INTERROGATORIES
to

MINISTER OF ENERGY

pursuant to

OEB PROCEDURAL ORDER # 5
(Made February 25th, 2008)

SUBMISSION DATE: **March 10th, 2008**

SUBMITTED BY: **FALLIS GROUP OF INTERVENER LANDOWNERS, ('Fallis Group')**

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INTERROGATORIES TO:

THE HONOURABLE GERRY PHILLIPS,

MINISTER OF ENERGY FOR ONTARIO

Ref: Exh.. B / Tab 1 / Schedule 3 -

Preamble: *Statement by HONI* - (p. 1, line 25 - 28, and p. 2, line 1-14)

HONI states that the present transmission system from the Bruce has the capability to transmit about 5,000 MW of the generation from the Bruce area.- and that there is a shortfall of 3,100 MW in needed transmission capacity.

OEB ISSUE NUMBER: 1.1

1.1 Has the need for the proposed project been established ?

INTERROGATORIES

1. The Auditor General of Ontario reported that prior to the signing of a Contract between The Minister of Energy, the OPA and Bruce Power L.P. and Bruce 'A' L.P. on October 17th, 2005 for the refurbishment of Units '1' and '2' at the Bruce "A" Nuclear Generating Station (GS), terms of that Agreement were negotiated with Bruce Power and your government directly, and that OPA was directed by The Minister of Energy, The Honourable Donna Cansfield, by written 'Direction', signed on October 14th, 2005 , to sign that agreement. Is that correct and if not, why not?

2. When Douglas Point GS was operating, while Bruce "A" GS and Bruce "B" GS were also operating in the early 1980's, the total generation capacity was 6,760 MW. Do you agree and if not, why?

3. Staff of the Ontario Energy Board (OEB) have determined that all 8 generating units at Bruce "A" GS and Bruce "B" GS (prior to the de-commissioning of Units 1 and 2 at Bruce "A") had an aggregate generation capacity of 6,560 MW. Do you agree and if not, why not?

4. By the 1980's Ontario had constructed sufficient number of transmission lines to transmit all of the generation capacity of all 3 GS, including Douglas Point, of 6,760 MW of power (namely three 230 KV and two 500 KV lines). Do you agree and if not, why?

5. The Honourable Minister of Energy, Dennis Timbrell, advised the Ontario Legislature on June 6th 1975, (see Hansard), that a 230 KV transmission line had the transmission capacity to transmit all of the power generated from 2 units at Bruce "A" GS, (namely 1,500 MW). Was the Minister correct and if not, why not?

6. Ontario Hydro constructed three 230 KV lines running from The Bruce, one to Orangeville, one to Owen Sound, and one to Detweiler. Would you agree that, if one 230 KV transmission line can transmit 1,500 MW of generated power that three 230 KV lines could, in the aggregate, transmit 4,500 MW of generated power? If not, why not?

7. Hydro One Networks Inc. (HONI) has given notice in material supporting its application that a 500 KV transmission line is capable of transmitting 3,000 MW of power. Do you agree and if not, why not?

8. There are two 500 KV transmission lines running from the Bruce, one to Milton and one to Longwood. Would you agree that if one 500 KV transmission line can transmit 3,000 MW of generated power that two 500 KV lines, in the aggregate, could transmit 6,000 MW of generated power? If not, why not?

9. If three 230 KV transmission lines can transmit 4,500 MW of generated power in the aggregate and two 500 KV transmission lines can transmit 6,000 MW of generated power in the aggregate would you agree that the combined aggregate of three 230 KV lines and two 500 KV lines, (five transmission lines), could transmit 10,500 MW of power? If not, why not?

10. Presently, and since 1997, the combined generation capacity from Bruce "A" & Bruce "B", according to the statement of the OPA, is 5,060 MW. If the transmission capacity of the 5 existing transmission lines running from the Bruce is 10,500 MW and the Bruce has been able and capable to transmit all power ever produced from the Bruce, of up to 6,760 MW, do you agree that there is still sufficient transmission capacity in the existing five line electrical highway running from the Bruce to transmit 1,500 MW of power to be generated from re-furbished Units 1 and 2 at Bruce "A" when complete? If not, why not?

11. What, if anything, has happened or occurred to the overall transmission capacity running from the Bruce to reduce transmission capacity of 10,500 MW, (as designed) to 5,060 MW, the present generating capacity of the combined Bruce Generating Stations?

12. Do you agree with OPA and HONI that the present transmission capacity from the Bruce is 5,060 MW? If not, why not?

13. The Independent Electrical System Operator, (IESO), released a detailed report, (August, 2005), in which the IESO concluded that there was **NO** need or requirement to build any new transmission lines for the purposes of the refurbishment and the bringing into service of Units 1 and 2 of Bruce "A". Do you agree and if not, why not?

14. Bruce Power made an application to The Canadian Nuclear Safety Commission (CNSC) for initial approval to build a Bruce "C" GS of 4,000 MW generation capacity in December 2006. On April 17, 2007, Ontario Power Generator (OPG) made a similar application to CNSC for initial approval to build a Darlington "B" GS of 4,000 MW of generation. There are presently two applications therefore before the CNSC. The 20 year Outlook Report of the OPA of 2007 does not make provision for the construction of two separate 4,000 MW Nuclear Generating Stations within the next 20 years. Do you agree and if not, why not?

15. The CNSC requires that all Nuclear Generators in Canada store and archive of all their operational records for 75 years after the decommissioning of any generating Unit of any nuclear Generating Station. What time, in terms of year requirements, are required by the Ontario Government for storing and archiving of all operational power generation and operational power transmission records by all nuclear generation operators and/or power transmission operators of 230 KV and 500 KV power transmission lines within the Province of Ontario?

16. What specific statute, regulation and/or protocol requirement, if any, sets out such record archiving period as may be identified in the above question, No. 15 ?

17. To what corporation or ministry were all records of Ontario Hydro transferred in respect to nuclear power generation and the transmission of all such power from the early 1960's to the time of transfer of all functions from Ontario Hydro to OPG and/or HONI ?. Where are those records presently kept and is the most expeditious manner of access to those records so that a meaningful review can take place prior to the OEB Hearings now set for May 1st, 2008 ?

18. HONI has stated that none of the OPA, IESO, or HONI has any records in their archives about any Nuclear Power Operation from The Bruce, or transmission of such power, prior to 2002. If that statement is correct would you please state where such information is now located? How it can be accessed by the Interveners herein, and the name and contact persons, phone/fax numbers, e-mail for accessing purposes?

19. Has HONI, the IESO or the OPA violated or infringed any government statute regulation, or protocol by failing to archive all nuclear generation and power generation records prior to 2002? If so, please particularize.

20. In the 1970's, Ontario Hydro proposed to build and did build a 500 KV line from The Bruce to Milton, and carried out an Environmental Study of the proposed route/corridor and determined that the 500 KV transmission line should deviate around and avoid the Camp Creek Lowlands in Normanby Township in Grey County. Over the objection of landowners within the deviation route, and against the recommendation of the Hearing Officer, Fred Miller, under the *Expropriations Act*, the Honourable James Taylor, the Minister of Energy in his Decision, on March 9th, 1977, determined that the Camp Creek Lowlands were environmentally sensitive lands warranting protection and he agreed with other Ministers that the Camp Creek Lowlands were a **"No Go Zone"** and that Ontario Hydro would PROTECT THESE LANDS and deviate the 500 KV line around these Lowlands. Ontario Hydro constructed that deviated line. HONI has made its present proposal to the OEB, ignoring Ontario Hydro and the Decision of your predecessor, the Honourable James Taylor, as the then Minister of Energy , and has proposed to the OEB to cross these environmentally provincially significant wetlands which are in a total state of nature

A) Will you as Minister, take a pro-active role to direct HONI not to cross these Camp Creek Lowlands which have been protected by your predecessor?

B) Is there any information that you are now privy to that justifies ruining these Camp Creek Lowlands that your Ministry was not privy thereto in 1977 when the then Minister of Energy, the Honourable James Taylor intervened to protect those lands?

C) Would you now locate and provide to these Interveners a copy of both of the two Environmental Reports filed with the Ministry of Energy in connection with the construction of the existing 500 KV line from Bruce to Milton as well as the Report of the Environmental Hearing Board, (all of which your predecessor Minister caused to be filed as items 8, 19, 22, in proceedings before the Divisional Court of the

Supreme Court of Ontario, commenced in Toronto, Ontario, in May, 1977.

21. These Interveners, and others have asked the following questions of HONI by way of interrogatories in these proceedings, most of which HONI has refused to answer stating that it has no information or records before 2002. These Interveners therefore ask the same interrogatories of you to enable them to try and ascertain the fullness of evidence needed to fully respond to the Application of HONI for Leave To Construct a new 500 KV line to Milton, in order that the OEB can have before it the best information possible to enable it to make an informed decision.

ADDITIONAL INTERROGATORIES TO WHICH HONI HAS YET TO MAKE REPLY

A. **THE FOLLOWING INTERROGATORIES (Nos. 1 - 93)** are made in respect to each of Issue 1.2. Issue 1.3 and issue 1.4, to allow the full history of Power Generation and Power Transmission from the Bruce to be properly understood in respect to:

- FIRSTLY: each of the three Nuclear generating stations, (Douglas Point, Bruce "A" and Bruce "B"), that have been operated at the Bruce, first by Ontario Hydro, then Ontario Power Generation, and since 2001, Bruce Power, and

- SECONDLY: each of the 5 Transmission lines (three 230 KV and two 500KV) that have transmitted all power generated and delivered from the above 3 Nuclear Generating stations.

A.1 <u>DOUGLAS POINT NUCLEAR REACTOR</u>

1. **(A)** What was the original commissioning 'in-service' date, (approx. 1968,) ? <u>and</u>
(B) What was the de-commissioning 'out-of-service' date, (approx. 1984), of the original Douglas Point Nuclear Power Plant located at Douglas Point in Bruce County, ("Douglas Point Reactor") ?

2. What was the actual maximum electrical generation capacity, expressed in MW/h, of the Douglas Point Reactor which had an original design capacity of 200MW/h ?

3. From the 'in-service" date of commissioning of the Douglas Point Reactor to the 'out-of-service" date of decommissioning of the Douglas Point Reactor, through which Transmission Line(s) was/were transmitted the power generated from the Douglas Point Reactor before the generation of electrical power from any of the nuclear power generation Units at either Bruce 'A' or Bruce 'B' at the Bruce facility, ?

4. **(A)** Was/were the Transmission Line(s), through which was transmitted the power generated from the Douglas Point Reactor, constructed specifically to transmit the power generated from the Douglas Point Reactor to the Ontario Grid, and
(B) If not, why not ?

5. What was the maximum Voltage transmission capacity of the Transmission Line(s) that transmitted the electrical power generated from the Douglas Point Reactor ?

6. **(A)** From what municipal starting location and what municipal ending location was/were constructed the Transmission Line(s) that transmitted the electrical power generated from the Douglas Point Reactor ?
(B) What is/are the measured length of that/those Transmission Line(s) in separate and combined length, expressed in KM, ? and
(C) When was such construction of that/those Lines completed ?

7. What was the maximum transmission capacity, expressed in MW/h, of each of that/those Transmission Line(s) that transmitted the electrical power generated from the Douglas Point Reactor during its commissioned years of electrical power generation ?

8. **(A)** Is/are the Transmission Line(s) that transmitted the electrical power generated from the Douglas Point Reactor still in service today ?, and if so,
(B) Is the maximum electrical transmission capacity of that those Transmission Line(s), expressed in MW/h, still the same today as it/they was/were during the commissioned operation of and power generation from the Douglas Point Reactor ? and
(C) If not - why not ?

9. **(A)** Since the Douglas Point Reactor was de-commissioned has/have the dedicated Transmission Line(s) used originally to transmit electrical energy produced at the Douglas Point Reactor been used since that date of de-commissioning of the Douglas Point Reactor, been used for the transmission of electrical power otherwise and since 1984 generated from the Bruce area facilities ?, and
(B) if not - why not ?

10. **(A)** If the dedicated Transmission Line(s) used originally to transmit electrical energy produced at the Douglas Point Reactor have not been used since de-commissioning in 1984

or have not been used to the same maximum intensities of electrical transmission as so utilized while the Douglas Point Reactor was commissioned and so used, why ?, and
(B) Are there transmission upgrades that could now be made to restore the transmission capacity of that/those Transmission Line(s) to maximum 1968 - 1984 transmission capacity levels ?

11. What is the present maximum electrical transmission capacity of the Transmission Line(s), expressed in MW/h. used originally to transmit electrical energy produced at the Douglas Point Reactor ?

12. What would be the maximum electrical transmission capacity of the Transmission Line(s), expressed in MW/h, used originally to transmit electrical energy produced at the Douglas Point Reactor, with maximum upgrades made thereto ?

A.2 BRUCE "A" NUCLEAR FACILITY

13. What was the original "in-service" commissioning dates for each of Units '1', '2', '3' and '4' of Bruce 'A' at the Bruce ?

14. What was the design electrical power generation capacity of each of Units '1', '2', '3' and '4' of Bruce 'A', expressed in MW/h ?

15. What is the actual maximum 'net generating capacity' of each of Units '1', '2', '3' and '4' of Bruce 'A,' expressed in MW/h. (The Auditor General of Ontario determined in April, 2007 in his Report on the Refurbishment Agreement between Bruce Power and the OPA made October 17th, 2005, that each Unit of Bruce 'A' had an authorized net generating capacity of 769 MW/h) ?

16. On what dates were each of Units '1' and '2' of Bruce "A' de-commissioned and taken out-of-service and ceased generating electrical power at the Bruce ?

17. On the dates of the respective original "in-service" commissioning dates for each of Units '1', '2', '3' and '4' at Bruce 'A' what were the contemplated power generation electrical life expectancies for each of Units '1', '2', '3' and '4' of Bruce 'A' expressed as contemplated decommissioning dates ?

18. **(A)** Were the original contemplated dates for de-commissioning of Units '1' and '2' of Bruce 'A' at substantial variance with the actual dates of de-commissioning of Units '1' and '2' of Bruce 'A' ?, and
(B) If so, - why ?

19. On what dates were each of Units '3' and '4' of Bruce "A' originally scheduled for de-commission to be taken out-of-service and cease generating electrical power at the Bruce ?

20. **(A)** *During what calendar periods of time* were each of Units '1', '2', '3' and '4' of Bruce 'A' each producing, at the same time, a maximum power generation capacity, in a combined format, a maximum power generation capacity, in a combined format, ? *and*
(B) *What was* the maximum combined generation capacity from all of Units '1', '2', '3' and '4' of Bruce 'A', all generating maximum power at capacity together, at the same time, as expressed in MW/h ?

21. **(A) ;** *During what calendar periods of time* were **(1)** each of Units '1', '2', '3' and '4' of Bruce 'A' each producing, at the same time, a maximum power generation capacity, in a combined format, while at the same time **(2)** each of Units '1', '2', '3' and '4' of Bruce 'B' were also each producing a maximum power generation capacity, in a combined format, from each of the 4 Units at Bruce 'B' ? *and*
(B) *What was* the maximum double combined generation capacity from all of Units '1', '2', '3' and '4' of Bruce 'A', and from Units '1', '2', '3' and '4' of Bruce 'A', both and all generating maximum power at capacity together, at the same time, as expressed in MW/h ?

22. **(A)** *During what calendar periods of time* were **(1)** each of Units '1', '2', '3' and '4' of Bruce 'A' each producing, at the same time, a maximum power generation capacity, in a combined format, while at the same time, **(2)** each of Units '1', '2', '3' and '4' of Bruce 'B' were also each producing a maximum power generation capacity, in a combined format, from each of the 4 Units at Bruce 'B', and **(3)** the Douglas Point Reactor was also, at the same time, producing a maximum power generation capacity therefrom ?, , *and*
(B) *What was* the maximum triple combined generation capacity from all of Units '1', '2', '3' and '4' of Bruce 'A', and from Units '1', '2', '3' and '4' of Bruce 'B', and the Douglas Point Reactor, all generating together, at the same time, as expressed in MW/h, and all three generating maximum power at capacity together, at the same time, as expressed in MW/h ?

23. Specifically what was the maximum generation capacity, expressed in MW/h of the total electrical power if generated at the same time from the combination of Units '1', '2', '3' and '4' of Bruce 'A' and from Units '1', '2', '3' and '4' of Bruce 'B' and the Douglas Point Reactor ?

23 (a). **(A)** *Has the transmission capacity* along all Transmission Lines originating at the Bruce, as constructed for transmitting all maximum generation capacity of all electrical power generated from the combination from each of Units '1', '2', '3' and '4' of Bruce 'A', and from Units '1', '2', '3' and '4' of Bruce 'B', and the Douglas Point Reactor for transmission to the Ontario Hydro Grid, ever been so deficient so as not to be able to transmit any such

maximum generation of power so produced from Bruce 'A', Bruce 'B' and Douglas Point Reactor combined ? , *and*

(B) *If so* during what calendar periods of time has such transmission capacity been so deficient ? *and*

(C) *If so*, what line outages or transmission deficiencies caused such lack of transmission capacity ?

23 (b) Of the total power produced from all present power producing nuclear units within Bruce "A" GS what amount, expressed in MW, **and also** expressed as a percentage of gross power production, is represented by power so produced and consumed by Bruce Power itself on site.

A.2 BRUCE "B" NUCLEAR FACILITY

24. What was the original "in-service" commissioning dates for each of Units '1', '2', '3' and '4' of Bruce 'B' at the Bruce ?

25. What was the design electrical power generation capacity of each of Units '1', '2', '3' and '4' of Bruce 'B' expressed in MW/h ?

26. **(A)** What is the actual maximum 'net generating capacity' of each of each of Units '1', '2', '3' and '4' of Bruce 'B' expressed in MW/h ? (The Auditor General of Ontario determined in April, 2007 in his *Report on the Refurbishment Agreement between Bruce Power and the OPA made October 17th, 2005*, that each Unit of Bruce 'A' had an authorized net generating capacity of 785 MW/h) ? In the *IPSP Discussion Paper # 5 - Transmission* produced by the OPA , filed as Exhibit b, Tab 6, Schedule 5, Appendix 5, & on page 44 thereof the OPA states that each of Units1, 2, 3 & 4 of Bruce 'B' have a generation capacity of 890MW/h).

(B) Which statement as to the production capacity of each of Units1, 2, 3 & 4 of Bruce 'B' is wrong ? *and*

(C) Has the OPA taken steps to correct the wrong information disseminated by the Auditor General of Ontario, or has the OPA stated the wrong production capacity of each of Units1, 2, 3 & 4 of Bruce 'B' and so advised the OEB and participants and interveners in this proceeding.

27. On the dates of the respective original "in-service" commissioning dates for each of Units '1', '2', '3' and '4' of Bruce 'B' what were the contemplated power generation electrical life expectancies for each of Units '1', '2', '3' and '4' of Bruce 'B'. ?

28. **(A)** *During what calendar periods of time* have each of Units '1', '2', '3' and '4' of Bruce 'B' each been producing, at the same time, a maximum power generation capacity, in a combined format ? , *and*
(B) *What is* the maximum combined generation capacity from all of Units '1', '2', '3' and '4' of Bruce 'B' all generating maximum power at capacity, together, at the same time, as expressed in MW/h ?

28(a) Of the total power produced from all present power producing nuclear units within Bruce "B" GS what amount, expressed in MW, **and also** expressed as a percentage of gross power production, is represented by power so produced and consumed by Bruce Power itself on site

A.3 TRANSMISSION LINES:

A.3.1 230 KV TRANSMISSION LINE BRUCE TO HANOVER/ORANGEVILLE:

29. **(A)** Was this 230 KV Transmission Line to Orangeville constructed under the authority of the Hydro Electric Power Commission of Ontario ?, and
(B) what was/is the length of such Line, expressed in KM ?, and
(C) what was the 'in-service date for the transmission of power along such 230 KV Line?

30. Was this 230 KV Transmission Line to Orangeville built originally to transmit power generated from the Douglas Pont Reactor ?

31. What was the maximum design transmission capacity of this 230 KV Line to Orangeville, expressed in MW/h, when it was originally put into service ?

32. What has been the maximum sustained electrical power transmission along this existing 230 KV Line to Orangeville, expressed in MW/h ?

33. A former Minister of Energy of Ontario, The Hon. Dennis Timbrell, advised the Ontario Legislature, on June 6th, 1975, that the existing 230 KV line was capable of transmitting all of the power generated from Units '1' and '2' of what is now and was then Bruce 'A'. The Auditor General of Ontario has advised that the net generation capacity for each of the 4 Units at Bruce 'A' was 769 MW/h. This represents 1,538 MW/h of power generation. Did the 230 KV Line have, from the outset the design transmission capacity to transmit thereon 1,538 MW/h as generated from the Bruce.

(A) Was that statement technically correct when then made, and is that statement still technically correct today ?, and

(B) If not - why not?

34. Did the 230 KV line to Orangeville have the design capacity to transmit 1,538 MW/h as might be produced from the Units '1' and '2' together with all additional generation capacity from the Douglas Point Reactor, expressed as MW/h ?

35. **(A)** What is the present maximum transmission capacity of this 230 KV Transmission line to Orangeville, expressed in MW/h ?, and

(B) If it is lower than the original design transmission capacity, why ? , and,

(C) If so, are there any technical reasons why this 230 KV Line cannot be refurbished to return it to its original design transmission capacity ? , and

(D) If so, what are those technical reasons ?

36. **(A)** Is this 230 KV Transmission Line to Hanover TS /Orangeville TS dedicated to transmit from any particular Unit at the present time, from either Bruce 'A' or Bruce 'B' ?, and

(B) If so , from which dedicated Units at Bruce 'A' and/or Bruce "B"?

37. **(A)** What maximum amount of electrical power is typically delivered to the Hanover Transformer Substation ("TS") from the existing 230 KV Transmission Line, expressed in MW/h, and,

(B) What amount of electrical power is typically delivered beyond Hanover, from Hanover to Orangeville TS, expressed in MW/h ?

38. **(A)** Are any of the 230 KV Transmission Line towers some of which were constructed over 40 years ago in present need of replacement or refurbishment, and

(B) If so , which particular towers are in such need, all of which the towers being presently numbered by HONI ?

39. **(A)** Was a working life cycle ever originally established for the 230KV Transmission towers constructed for this 230 KV Line to Orangeville ? , and

(B), If so what then was the forward calendar date for the end of such working life expectancy for the 230 KV Towers themselves ?

40. **(A)** What is the present working life cycle expectancy for the existing 230 KV Towers within this existing 230 KV Corridor to Orangeville ? , and

(B) What is the forward calendar date now utilized as the date after which the existing 230 KV Line Towers will no longer be licensed for use by HONI ?

41. **(A)** What is the present working life cycle expectancy for each of the existing 230 KV power cable/conduit lines as strung between each of the 230 KV Towers within this existing 230 KV Corridor ?, and
(B) What is the forward calendar date now utilized as the date after which each of the existing 230 KV power cable/conduit lines as strung between each of the 230 KV Towers as located suspended from such 230 KV Towers, within this existing 230 KV Corridor will no longer be licensed for use by HONI ?

42. **(A)** Since the date of construction of each of the Towers within this 230KV transmission line in the early 1960's, over 40 years ago, have any of the towers and/or conduit power transmission cable/conduit lines ever had to have been replaced or repaired because of an event beyond working life deterioration ? , and
(B) If so , please particularize each technical reason for each such repair or replacement, naming the present municipality, the Lot and Concession No. and the 230 KV tower number as presently so numbered by HONI on its current photo base mapping as provided, the date of such event involving loss repair and/or replacement ?

A.3.2 230 KV TRANSMISSION LINE BRUCE TO OWEN SOUND:

43. **(A)** What was this technical reason for the construction of this 230 KV Transmission Line to Owen Sound ?, and
(B) What was/is the length of such Line, expressed in KM ?, and
(C) What was the 'in-service' date for the transmission of power along such 230 KV Line?

44. **(A)** When was the construction of this 230 KV Transmission Line to Owen Sound completed ?, and
(B) *What is* the end location for this 230KV Transmission Line ? , and
(C) To where is the electrical power further distributed, as transmitted by this 230KV Line to Owen Sound ?

45. What was the maximum design transmission capacity of this 230 KV Line to Owen Sound, expressed in MW/h, when it was originally put into service ?

46. What has been the maximum sustained electrical power transmission along this existing 230 KV Line to Owen Sound, expressed in MW/h ?

47. Did this 230 KV line to Owen Sound have the design capacity to transmit 1,538 MW/h as might be produced from the either Bruce 'A' or Bruce 'B'. ?

48. **(A)** What is the present maximum transmission capacity of this 230 KV Transmission line, to Owen Sound expressed in MW/h ? , and
(B) If it is lower than the original design transmission capacity, why ? , and,
(C) If so, are there any technical reasons why this 230 KV Line to Owen Sound cannot be refurbished to return it to its original design transmission capacity ?, and
(D) If so, what are those technical reasons ?

49. **(A)** Is this 230 KV Transmission Line to Owen Sound dedicated to transmit from any particular Unit at the present time, from either Bruce 'A' or Bruce 'B' ? , and
(B) If so , from which dedicated Units at Bruce 'A' and/or Bruce 'B'?

50. Are any of the 230 KV Transmission Line towers in this Line to Owen Sound which were constructed over 30 years ago in present need of replacement or refurbishment ?

51. **(A)** Was a working life cycle ever originally established for the 230KV Transmission towers constructed for this 230 KV Line to Owen Sound, ? and
(B), If so what then was the forward calendar date for the end of such working life expectancy for the 230 KV Towers to Owen Sound ?

52. **(A)** What is the present working life cycle expectancy for the existing 230 KV Towers to Owen Sound within this existing 230 KV Corridor ? , and
(B) What is the forward calendar date now utilized as the date after which the existing 230 KV Line Towers to Owen Sound will no longer be licensed for use by HONI ?

53. **(A)** What is the present working life cycle expectancy for each of the existing 230 KV power cable/conduit lines as strung between each of the 230 KV Towers to Owen Sound within this existing 230 KV Corridor ? , and
(B) What is the forward calendar date now utilized as the date after which each of the existing 230 KV power cable/conduit lines as strung between each of the 230 KV Towers to Owen Sound as located suspended from such 230 KV Towers, within this existing 230 KV Corridor will no longer be licensed for use by HONI ?

54. **(A)** Since the date of construction of each of the Towers within this 230KV transmission line in the '70s or '80s, over 25 years ago, have any of the towers and/or conduit power transmission cable/conduit lines ever had to have been replaced or repaired because of an event beyond working life deterioration ?, and
(B) If so , please particularize each technical reason for each such repair or replacement, naming the present municipality, the Lot and Concession No. and the 230 KV tower number as presently so numbered by HONI on its current photo base mapping as provided, the date of such event involving loss repair and/or replacement ?

A.3.3 230 KV TRANSMISSION LINE BRUCE TO DETWEILER:

55. **(A)** What was this technical reason for the construction of this 230 KV Transmission Line to Detweiler ? and
(B) What was/is the length of such Line, expressed in KM ? , and
(C) What was the 'in-service date for the transmission of power along such 230 KV Line?

56. **(A)** When was this construction of this 230 KV Transmission Line to Detweiler completed ?, and
(B) *What is* the end location for this 230KV Transmission Line ? , and
(C) To where is the electrical power further distributed, as transmitted by this 230KV Line to Detweiler ?

57. What was the maximum design transmission capacity of this 230 KV Line to Detweiler, expressed in MW/h, when it was originally put into service ?

58. What has been the maximum sustained electrical power transmission along this existing 230 KV Line to Detweiler, expressed in MW/h ?

59. Did this 230 KV line to Detweiler have the design capacity to transmit 1,538 MW/h as might be produced from the either Bruce 'A' or Bruce 'B'. ?

60. **(A)** What is the present maximum transmission capacity of this 230 KV Transmission line to Detweiler, expressed in MW/h ?, and
(B) If it is lower than the original design transmission capacity, why, and, **(C)** if so, are there any technical reasons why this 230 KV Line to Detweiler cannot be refurbished to return it to its original design transmission capacity ?, and
(D) If so, what are those technical reasons ?

61. **(A)** Is this 230 KV Transmission Line to Detweiler dedicated to transmit from any particular Unit at the present time, from either Bruce 'A' or Bruce 'B ?', and
(B) If so , from which dedicated Units at Bruce 'A' and/or Bruce "B"?

62. Are any of the 230 KV Transmission Line towers in this Line to Detweiler which were constructed over25 years ago in present need of replacement or refurbishment ?

63. **(A)** Was a working life cycle ever originally established for the 230KV Transmission towers constructed for this 230 KV Line to Detweiler ?, and
(B), If so what then was the forward calendar date for the end of such working life expectancy for the 230 KV Towers to Detweiler, ?

64. **(A)** What is the present working life cycle expectancy for the existing 230 KV Towers to Detweiler within this existing 230 KV Corridor ?, and
(B) What is the forward calendar date now utilized as the date after which the existing 230 KV Line Towers to Detweiler will no longer be licensed for use by HONI ?

65. **(A)** What is the present working life cycle expectancy for each of the existing 230 KV power cable/conduit lines as strung between each of the 230 KV Towers to Detweiler within this existing 230 KV Corridor ? , and
(B) What is the forward calendar date now utilized as the date after which each of the existing 230 KV power cable/conduit lines as strung between each of the 230 KV Towers to Detweiler as located suspended from such 230 KV Towers, within this existing 230 KV Corridor will no longer be licensed for use by HONI ?

66. **(A)** Since the date of construction of each of the Towers within this 230KV transmission Line in the '70s or '80s to Detweiler, over 25 years ago, have any of the towers and/or conduit power transmission cable/conduit lines ever had to have been replaced or repaired because of an event beyond working life deterioration ?, and
(B) If so , please particularize each technical reason for each such repair or replacement, naming the present municipality, the Lot and Concession No. and the 230 KV tower number as presently so numbered by HONI on its current photo base mapping as provided, the date of such event involving loss repair and/or replacement ?

A.3.4 500 KV TRANSMISSION LINE BRUCE TO MILTON:

67. **(A)** What was/is the length of such Line, expressed in KM ?, and
(B) What was the 'in-service date for the transmission of power along such 500 KV Transmission Line to Milton?

68. Was this 500 KV Transmission Line to Milton built originally to transmit power generated from the the combined 4 Units 1, 2, 3, and 4, located at Bruce 'A'?

69. What was the maximum design transmission capacity of this 500 KV Line to Milton, expressed in MW/h, when it was originally put into service ?

70. What has been the maximum sustained electrical power transmission along this existing 500 KV Line to Milton, expressed in MW/h ?

71. HONI has published and disseminated printed material in its submission to the Minister of the Environment for Approval under the *Environmental Assessment Act* that states in

writing that the proposed 500 KV line as proposed in this application for leave to construct will have a transmission capacity, expressed in MW/h, of 3,000 MW/h.

(A) Does the existing 500 KV line constructed from the Bruce to Milton in the late '70s, some 30 years ago, have the present transmission capacity to transmit 3,000 MW/h ?, and

(B), If not - why not ? and

(C) If not now but it previously had that transmission capacity is there any present technical reason why such original transmission capacity cannot be restored to the 500 KV Line by replacement and/or refurbishment.

73. Did the 500 KV line to Milton have the design capacity to transmit 3,000 MW/h of generation power or more as might be produced from the 4 units at either of Bruce 'A' of Bruce 'B' together with all additional 200 MW/h generation capacity from the Douglas Point Reactor, expressed as MW/h ?

74. **(A)** What is the present maximum transmission capacity of this 500KV Transmission Line, to Milton expressed in MW/h ? , and

(B) If it is lower than the original design transmission capacity, why ? , and,

(C) If so, are there any technical reasons why this 500 KV Line cannot be refurbished to return it to its original design transmission capacity, and **(D)** if so, what are those technical reasons ?

75. **(A)** Is this 500 KV Transmission Line to Milton dedicated to transmit from any particular Unit at the present time, from either Bruce 'A' or Bruce 'B' ? , and

(B) If so , from which dedicated Units at Bruce 'A' and/or Bruce "B"?

76. **(A)** Are any of the 500 KV Transmission Line towers which were constructed about 30 years ago in present need of replacement or refurbishment ?, and

(B) If so , which towers are in such need, all of the towers being presently numbered by HONI?

77. **(A)** Was a working life cycle ever originally established for the 500 KV Transmission towers constructed for this 500 KV Line to Milton ?, and

(B), If so what then was the forward calendar date for the end of such working life expectancy for the 500 KV Towers themselves ?

78. **(A)** What is the present working life cycle expectancy for the existing 500 KV Towers within this existing 500 KV Corridor to Milton ?, and

(B) What is the forward calendar date now utilized as the date after which the existing 500 KV Line Towers will no longer be licensed for use by HONI ?

79. **(A)** What is the present working life cycle expectancy for each of the existing 500 KV power cable/conduit lines as strung between each of the 500 KV Towers within this existing 500 KV Corridor to Longwood ?, and
(B) What is the forward calendar date now utilized as the date after which each of the existing 500KV power cable/conduit lines as strung between each of the 500KV Towers as located suspended from such500 KV Towers, within this existing 500 KV Corridor to Longwood will no longer be licensed for use by HONI ??

80. **(A)** Since the date of construction of each of the Towers within this 500KV transmission line in the late 1970's, almost 30 years ago, have any of the towers and/or conduit power transmission cable/conduit lines ever had to have been replaced or repaired because of an event beyond working life deterioration ?, and
(B) If so , please particularize each technical reason for each such repair or replacement, naming the present municipality, the Lot and Concession No. and the 500 KV tower number as presently so numbered by HONI on its current photo base mapping as provided, the date of such event involving loss repair and/or replacement

A.3.4 500 KV TRANSMISSION LINE BRUCE TO LONGWOOD:

81. **(A)** What was/is the length of such Line, expressed in KM ? , and
(B) What was the 'in-service' date for the transmission of power along such 500 KV Transmission Line to Longwood?

82. Was this 500 KV Transmission Line to Longwood built originally to transmit power generated from the the combined 4 Units 1, 2, 3, and 4, located at Bruce 'A ' and/or Bruce 'B'?

83. What was the maximum design transmission capacity of this 500 KV Line to Longwood, expressed in MW/h, when it was originally put into service ?

84. What has been the maximum sustained electrical power transmission along this existing 500 KV Line to Longwood, expressed in MW/h ?

85. HONI has published and disseminated printed material in its submission to the Minister of the Environment for Approval under the *Environmental Assessment Act* that states in writing that the proposed 500 KV line as proposed in this application for leave to construct will have a transmission capacity, expressed in MW/h, of 3,000 MW/h ?.
(A) Does the existing 500 KV line constructed from the Bruce to Longwood in the late '70s, almost 30 years ago, have the present transmission capacity to transmit 3,000 MW/h ?, and
(B), If not - why not, and

(C) If not now but it previously had that transmission capacity is there any present technical reason why such original transmission capacity cannot be restored to the 500 KV Line by replacement and/or refurbishment.

86. Did the 500 KV line to Longwood have the design capacity to transmit 3,000 MW/h of generation power or more as might be produced from the 4 units at either of Bruce 'A' of Bruce 'B' together with all additional 200 MW/h generation capacity from the Douglas Point Reactor, expressed as MW/h ?

87. **(A)** What is the present maximum transmission capacity of this 500KV Transmission Line, to Longwood expressed in MW/h ?, and
(B) If it is lower than the original design transmission capacity, why ?, and,
(C) If so, are there any technical reasons why this 500 KV Line cannot be refurbished to return it to its original design transmission capacity ?, and
(D) If so, what are those technical reasons ?

88. **(A)** Is this 500 KV Transmission Line to Longwood dedicated to transmit from any particular Unit at the present time, from either Bruce 'A' or Bruce 'B' ?, and
(B) If so , from which dedicated Units at Bruce 'A' and/or Bruce "B"?

89. **(A)** Are any of the 500 KV Transmission Line towers which were constructed within the 500KV Line to Longwood over 25 years ago in present need of replacement or refurbishment ?, and
(B) If so , which towers are in such need, all of the towers being presently numbered by HONI?

90. **(A)** Was a working life cycle ever originally established for the 500 KV Transmission towers constructed for this 500 KV Line to Longwood ?, and
(B), If so what then was the forward calendar date for the end of such working life expectancy for the 500 KV Towers themselves ?

91. **(A)** What is the present working life cycle expectancy for the existing 500 KV Towers within this existing 500 KV Corridor to Longwood ? , and
(B) What is the forward calendar date now utilized as the date after which the existing 500 KV Line Towers will no longer be licensed for use by HONI ?

92. **(A)** What is the present working life cycle expectancy for each of the existing 500 KV power cable/conduit lines as strung between each of the 500 KV Towers within this existing 500 KV Corridor to Longwood ?, and
(B) What is the forward calendar date now utilized as the date after which each of the existing 500KV power cable/conduit lines as strung between each of the 500KV Towers as located suspended from such500 KV Towers, within this existing 500 KV Corridor to Longwood will no longer be licensed for use by HONI ?

93. **(A)** Since the date of construction of each of the Towers within this 500KV Transmission Line to Longwood over 25 years ago, have any of the towers and/or conduit power transmission cable/conduit lines ever had to have been replaced or repaired because of an event beyond working life deterioration, and

(B) If so , please particularize each technical reason for each such repair or replacement, naming the present municipality, the Lot and Concession No. and the 500 KV tower number as presently numbered by HONI on its current photo base mapping as provided, the date of such event involving loss repair and/or replacement