV transmission line is intended by *HONI* to be constructed parallel and immediately adjacent to the north of the existing First 500KV transmission line until it intersects, on convergence with an existing 230 KV

transmission line running from the Bruce to Hanover & Orangeville and at such convergence point, just across the road within Lot 37, Concession 'A' in Brockton (former Township of Brant)

g. The proposed routing of *HONI* necessitates a total fee simple buy-out and the destruction of the heritage century and one-half old residence of Watson.

h. *HONI* has provided the Fallis Group with information about different types and installation costs of a turning tower which is attached hereto as *Schedule 'C'* hereto, being an E-Mail sent by Hydro One Projects Manager, Vic Girard on July 26, 2007.

I. Watson proposes that a TOR be established by the MOE to allow the MOE to assess a proposal by Watson to reroute the proposed 500 KV line by building a deviation with a turning tower opposite the existing 500 KV transmission line.500 KV Towers Nos. #119 and #120 within Lot 2 and 1, Concession 1, of (former Greenock Township) in the Municipality of Brockton to converge with and cross over the existing 230 KV line going from Bruce to Hanover & Orangeville at a point opposite 230 KV Towers Nos. 84 and 85 within Lot 38 Concession 'A' in Brockton, as now owned by Watson.

j. Watson opines that there will be a cost saving to *HONI* and a further opportunity to preserve an existing farming operation with an associated heritage residence which, destruction will cause a direct, unjustifiable interference with the 'environment 'as it relates to Watson, his land and the social and economic fabric thereof that will probably cause a loss of one major farming Unit.

k. The Fallis Group submits that there is no law nor any environmental reason whatsoever which requires any part of the proposed 500 KV transmission line to be constructed in an absolutely straight line The environmental reasons which the MOE is mandated to assess should allow for the proposed 500 KV transmission Line to be constructed in another neighboring location which has more suitable environmental reasons for such positioning.

*The Fallis Group requests that these Watson related issue topics be TOR of the EA assessment proceedings herein.*

## 4. THOMAS & LAURA VISSER: PART LOT 6, CONCESSION 2, (former Township of Normanby), MUNICIPALITY OF WEST GREY, COUNTY OF GREY

a. The proposed new 500 KV transmission line corridor diagonally crosses the south

west corner of their residential Lot on which the Vissers live in a recently constructed home, and that was listed for sale with Colwell Banker realtors for the sum of $282,000 prior to the announcement on March 29th, 2007 of the OEB Applications.

b. The existing residence of the Vissers lies just outside the *HONI* proposed 500 KV transmission corridor by approximately 90 feet at its closest and 150 feet away at it furthest.

c. The existing residence of Vissers lies within 200 feet of the centre line of the proposed new Transmission line, and within the first 250 feet of a recommended separation distance for human habitation from the Centre Line of a 500KV Transmission line of 1,700 feet and an unspecified separation distance for a combined transmission of 1,230 KV for 3 adjacent high voltage power lines.

d. The construction and empowerment of the proposed new 500 KV transmission line will serve only to compound a very severe health problem from which the Vissers now suffer, namely the fact that the existing 500 KV transmission line on the south plus the northerly adjacent 230 KV line totaling a730 KV transmission capacity are already located within 500 feet of the most southerly 500 KV line within a recommended 1,700 foot set back for a 500 KV line, and a recommended 2,500 set back for a 765 KV transmission line.

e. If the third line and the second 500KV Line is built the total electromagnetic field within 500 feet of the Visser residence will total 1,230 KV, and all three Transmission lines will be emanating electromagnetic pollution from compounded field of electromagnetic discharge influence from 3 adjacent power lines, which have been shown to negatively effect the health of humans living within such separation distances.

f. The Vissers request that a TOR be established by the MOE to determine the risk to the human health to them and their children resulting from the combination of the discharge of electromagnetic pollution upon the Vissers generated by 3 adjacent electromagnetic fields emanating from 3 side-by-side sets of high voltage transmission lines carrying, in total, 1,230 KV of electrical power.

*The Fallis Group requests that this topic be a TOR of the EA assessment proceedings herein.*

g. The Fallis Group requests that a TOR be established by the MOE to determine what is the safe minimum distance that humans should reside distant and away from the combination of the discharge of electromagnetic pollution generated by 3 adjacent electromagnetic fields emanating from 3 side-by-side sets of high voltage transmission lines carrying, in total, 1,230 KV of electrical power

*The Fallis Group requests that this topic be a TOR of the EA assessment proceedings herein.*

h. The Fallis Group requests that a TOR be established by the MOE to now require *HONI*, as a pre-condition of proceeding forward with the hearing, to provide the MOE within 90 days hereof of the names and addresses of all residential occupants of land within the following categories of land distances from the centre line of the proposed new 500 KV transmission tower line

| | |
|---|---|
| Category One: | 1700 feet |
| Category Two | 1700 feet to 2300 feet |
| Category Three | 2300 feet to 2800 feet |
| Category Four | 2800 feet to 3300 feet |
| Category Five | 3300 feet to 3800 feet |
| Category Six | 3800 feet to 4300 feet |
| Category Seven | 4300 feet to 4800 feet |

*The Fallis Group requests that this issue topics be a condition precedent additional TOR of the EA assessment to be determined in advance of all other TOR that are established by the MOE for proceedings herein except for the TOR sought in 1(q) above, and 2(f)4 above.*

I) (This information as requested in clause 4(h) above will permit the MOE to be able to require *HONI* to b able to immediately notify any of those proximate residents who may reside within any of the Seven Categories of distances that the MOE may determine to be residing within a health risk zone of influence from the electromagnetic pollution generated by discharge from 3 adjacent electromagnetic fields emanating from 3 side-by-side sets of high voltage transmission lines carrying, in total, 1,230 KV of electrical power).

*The Fallis Group requests that this topic be a TOR of the EA assessment proceedings herein*

j) The Fallis Group concerns about health risks to humans residing in proximity to high voltage transmission lines caused by continuous exposure to electromagnetic pollution generated by discharge from adjacent electromagnetic fields emanating from high voltage transmission lines is founded upon the fact that certain institutions in various jurisdictions have identified evidence in varying degrees of such health risks concerns, Details of which are listed below in the following section entitled, "United States"):

UNITED STATES:

1. The National Institute of Environmental Health Sciences (NIEHS), submitted a *Report on Health Effects from Exposure to Power-Line Frequency Electric*

*and Magnetic Fields* to the U.S. Congress in May of 1999, prepared in response to the 1992 Energy Policy Act.

The *NIEHS REPORT* stated therein at p. 36 that:

> *'The ultimate goal of any risk assessment is to estimate the probability of disease in an exposed population. In general, this involves the combination of three basic pieces of information: the probability that the agent causes the disease, the response as a function of exposure given that the exposure does cause disease and the distribution of exposures in the population being studied'*

2. Amongst many other conclusions the *NIEHS REPORT* submitted to the U.S. Congress, in 1999, that:

> *"A majority of the members of this Working Group (19/28 voting members) concluded that exposure to power-line frequency ELF-EMF is a "possible" human carcinogen. This decision was based largely on "limited evidence of an increased risk for childhood leukemia with residential exposure and an increased occurrence of CLL (chronic lymphocytic leukemia) associated with occupational exposure".*

3. The *NIEHS REPORT* recommended to the U.S. Congress in 1999, at p. 37-38 as follows:

> *"The NIEHS suggests that the level and strength of evidence supporting ELF-EMF exposure as a human health hazard are insufficient to warrant aggressive regulatory actions; thus, we do not recommend actions such as stringent standards on electric appliances and a national program to bury all transmission and distribution lines. Instead, the evidence suggests passive measures such as a continued emphasis on educating both the public and the regulated community on means aimed at reducing exposures. NIEHS suggests that the power industry continue its current practice of siting power lines to reduce exposures and continue to explore ways to reduce the creation of magnetic fields around transmission and distribution lines without creating new hazards".*

4. The Fallis Group submits that *HONI* has made absolutely no provision or allowance for the location of the proposed 500 KV power transmission line, nor taken into consideration the health risk concerns for those persons residing in health risk proximity of the combined 3 side-by-side transmission

lines which will collectively have the capacity at any given time to transmit 1,230 KV of electrical power and the associated health consequences of their residents living proximate to the electromagnetic pollution emanating therefrom.

5. The Fallis Group submits that no where in any of the material filed with the '*Environmental Assessment - Proposed Terms of Reference*", as submitted by *HON* to the MOE on the 'Bruce to Milton Transmission Reenforcement Project.' has *HONI* made any specific request for a TOR that the MOE have any regard to humans, as being a constituent statutory part of the 'environment', as defined under the *EA Act,* and the health risk concerns on residents living proximate to the 1,230 KV of power to be transmitted along 3 adjacent lines if the new power line is constructed and utilized with design load capacities.

6. The Fallis Group submits that the only health risks to humans that *HONI* has appeared to address in its *Proposed Terms of Reference,* and to provide for, are as follows:

   I. Elevating the lowest point of suspension of power cables strung from each 500 KV tower, at maximum load conditions under the hottest days of the year, to a sufficiently safe distance from the ground to permit commercial access thereunder, typically for the use of tall farming and logging equipment and ancillary machines designed to make improvements to such utilized lands.

   ii. Establishing a distance restriction for the existence of any structure within 87.5 feet to 100 feet from the centre line of the proposed 500 KV power transmission line that could be impacted in the event of the collapse of any one 500 KV Tower and associated suspended cable lines, whether occasioned by a natural or unnatural event, or by terrorism.

7. The Fallis Group notes that of the 320 published study references considered by *NIEHS* in its 1999 *REPORT* for the U.S. Congress, only three appear to originate from Canada, namely:

   ***24.*** *McBride ML, Gallagher RP, Thériault G, Armstrong BG, Tamaro S, Spinelli JJ, Deadman JE, Fincham B, Robson D, Chaoi W. Power-frequency electric and magnetic fields and risk of childhood leukemia in Canada. American Journal of Epidemiology 149:831-842(1999).*

   ***42.*** *Thériault G, Goldberg M, Miller AB, Armstrong B, Guénel P, Deadman J, Imbernon E, To T, Chevalier A, Cyr D, Wall C. Cancer risks*

*associated with occupational exposure to magnetic fields among electric utility workers in Ontario and Quebec, Canada, and France:1970-1989. American Journal of Epidemiology 139:550-572(1994).*

***75.*** *Baris D, Armstrong BG, Deadman J, Thériault G. A mortality study of electrical utility workers in Quebec. Occupational and Environmental Medicine 53:2531(1996).*

8. The Fallis Group notes that of the 320 published study references considered by *NIEHS* in its 1999 *REPORT* for the U.S. Congress, published relevant study references were considered that originated from the following countries, other than the United States:

*Canada, Denmark, England, Finland, Germany, Norway, Russia, Spain, Sweden and Taiwan.*

9. The Fallis Group notes that the studies done in Russia have determined conclusively that there is a definite co-relationship between the incidents of health related problems in humans and continuous close proximity to high voltage power transmission lines, which Russian study results were also noted by the *NIEHS Report* in its 1999 *REPORT* for the U.S. Congress.

***37.*** *Asanova TP, Rakov AN. The health status of people working in the electric field of open 400-500 KV switching structures. Gigiena Truda I Professionalnye Zabolevaniia 10:50-52(1966).*

10. The Fallis Group has ascertained that in 1970 the USSR passed nationwide Regulations governing the nature and extent of permissible exposure for electrical workers. The Soviets believed that electric field affects people, that the reaction is non-specific, and that it can develop after comparatively long exposures (2-5 months). They further believe that the effects of exposure are cumulative, dose-related and depend strongly on individual physiological differences. The medical problems attendant with such pre-longed exposure were noted by Soviet researchers to involve disturbance of the cardiovascular systems, the central nervous system, blood composition and lower sexual capacity

11. As previously stated the Fallis Group submits, that the public should not be expected to prove that electric or magnetic fields from power transmission lines constitute a health risk; it is *HONI* that has the burden of credibly showing safety.

12. The Fallis Group submits that as the OEB has indicated that its only mandate of concern is to evaluate the proposed project through its statutory mandate filter of looking at the project only through the price cost of the project to Ontario consumers, and the reliability and quality of the delivery of electrical

services to these consumers, it therefore falls on the mantel of responsibility of the MOE to satisfy itself as to the health risk safety of those persons who now live within the reach of the electrical magnetic field generated from the combined high voltage 3 transmission lines that will transmit up to 1,230 KV of electricity at any given time, and to set out its assessment findings in the final assessment Report that it produces for this Application of *HONI.*

13. The Fallis Group submits that for the MOE the issue NOW is not whether *HONI* can afford the time and money associated with any delay in receiving an Environmental Assessment Report from the MOE, but rather the issue is whether *HONI* and the MOE can afford to risk the health consequences to be potentially suffered by and upon some of the landowners and many un-notified residents who will still live within the sphere of electromagnetic influence emanating from the intended to combined 1,230 KV power transmission from 3 adjacent high voltage power lines. The continued good health of adjacent residents mus not be compromised by a hastened and diminished assessment of those risks, just to accommodate *HONI* in its quest for a speedy hearing to otherwise meet a deadline of December 31st, 2011 for the completion of construction of a new 500 KV transmission line, that may cost *HONI* monies as a result of its delay of over 1.5 years in bringing this Application to the MOE..

14. This Application will not only determine whether there is any present need for further transmission capacity out of the Bruce, but will also determine whether there is an inherent health risk to residents living in close proximity to the proposed 500KV transmission Line which will allow those at risk to be compensated in due course if such potential health related injury may otherwise require them to relocate.

15 HONI HAS BROUGHT THIS PROBLEM UPON ITSELF BY ITS OWN TIME DELAYS:, NAMELY:

- 1 year, 5 months and 12 days, until March 29th, 2007, BEFORE commencing an Application to the OEB for Leave to Construct a 500 KV Transmission Line, from the date of contractually committing to build one (through the Ontario Power Authority) who signed an agreement with Bruce Power on October 17th, 2005 to construct such a Line.

- *1 Year 8 Months 26 days until July 12th, 2007* BEFORE commencing an Application to the MOE for an Environmental Assessment of its proposal to construct a 500 KV Transmission Line, from the date of contractually committing to build one (through the Ontario Power Authority) who signed an agreement with Bruce Power on October

17th, 2005 to construct such a Line.

16. Simply put, the MOE is the very last opportunity that land residents lying within the electromagnetic sphere of health risk influence well beyond the 175 - 200 foot strip proposed by *HONI* for a transmission corridor, having had no formal notice of the proposed Project nor the potential health risk consequences arising therefrom.

*The Fallis Group requests that this must be made a TOR of the highest priority by the MOE in the terms of reference to be set by it.*

## 5. DAVID & KAREN RAWN: LOT 3, CONCESSION 3, (former Township of Normanby) MUNICIPALITY OF WEST GREY, COUNTY OF GREY

1. David and Karen Rawn (Rawns) are the owners of Lot 3, Concession 3, (former Township of Normanby), Municipality of West Grey, County of Grey.

2. *HONI* proposes to construct a 500 KV power transmission line within a 175 foot strip of land that it has designated through the Rawns lands, lying to the immediate north of an existing 230 KV line constructed diagonally through the Rawns lands which was build in the early 1960's by the HEPC.

3. In the period 1976–78 a second 500 KV Line was constructed from the Bruce to Milton which was constructed on the south side of the same existing 230 KV transmission line through the entirety of the Townships of Normanby, Egremont and Proton in Grey County

4. During the course of planning for the 1976-1978 Construction of the 500 KV transmission line a significant lobby was carried out with Ontario Hydro to protect an area within Normanby Township know as the Camp Creek Lowlands, though which Ontario Hydro proposed to construct its 500 KV transmission line.

5. In April of 1976 Ontario Hydro requested a comment from the Saugeen Vallley Conservation Authority, ('SVCA'), on the proposed construction and crossing of the 500KV Transmission Line in the Camp Creek Area of Normanby Township.

6. In the Spring of , 1976 the SVCA responded to a request from Ontario Hydro dated April 28th, 1976, to construct a 500 KV Line, by a 16 page response report to Ontario Hydro and therein supported Ontario Hydro's proposal to divert the 500KV transmission line away from the Camp Creek Lowlands.

7. Ontario Hydro had conducted studies between October of 1973 and April of 1976 and determined to deviate the 500 KV line away from the main Camp Creek Lowland Area, and which the SVCA supported in its 1976 Spring Report.

8. The SVCA specifically commented in its 1976 Spring Report, on page 9 thereof that the establishment of a 500 KV line parallel and lying to the immediate North of the 230 KV transmission line *still had far more impact than the preferred route (*of Ontario Hydro which 500 KV Transmission line deviated to the south at 500 KV Tower # 260, (near 230 KV Tower No. # 149), and rejoined the transmission corridor at 500 KV Tower No, #271, (at 230 KV Tower No. # 143).

9. The MOE ,in a letter to Ontario Hydro dated Nay 10th, 1976, concurred in the deviation proposal of Ontario Hydro to by-pass the Camp Creek Lowlands.

10. On March 9th, 1977 the Minister of Energy, The Honourable Dennis Timbrell, as "Approving Authority' under an Application made by Ontario Hydro under the *Expropriations Act*, (and after a review of the Report of the Hearing Officer, Mr. Fred Miller, under Hearings of Necessity conducted under that *Act*), made specific reference in his written reasons to the *' Camp Creek Diversion'* in section 7, found on pages 11 - 17 of his *Written Reasons'*

11. Specifically the Minister of Energy determined that the '*no-go*' classification, as assigned to the Camp Creek Lowlands by the Inquiry Officer, was substantiated in detail by an Environmental Assessment Report, prepared by Ontario Hydro, in the spring of 1976 , and which included support data from the Ministries of Environment and Natural Resources.

12. The Minister of Energy, Dennis Timbrell, made the following comments on March 9th, 1977 (in his Written Decision approving the 1997 expropriation for the 500 KV transmission line), on the specific 175 foot transmission line corridor now proposed by *HONI* lying directly north of the existing 230 KV transmission Line ( and which lay in exactly the same location within the Camp Creek Lowland area, and the present Rawns lands, that Ontario Hydro had studied and rejected for use as a 500 KV transmission line in 1976).

> ***P. 12.*** *"However, it is possible to avoid the stream almost entirely by a jog approximately 1,800 feet to the south for a total length of 1.4 miles. This jog known as the :Camp Creek Diversion", was proposed by Ontario Hydro to avoid what it considered to be undue environmental impact on Camp Creek, but was opposed by owners of two of six parcels of land affected. It was subject to considerable discussion at the inquiry."*
>
> *"The special environmental sensitivity of the Camp Creek Area was evident to te environmental study tam from the outset and was in fact singled out as a matter of much concern by the Ministry of Natural Resources in the entire, very large study area.. Based on the conclusions of the environmental study,*

*the principle of the diversion was accepted by the Government by Order-in-Council # 3582/75 on December 23, 1975 which authorized Ontario Hydro to apply to expropriate land. "*

***P. 13.*** *'As I mentioned above, the Inquiry Officer extensively reviewed the methodology of the environmental study and found it acceptable, particularly commending its depth and completeness and Hydro's extensive efforts to obtain public input. The study's conclusions are therefore quite persuasive. Indeed the 'no-go' assigned to the lowlands was substantiated in detail by an Environmental Assessment, which included support data from the Ministries of Environment and Natural Resources."*

*'The principal conclusions ( Of the Environmental Assessment Report) were:*

1. *That Camp Creek at this location and its associated wooded area ia a natural environment of very high quality.*

2. *'The installation of a new transmission line and the associated clearing of trees within the Camp Creek Lowland would cause a significant long term degradation of this natural quality.*

3. *That the diversion favoured by Ontario Hydro would avoid this degradation while involving relatively little conflict with other land uses in the affected area, including agriculture..*

***P.14*** *SOIL*

*Examination of soil types in the Camp Creek Lowlands indicated the probability that use of heavy equipment would cause extensive damage to the soil including compaction, rutting and erosion, which would be unusually difficult to restore. The poor soil drainage of the wetlands would also significantly increase the difficulty of tower construction because of its unsuitability for vehicular traffic, and the difficulty of construction secure foundations.*

*VEGETATION*

*The impact on vegetation of construction in the Lowland would be unusually severe. The vegetation cover in this area does not lend itself well to selective cutting and a large area would therefore have to be effectively cut. As the creek in te eastern half of the Lowland also acts as a wind funnel. Any residual shallow rooted trees such as cedar or hemlock might well be uprooted, creating a bare, ugly area, whose slopes would quickly erode. Reforestation would also be particularly difficult*

*Another potential problem related to the forest cover is occasioned by the wooded 'islands" created by creek braiding. These trees on these islands would be selectively cut, but disposal of the logs and non salvable material would be difficult, time consuming and expensive.*

*STREAM QUALITY*

***P.15*** *The removal of stream side vegetation and the irreducible minium of construction damage would lead to erosion, sedimentation and turbidity of the water, greatly reducing its suitability for both fish and aquatic plants. In addition the loss of forest cover which presently shades the stream from the sun would raise its summer temperature beyond the tolerance of trout. Since Camp Creek now produces a significant percentage of the cold water fish in the Saugeen River system, this would significantly reduce sport fishing both locally and downstream.*

*OVERALL*

*Considered as a whole, the existing inter-relationships between the forest cover, wildlife, and the creek system in the Camp Creek Lowland have social, environmental benefits which are locally significant, and probably regionally significant, as well as visual and aesthetic appeal.*

***P. 16*** *These benefits would be would be significantly impaired by a new transmission line through the Lowland. Although the diversion would not eliminate the environmental impact of the line on the Camp Creek area or the creek itself, it s an acceptable minimum modification of the line, as the essential character of the Creek and the Lowland ecology would be protected.*

***P. 18.*** *The diversion has been amply justified and is necessary in the public interest, and I have therefore approved it,*

*Dated at Toronto, this 9th day of March, 1977*

**"DENNIS TIMBRELL"**

Minister of Energy
Approving Authority

13. The Fallis Group submits that the Minister of Energy, Dennis Timbrell, as Approving Authority, made a decision and a determination, based upon a proper and fully examined and studied environmental criteria, namely that a 500 KV line would not be allowed to be constructed within the Camp Creek Lowlands,

14. The Fallis Group submits that for *HONI* to now seek leave to construct a new 500 KV line in exactly the same location that was environmentally determined, studied and reviewed by various ministries, the SVCA, the Hearing Officer under the Expropriations Act, and the Minister of Energy, as the Approving Authority, can only be considered as an affront to past governments, the existing landowners, the Rawns, and every conservation organization, and all members of the public who have continued to benefit by such conservation decisions made 30 years ago that the Camp

Creek Lowlands was a '*No-Go*" area for transmission line construction,

15. Surely all those past authorities, as listed above, did not make those decisions and win the benefits flowing therefrom or conservation and environment purposes, only to have them now lost in perpetuity 30 years later, *firstly* to an 'illustrator' who drew a parallel line located 175 feet north of the northerly 230 KV and 500 KV transmission lines, and *secondly* to surveyors and engineers who have obviously only been schooled in and learned the fine art of drawing a '*straight line*', none of whom have yet displayed any evidence of having given an 'environmental' considerations whatsoever to the Camp Creek Lowlands, nor taken the time to study past studies undertaken in respect thereto

*The Fallis Group requests that this important issue in respect to the Camp Creek Lowlands and the "No-Go" Zone therein be added as a TOR in the EA Assessment review.*

## 6. THE 'HANOVER DIP' THROUGH BROCKTON, HANOVER AND WEST GREY

1. In the early 1960's HEPC constructed a 230 KV line which was designed to run from the Douglas Point Nuclear Plant ( now located with the Bruce) to Orangeville to transmit power into the Ontario Grid at two points, one point located at the end of the line near Orangeville in Dufferin County, and the other point located at the Hanover Transformer Substation, (TS) in Grey County, in mid-line.

2. Although the Transmission Corridor for the 230 KV line projects in a straight line north of Hanover, a deviation 'Dip" to the south west of the projected transmission corridor was made off that projected corridor at 230 KV Tower No. # 135 within Lot 30 Concession 6, (former Brant Township) in the Municipality of Brockton , which line deviated into the Town of Hanover, dropped power off at the Hanover TS, and then proceeded due East from Hanover into the Municipality of West Grey (former Bentinck Township), until it rejoined the projected transmission corridor at 230 KV Tower No. # 168 within Lot 26 Concession 2 N.D.R. (Former Bentinck Township).

3. In 1974 Ontario Hydro made an Proposal to build a new 500 KV transmission line within the original projected corridor, to avoid the Town of Hanover. Ontario Hydro indicated that it was aware of Hanover's Official Plan and Hanover Council's resolution to keep the new 500 KV Line at least five miles away from the Town.

4. Various groups lobbied with Ontario Hydro and from public input Ontario Hydro chose a route parallel and beside the existing 230 KV Right of Way.

5. Although the Town Council and its then Mayor, Allan Fisher, attended before the hearings of Necessity and argued against the location of the 500KV line within

Hanover, the Hearing Officer found the routing to be defensible, notwithstanding that the Town was not consulted nor informed of the intention of Ontario Hydro to alter the first location within the Original Proposed corridor to the new location parallel and beside the 230 KV transmission right-of- way. In fact the Town was not even notified of the Notice of Expropriation.

6. The Approving Authority, Mr, Dennis Timbrell, did note these concerns of Hanover, and in particular, the failure of Ontario Hydro to keep Hanover informed, but did not choose to set aside or alter the expropriated location, requesting only that Ontario Hydro meet with the Town representatives to discuss complaints and possible measures to minimize the impact on the Town's plans for the area.

7. There was however absolutely no electrical reason for the 1977 500 KV Line to deviate in to Hanover, as no power was dropped off, and the Fallis Group states that there is presently still no electrical reason for the New 500KV Line to now deviate into Hanover for exactly the same reason.

8. As the combined transmission capacity of the two 500 KV and the one 230 KV transmission line is a cumulative total of 1,230 KV, the electromagnetic pollution from such electromagnetic discharge has been determined to have potential health risk consequences that could exceed 4,000 feet on either side of the 3 transmission lines.

9. That potential electromagnetic pollution could broadcasts out to over 8,500 feet when the distance between the 3 lines is added in.

10. The Town of Hanover lost its opportunity to object to the location of the first 500 KV line because of the admitted failure of Ontario Hydro to notify the Town of the change to bring the 500 KV line into Town from the original Corridor in which it was supposed to, and was designed to, be located.

11. As the second biggest urban community in Grey County and the biggest Urban Community in South Grey County Hanover deserves its right to grow the town and its population, and the only direction it can now do so without annexations ( which can be challenged and not granted), is to the north of the Saugeen River but which is now occupied by a 230 KV and a 500 KV Transmission Line and yet the potential of another 500 KV Transmission line, which in combination may have potential health risks of up to an area 8500 feet in width along the 3 transmission lines.

12. As a condition of approving any new 500KV Line for environmental assessment purposes, the MOE should require that *HONI* construct any new 500KV Line within the northerly projected corridor , and that it should be a condition of such approval that *HONI should* build a second 500 KV Line therein to replace the 500 KV 'Hanover Dip,' and when constructed to join it to the present existing 500 KV Line between present 500 KV Tower Nos. # 187 and # 229.

13. The cost savings and benefits to the Town of Hanover as a 'person, within the meaning of the *EA Act* from such relocation will bring substantial benefits of community to Hanover that will allow it to grow as a normal urban centre without potential risk to health for its citizens, a condition that will generate social, economic and cultural prosperity to Hanover and the regions within Grey and Bruce Counties that it now serves

14. *The Fallis Group proposes that a TOR established by the MOE be the 'Hanover Dip" and the proposal of HONI to construct yet another 500K V transmission line therein, which will conflict with the Urban Growth patterns fro the Town of Hanover and the health risks to its citizens if it is constructed.*

ALL OF THESE SUBMISSIONS ARE RESPECTFULLY SUBMITTED

DATED AT DURHAM, ONTARIO, THIS 3RD DAY OF SEPTEMBER, 2007

**FALLIS FALLIS & McMILLAN**

per: Peter T. Fallis
Solicitors for the 'Fallis Group"

TO:

Ministry of the Environment
Environmental Assessment and Approvals Branch
Ministry of the Environment
2 St Clair Avenue West, Floor 12A
Toronto, ON M4V 1L5
Attention: Catherine McLennon

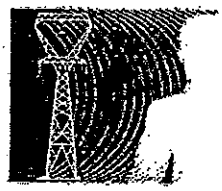
AND TO:

Hydro One Networks Inc.
8th Floor, South Tower
483 Bay Street
Toronto, ON M5G 2P5
Attention: Mr Glen MacDonald, Senior Advisor - Regulatory Research and Administration

# SCHEDULE 'A'

Names & Lots Descriptions of the 'Fallis Group'

| | |
|---|---|
| Charlton, Gwendolyn J | Lot 27 Concession 2 (Former Twp of Normanby) |
| Cressman, Doris | Lot 7 Concession 5 (Former Twp of Egremont) |
| Cressman, Keith | Lot 7 Concession 5 (Former Twp of Egremont) |
| Flanagan, Dean | Lot 1 & Part Lot 2 Con 16 (Former Twp of Egremont) |
| Flanagan, John | Lot 3 & Part Lot 4 Con 16 (Former Twp of Egremont) |
| Flanagan, Phyllis D. | Lot 3 & Part Lot 4 Con 16 (Former Twp of Egremont) |
| Foster, Allan Eric | Lot 10 & 11 Concession 14 (Former Twp of Egremont) |
| Foster, Karyn | Lot 10 & 11 Concession 14 (Former Twp of Egremont) |
| Hughes, Calvin John | Lot 20 Concession 2 (Former Twp of Egremont) |
| Kennedy-Menaul, Sharon | Division 3 Lot 6 Concession 1 (Former Twp of Egremont) |
| Lewis, James Douglas | Lots 8 & 9 Concession 14 (Former Twp of Egremont) |
| Lewis, Jennifer Lynne | Lot 19 Con 2, Lot 25 Con 3 (Former Twp of Egremont) |
| Lewis, Mervin Wayne | Lot 19 Con 2, Lot 25 Con 3 (Former Twp of Egremont) |
| Lewis, Penny Joanne | Lot 7 Concession 14 (Former Twp of Egremont) |
| McAllister, Alvin | Lot 27 Concession 2 (Former Twp of Normanby) |
| McLean, Barbara | Part Lot 23 Concession 2 (Former Twp of Egremont) |
| Milne, David Douglas | Part Lot 6 Concession 3 (Former Twp of Normanby) |
| Milne, Mary Joan | Part Lot 6 Concession 3 (Former Twp of Normanby) |
| Mulhall, Catherine Blanche | Lot 14 Concession 14 (Former Twp of West Luther) |
| Mulhall, John | Lot 14 Concession 14 (Former Twp of West Luther) |
| Rawn, David | Lot 6 Concession 3 (Former Twp of Normanby) |
| Rawn, Karen | Lot 6 Concession 3 (Former Twp of Normanby) |
| Saugeen Maple Farms Ltd. | Lot 24 Concession 10 (Former Twp of Egremont) |
| Visser, Thomas William | Lot 6 Concession 2 (Former Twp of Normanby) |
| Visser, Laura Lee | Lot 6 Concession 2 (Former Twp of Normanby) |
| Watson, Robert | Lot 37 Concession A (Former Twp of Greenock) |
| Wilson, Thomas | Lot 21 Concession 3 (Former Twp of Egremont) |
| Younger, Robert George | Part Lot 26 & 27 Con 10 (Former Twp of Egremont) |



INTERNATIONAL UTILITY SYMPOSIUM

# HEALTH EFFECTS OF ELECTRIC AND MAGNETIC FIELDS:
## Research, Communication, Regulation

# *SYLLABUS*

SPONSORED BY:

ELECTRIC POWER RESEARCH INSTITUTE
CANADIAN ELECTRICAL ASSOCIATION
EDISON ELECTRIC INSTITUTE
NATIONAL RURAL ELECTRIC COOPERATIVE ASSOCIATION
BONNEVILLE POWER ADMINISTRATION
ONTARIO HYDRO

ENDORSED BY: AMERICAN PUBLIC POWER ASSOCIATION

TORONTO, CANADA
SEPTEMBER 16-19, 1986



HEALTH RISKS FROM ELECTRIC POWER FACILITIES 1/

ANDREW A. MARINO, Ph.D., J.D.
Department of Orthopaedic Surgery
LSU School of Medicine in Shreveport
Shreveport, Louisiana 71130

1/ Paper presented at the International Utility Symposium on Health Effects of Electric and Magnetic Fields, September 16-19, 1986. Toronto, Canada.

ELECTROMAGNETIC ENERGY IN THE ENVIRONMENT

The environment is heavily laden with electromagnetic fields from many sources including radio, television, microwave-relay stations, and powerlines. At the power-line frequency, the average background electric and magnetic fields are on the order of 1 V/m and 800 microgauss respectively. Background fields are pervasive and usually cannot be uniquely identified with a particular device, but significantly stronger fields exist near high-voltage powerlines. The zone of influence of the electric field of powerlines (the distance from the centerline within which the field is greater than 1 V/m) is given in Table 1.

TABLE 1

Zone of Influence of High-Voltage Powerlines

| POWERLINE VOLTAGE (volts) | LATERAL DISTANCE FROM CENTERLINE (feet) |
|---|---|
| 765,000 | 2500 |
| 500,000 | 1700 |
| 345,000 | 1300 |
| 230,000 | 800 |
| 115,000 | 400 |

# SCHEDULE 'C'



**Peter Fallis**

**From:** vic.girard@hydroone.com
**Sent:** July 26, 2007 8:16 AM
**To:** fallaw@bmts.com
**Subject:** Information Provided to Peter Fallis, Lawyer for Property Owners

Dear Mr Fallis:

Here are the cost of installation of various 2cct 500 kV structures as requested.

| Tower Type | Angle Allowed | Cost |
|---|---|---|
| **Suspension Tower (V1S)** | 0 degrees | $120 - 150k |
| **Light Angle Tower (V1L)** | 6 degrees | $160 - 190k |
| **Medium Angle (V1LM)** | 20 degrees | $250 - 300k |
| **Medium Angle (V1M, Deadend)** | 30 degrees | $350 – 450k |
| **Heavy Angle (V1H, Deadend)** | 45 degrees | $550 – 750k |

The actual cost of each tower will depend on soil conditions that are specific to the area and access road requirements to the tower location.

As I provided to you verbally the line losses on the transmission line between Bruce NGS and Milton SS are in the range of 3%.

I do not have any information about the cost of the electricity that will be transferred on the existing and proposed future transmission line. This is beyond the scope of Hydro One.

Vic Girard
Manager, Major Projects
Hydro One Inc
416-347-1501