File No. RP-2004-0203

ONTARIO ENERGY BOARD

IN THE MATTER OF the *Ontario Energy Board Act, 1998*, S.O. 1998, c.15, Schedule B.

AND IN THE MATTER OF Applications by distributors under the *Ontario Energy Board Act, 1998* for approval of Conservation and Demand Management Plans

RESPONSE TO MOTION RECORD OF POLLUTION PROBE DATED NOVEMBER 12, 2004

by Woodstock Hydro Services Inc.

Re: Electric Utility LRAM for fiscal 2005

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December 1, 2004

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Executive Summary

1. As an interested party in the Ontario Energy Board's ("OEB") RP-2004-0203 procedure, Woodstock Hydro Services Inc. ("Woodstock Hydro") has prepared a response to Pollution Probe's proposal for the Lost Revenue Adjustment Mechanism ("LRAM").

2. Woodstock Hydro is concerned with various issues that arise from Pollution Probe's LRAM proposal such as:
   a) the recovery of lost distribution revenue in a subsequent year after the revenue has been forgone;
   b) the need to substantiate the incremental reductions in kWh and kW;
   c) the need to quantify the impact of free-riders;
   d) the need to prove that the LDC's conservation program has been the driver for incremental saving in kWhs or kWs as opposed to another external driver;
   e) the need to support an audit process;
   f) the additional cost associated with justifying the LRAM before the OEB and other stakeholders; and
   g) the regulatory risk of not recovering the expected LRAM.

3. Woodstock Hydro's believes a more simplistic approach to address the LRAM can be implemented. Woodstock Hydro proposes LDC distribution charges move to a full 100% fixed charge ("full fixed charge") and the variable distribution charge be eliminated. A full fixed charge would eliminate the need for a LRAM as the LDC would be indifferent to reductions in kWhs and kW. The full fixed charge would be designed to be revenue neutral within each rate class and there would be a provision made to have a full fixed charge for various levels of consumption.

4. Woodstock Hydro submits a full fixed charge is based on cost causality principles and is supported by the Government's policy to have one line on the bill for delivery charges. Under the proposed rate design the monthly bill impacts would range from $1.10 to $3.00 for a residential customer using 100 and over 1000 kWh/month, respectively.

Introduction

5. On October 20, 2004 the OEB received a letter from counsel for Pollution Probe stating in part:

"I am writing as legal counsel for Pollution Probe with respect to possible implementation of certain energy conservation measures (specifically, certain shareholder protection and incentive mechanisms) in 2005 (i.e. beginning March 1, 2005). I am seeking guidance as to how to bring this issue forward for consideration by the Board and in particular by means of a motion to have it placed on the issues list for RP-2004-0188 if necessary...

Pollution Probe believes that implementation of these conservation measures in 2005 (rather than waiting until 2006) is very much in line with and supportive of the Ontario government's energy conservation priorities. It is also supportive of consumer protection because it would ensure for 2005 that the utilities' conservation expenditures provide their ratepayers with the largest possible net bill reductions."

6. In order to address the issues raised by Pollution Probe, the Board issued Procedural Order No. 2, on October 28, 2004, setting the process and date for a Motions Day to be convened on Monday, December 6, 2004 at the OEB's offices. Procedural Order No. 2 ordered Pollution Probe to file a Motion Record by Friday, November 12, 2004 and allowed any interested party to file a written response to the Motion Record by Wednesday, December 1, 2004.

7. On November 12, 2004 Pollution Probe filed thier Motion Record. According to paragraph one of the Motion Record, Pollution Probe is seeking a Motion for:

"An Order establishing guidelines for a Lost Revenue Adjustment Mechanism (LRAM) and a Shared Savings Mechanism (SSM) for Ontario's electrical utilities, permitting such utilities to apply in a subsequent rate year for financial allowances in support of their fiscal 2005 energy conservation programmes."

8. As an interested party in this procedure, Woodstock Hydro has prepared this submission to respond to Pollution Probe's proposal on Revenue Protection – the LRAM. In paragraph 8 and 9 of their Motion Record, Pollution Probe states:

> *"8. Based on economic principles, I believe that the electric utilities should be allowed to recover, in a subsequent rate year, lost distribution revenues (plus carrying costs) that they experience in fiscal 2005 as a result of their energy conservation programmes. A "Lost Revenue Adjustment Mechanism" (LRAM) is the best way in the present circumstances to accomplish this and thus remove the presently existing perverse and economically irrational incentive structure.*
>
> *9. From an economic and regulatory perspective, it is my view that a utility's fiscal 2005 lost distribution revenues, for each rate class, should be calculated by multiplying the incremental reduction in its kWh and kW volumes, as a result of its conservation programmes, by its distribution charges per kWh and/or kW."*

9. It is Woodstock Hydro opinion the proposed LRAM is problematic as the incremental reduction in kWh and kW volumes resulting from a conservation program could be difficult to quantify when items such as free-riders need to be considered. A LDC would need to justified the reductions before the OEB and would be open to scrutiny by interested parties which means there is regulatory risk associated with the LRAM amount a LDC can expect to recover. LDCs would also incur additional regulatory costs to support the LRAM process.

10. Woodstock Hydro proposes another approach to address LRAM which would be relatively simple to implement, would not need to be supported by additional calculations, would not need any ongoing regulatory approval and would be more cost effective than the Pollution Probe proposal. Woodstock Hydro's proposes LDC distribution charges move to a full fixed charge and the volumetric distribution charge be eliminated.

11. A full fixed charge would eliminate the need for a LRAM as the LDC would be indifferent to reductions in kWhs and kW. The full fixed charge would be designed to be revenue neutral within each rate class and there could be a provision made to have a full fixed charge for various levels of consumption. With a full fixed charge, the current disincentives to promote conservation would be eliminated for a LDC as there would be no adverse effect on its net income when a conservation program was implemented.

12. In Woodstock Hydro's view the full fixed charge is further supported by cost causality principles and the Government's policy to have one line on the customer's bill for delivery charges.

13. Woodstock Hydro understands that elimination of the volumetric distribution charge will slightly reduce the incentive for a customer to conserve energy. For example, if a Woodstock Hydro residential customer was to reduce their usage by 75 kWh per month (i.e. about 10% of the average residential monthly consumption) they would forgo the monthly savings of about $1.10 under the full fixed charge proposal. However, Woodstock Hydro believes these forgone savings will be replaced by other savings that would result from a LDC not having to support the LRAM proposed by Pollution Probe.

14. The remainder of Woodstock Hydro's submission will further address items raised above as well as other items that are associated with a full fixed charge under the following headings.

a) Woodstock Hydro's Concerns with the LRAM Proposal
b) Cost Causality Supports Full Fixed Charge
c) Current Bill Supports Full Fixed Charge
d) Full Fixed Charge Rate Design and Impact on Customer Bills
e) Impact on Risk Premium for Equity Rate of Return

15. Elenchus Research Associates of Toronto, Ontario has been retained by Woodstock Hydro to assist in the preparation of this submission.

16. Ken Quesnelle Vice President/Assistant General Manager, Woodstock Hydro and Bruce Bacon, Senior Consultant, Elenchus Research Associates will be appearing at the Motions Day on December 6, 2004 at the OEB's office to support this submission. The resumes for Ken Quesnelle and Bruce Bacon are provided under Appendix A and B, respectively.

Woodstock Hydro's Concerns with the LRAM Proposal

17. In paragraphs 34 to 36 in the Motion Record from Pollution Probe the details of their LRAM proposal are provided and outlined as follows.

> *"34. In my opinion as a regulatory economist, to ensure that the electric utilities will not be penalized for implementing effective, "customer-side of the meter", conservation programmes in fiscal 2005, they should be allowed to recover, in a subsequent rate year, the lost distribution revenues (plus carrying costs) that they experience between March 1, 2005 and April 30, 2006 as a result of their energy conservation programmes.*
>
> *35. In my view, a utility's lost distribution revenues, for each rate class, should be calculated by multiplying the incremental reduction in its kWh and kW volumes as a result of its conservation programmes, by its distribution charges per kWh and kW.*
>
> *36. For example, for a residential programme, I believe that the annual savings associated with a conservation programme should equal the number of participants, net of free-riders, times the average kWh saving per participant. (Free-riders are programme participants that would have undertaken the conservation measure even without the utility conservation programme.) For example, assuming 12 participants and 2 free-riders and a saving per participant of 20 kWh per year, the annual incremental savings would be 200 kWh per year [(12 participants – 2 free-riders) x 20 kWh per year per participant]."*

18. There are various issues in the Pollution Probe's evidence that concern Woodstock Hydro as the proposed LRAM would be implemented. In particular, Woodstock Hydro is concerned with:

a) the recovery of lost distribution revenue in a subsequent year after the revenue has been forgone;
b) the need to substantiate the incremental reductions in kWh and kW;
c) the need to quantify the impact of free-riders;
d) the need to prove that the LDC's conservation program has been the driver for incremental saving in kWhs or kWs as opposed to another external driver;
e) the need to support an audit process;
f) the additional cost associated with justifying the LRAM before the OEB and other stakeholders; and
g) the regulatory risk of not recovering the expected LRAM.

19. Woodstock Hydro proposes to eliminate all these concerns by proposing that LDC distribution charges move to a full fixed charge rate structure. With a full fixed charge there would not be any lost revenue with a conservation program and there would be no need for a LRAM process.

Cost Causality Supports Full Fixed Charge

20. In 2000, LDCs unbundled their distribution charges in accordance with direction provided by the OEB in the Electricity Distribution Rate Handbook ("Rate Handbook"). With regards to the design of the fixed monthly service charge and the volumetric distribution charge section 3.3 of the Rate Handbook states:

> "*The initial class revenue requirements determined above* (in section 3.2 – added) *are used to set a two-part distribution rate consisting of a monthly service charge and a volumetric kW or kWh rate. The monthly service charge is designed to recover the distribution fixed costs. The volumetric charge is intended to reflect, to some degree, differences in customers' use of the distribution system and, as such, addresses equity*

between customers within a customer class. In the case of demand-metered customers, the volumetric charge will be a per kW charge. For energy-metered customers, the volumetric charge will be a per kWh charge. The basis of the volumetric charge is the incremental distribution cost ("IDC").

The IDC used in the volumetric rate derivation presented in Chapter 4, and used in the RUD Model, is $0.0062/kWh. Conceptually it represents the cost of providing the next kWh and includes incremental operating and maintenance expenses, incremental capital investment, and incremental financing charges. The IDC value was derived in a 1980's joint Ontario Hydro-Municipal Electric Utility ("MEU") study and is the value that was included in the MEU's rate setting under Ontario Hydro's regulatory regime. As such, $0.0062/kWh is the IDC value included in the electricity distribution utilities' existing rates."

21. In a "Study of the Incremental Distribution Costs Used in the Municipal Residential End-Rate Adequacy Test (Phase II), RS-92-18" dated December 1992 there is a reference to the model used in the 1980's joint Ontario Hydro-Municipal Electric Utility ("MEU") study. In section 4.2.2 of RS-92-18 it states:

"*The municipal engineering model estimated the ILC* (i.e. incremental local cost, same as IDC – added) *by varying the load (customer demand level). That is, it determines the cost of constructing and operating a system (including losses) designed to service 5 kilowatts per customer, 10 kilowatts per customer, etc at current prices. The ILC per kilowatt-hour incurred is then defined as the difference in total cost for the 10 kilowatt system over and above the 5 kilowatt system all divided by the change in demand and energy. The additional or incremental costs are directly related to the change in demand and energy."*

22. The IDC, referenced in the Rate Handbook, was used to determine the variable volumetric distribution charge for the LDC's unbundled distribution rates. The Rate Handbook suggests this volumetric charge represents the cost of a customer using the

distribution system. In other words, if a customer uses more energy within a month compare to another customer the first customer causes more costs on the distribution system and should pay for this additional cost through the volumetric distribution charge. However, operators of distribution system understand that this is not the case. The cost to support demand or usage is determined at the time of construction and is essentially a fixed cost. The method used to determine the IDC supports this position.

23. As outlined in paragraph 21, the model used to determine the original IDC, that forms the basis to the current volumetric distribution charges, was based on a study that compares costs at the time of construction. It does not determine the difference in cost from a customer using more demand in one month compare to another customer.

24. When a new customer is connected to the distribution system, a distribution engineer will determine the maximum demand they expect the customer to use. Generally, this is called the design demand. Once the design demand is know, the distribution system will be constructed or upgraded to handle the additional design demand. The cost to construct or upgrade will be incurred before the customer starts taking power and will be a fixed costs. When the new customer starts taking power their usage pattern will have very little impact on the cost of the distribution system.

25. The design demand could be different for different levels of demand which suggest there could be various fixed costs for various levels of demand.

26. For a distribution system, costs are either incurred to service customers or to meet capacity demands. The costs associated with servicing customers are called the customer costs and in accounting terms are generally accepted to be fixed costs. The costs connected with meeting the capacity demands are categorized as demand costs and have typically been classified as variable costs. However, based on the forgoing discussion it is Woodstock Hydro's opinion that the demand costs are determined at the time of construction, do not vary with monthly usage and could be classified as fixed costs.

27. Woodstock Hydro submits that based on cost causality principles it would be reasonable to collect all distribution costs from customers on a fully fixed charge basis.

Current Bill Supports Full Fixed Charge

28. The current bill was recently redesigned to show the following components:
    a) Electricity;
    b) Delivery;
    c) Regulatory charges; and
    d) Debt retirement charge.

29. The delivery charge includes the cost of transmission and distribution to move power from the generating stations to the end-use meter on a house or business. As a result, the customer no longer sees the fixed monthly charge or the variable charge for distribution service. In other words, the customer sees one fixed monthly charge for delivery services with no reference to the level of monthly usage.

30. Woodstock Hydro submits that a full fixed distribution charge would be consistent with the current bill format as it is essentially what a customer sees on their bill today – a monthly fixed charge that is not associated with usage.

Full Fixed Charge Rate Design and Impact on Customer Bills

31. To be completely consistent with the cost causality principles full fixed charges should be design to recover costs at different levels of service. For residential customers, it is Woodstock Hydro's experience that residential customers are connected with a 100 amps, 200 amps or 400 amps service. These service levels reflect the design demand and broadly translate to a monthly kWh usage on a per customer basis as following.

Service Level in amps	Estimated kWh per month
100	600
200	750
400	Greater than 1000

32. Woodstock Hydro recognizes that having a full fixed charge rate design based completely on cost causality principles would concern low volume consumers. However, Woodstock Hydro believes a full fixed charge based on the service level should be the end state since it better reflects the cost of providing distribution services. As a transition, Woodstock Hydro proposes to balance these concerns with cost causality principles to design a full fixed charge rate for categories of monthly usage below 600 kWh. Using the residential class as an example, Woodstock Hydro proposed to design full fixed charges for the following monthly consumption categories.

kWh per month
Up to 250
251 to 500
501 to 750
751 to 1000
Greater than 1000

33. In order to design the full fixed charge Woodstock Hydro proposes the following steps to design the rate.

Step 1: Determine the current class revenue collected in the rate class. For example, Woodstock Hydro's estimated 2004 distribution revenue for the residential class is $2,954,107.

Step 2: Using the current distribution charges, preliminary full fixed charges would be calculated for various levels of consumption in a rate class. The preliminary full fixed charge would be the current monthly charge plus the current volumetric distribution charge times the highest level of consumption in the category. For example, the preliminary full fixed charge for the "0 to 250 kWh" category would be Woodstock Hydro's monthly service charge of $9.75 plus the current volumetric distribution charge of $0.0143 per kWh times 250 kWhs. This

results in a preliminary full fixed charge of $13.33 per month for those residential customers that use 0 to 250 kWh per month. For illustrative purposes, the preliminary full fixed charge for Woodstock Hydro's residential class would be as follows.

kWh per month	Full Fixed Charge
Up to 250	$13.33
251 to 500	$16.90
501 to 750	$20.48
751 to 1000	$24.05
Greater than 1000	$29.34

Step 3: The number of customers in each consumption category would be determined which for the residential class of Woodstock Hydro would be as follows.

kWh per month	No of Customers
Up to 250	1,243
251 to 500	3,311
501 to 750	3,320
751 to 1000	2,248
Greater than 1000	2,473

Step 4: Calculate the total annual preliminary class revenue by multiplying the preliminary rates in Step 2 with the customer numbers in Step 3 times 12. For this example, the total annual preliminary residential class revenue is $3,205,447

Step 5: The ratio of the class revenue in Step 1 to the preliminary class revenue in Step 4 is determined which for this example is 0.9216

Step 6: To ensure revenue neutrality in a rate class, the final full fixed charge would be determined by applying the ratio in Step 5 to the rates in Step 2. The final full fixed charges for the Woodstock Hydro residential class would be as follows

kWh per month	Full Fixed Charge
Up to 250	$12.28
251 to 500	$15.57
501 to 750	$18.87
751 to 1000	$22.16
Greater than 1000	$27.04

34. Woodstock Hydro submits the final full fixed charges fairly reflects the fixed customer cost and the fixed construction costs on a distribution system for a customer with usage in the defined category.

35. Under the proposed rate design the bill impacts would range from $1.10 per month for a residential customer consuming 100 kWh/month to $3.00 per month for a residential customer using over 1,000 kWh/month. Woodstock Hydro believes these impacts are reasonable for a change in rate structure.

Impact on Risk Premium for Equity Rate of Return

36. Woodstock Hydro has discussed the full fixed charge proposal with participants in the electricity market. It has been suggested by some participants that moving to a full fixed charge for distribution services would reduce the risk premium associated with the rate of return on equity. The risk premium would be reduced as the collection risk on distribution revenue would be lowered with the elimination of the volumetric distribution charge.

37. A review of the report prepared by Dr. William T. Cannon, that supports the current market based rate of return on equity, indicates the following process is used to determine the rate of return on equity.

> *"The initial setup will establish a just and reasonable return on equity ("ROE") for each of the Ontario LDCs, given a test year long Canada forecast, which will be the base against which subsequent adjustments to the formula-based ROE can be made.*
>
> *Step 1: Establish the forecast of the long Government of Canada yield for the test year. The forecast yield for long-term Government of Canada bonds will be established for the test year by taking the average of the 3 and 12 months forward 10-year Government of Canada bond yield forecasts, as stated in the most recent issue of Consensus Forecasts, and adding the average of the actual observed spreads between 10 and 30-year Government of Canada bond yields, as reported in the Financial Post, for each business day in the month corresponding to the most recent Consensus Forecast issue.*
>
> *Step 2: Establish implied risk premium. A utility's test year ROE will consist of the projected yield for 30-year long Canada bonds plus an appropriate premium to account for the utility's risk relative to long Canada bonds. The primary methodological approach to be used in evaluating the appropriate risk premium should be the equity risk premium test".*

38. It appears the above process does not take into consideration the fixed/variable distribution rate structure in the determination of the rate of return on equity. As a result, it is Woodstock Hydro's view the rate of return on equity should not be reduced with a full fixed charge for distribution services.

Appendix A: Ken Quesnelle Resume

Ken Quesnelle

Professional Experience

- Employed by Penetanguishene Public Utility Commission 1976-1991
- Power Line Maintainer Certification, 1983
- Instructor, Ontario Hydro Training and Development Centre, 1984-1987
- Superintendent of Operations, Penetanguishene PUC, 1987-1991
- Superintendent of Operations and Engineering, Woodstock PUC, 1991-1999
- Assistant General Manager/Secretary, Woodstock PUC, 1999-2000
- Vice-President/Assistant General Manager, Woodstock Hydro, 2000-present

Education

- Humber College, architecture, 74-75
- Georgian College, Ontario Management Development Program, business administration and accounting, 1983-1987
- Fanshawe College, Municipal Administration Program, Accredited Municipal Manager/Clerk Treasurer (AMCT) designation 1997

Professional Activities

- Director of Municipal Electric Association (MEA) District # 7, 1995-1998, Vice President, 1999-2000, now known as the Electrical Distributors Association-EDA
- President, EDA Western District and member of the Provincial Board of Directors for the 2001-2003 and 2003-2005 terms
- Chair of the EDA for the 2004-2005 term
- Chair of the Ontario Energy Board task force on regulations for Electrical Distribution Companies, Distribution System Code, April, 1999-June, 2000
- Chair of the EDA Task Force working with the Electrical Safety Authority on regulations for the Electrical Distribution Safety Code
- Member of the Industry Advisory Council to The Electrical Safety Authority
- Member of the Canadian Council of Public/Private Partnerships

Appendix B: Bruce Bacon Resume

ELENCHUS RESEARCH ASSOCIATES

Bruce Bacon

Profile

- A Senior Consultant with twenty-five years experience in the electricity and natural gas industries evaluating the short and long term financial and pricing impacts of business alternatives.
- Proven record of success in managing the development of cost of service models, delivering presentations to senior management, preparing submission to the Ontario Energy Board (OEB), National Energy Board (NEB) and the Régie de l'énergie (Régie) as well as testifying before the NEB, the OEB and the Régie.
- Highly skilled in training, motivating and influencing staff as well as setting priorities and leading teams.
- A strong team player, an excellent analyst and an effective communicator with strong interpersonal skills.

EXPERIENCE

Elenchus Research Associates: Associate

May 2003 – present

- Member of four OEB working groups for 2006 Electricity Distribution Rates.
- Member of OEB Cost Allocation Working Group.
- Provide ongoing regulatory advice to LDCs in Ontario.
- Chief Operating Officer of ENERconnect

Econalysis Consulting Services: Senior Consultant

1999 TO 2003

- Conducted power pricing studies for generation clients in Ontario.
- Supported the preparation of unbundled Distribution Rate Applications and Retail Transmission Rate Applications for over 30 electric local distribution companies within Ontario.
- Conducted distribution cost allocation studies for Hydro One, Oakville Hydro and St. Catharines Hydro.

- Conducted a cost efficiency study for Festival Hydro, St Thomas Energy and Woodstock Hydro Services.
- Participated on the OEB PBR Distribution Rate Task Force; the OEB Retail Settlement Code Task Force and the OEB Distribution System Code Task Force
- Testified at the OEB Generic Hearing on changes to the implementation of market-based rate of return.
- Prepared evidence and testified at the Régie on transmission rate design for Hydro Quebec.

Ontario Hydro: Manager, Marketing Services, Consumer & Small Business Markets, OHSC

1996 to 1998

- As a member of the Power Purchasing project, developed working knowledge of power trading and risk management techniques in order to risk manage the purchase of power from the power pool.
- Prepared various position papers for the Market Design Committee (MDC) to address retail market design issues and supported the OHSC representative at the MDC.

Ontario Hydro: Senior Advisor - Strategic Marketing, Ontario Hydro Retail

1995 to 1996

- Directed a province wide team to develop a service charge and energy rate structure for 960,000 Ontario Hydro Retail customers.
- Assisted in the review of cost efficiency gains by rationalizing the operations of over 48 individual local Rural Area office structures.

Ontario Hydro: Strategic Advisor - Retail Rates and Forecasts, Retail System

1990 to 1995

- Responsible for setting and gaining approval of retail rates for 960,000 residential and small business customers.
- Provided analytical support to the 1994 Joint Study into Retail Electricity Service in Ontario.
- Participated on company wide teams to evaluate open access, retail rate structures and wholesale cost allocation.

TransCanada Pipelines Ltd: Supervisor, Pipeline Cost Analysis

1988 to 1990

- Directed the preparation of long-term financial/rate impact studies submitted to the NEB for a $1.2 billion and a $2.5 billion pipeline expansion program.

- Testified before the NEB supporting the impact studies.
- Gained extensive knowledge of the supply and transmission business in the regulated natural gas industry.

TransCanada Pipelines Ltd: Assistant Supervisor, Pipeline Cost Analysis
1986 to 1988

- Supervised the system development of TransCanada's financial and rate forecasting model.

Education

Marketing Management Program
Ivey Business School, London, 1997

B.Sc. Mathematics
York University, Toronto, 1979