

Newfoundland Power

2004

Environmental Commitment & Responsibility (ECR) Program

April 8, 2005

An Introduction to Newfoundland Power

Newfoundland Power and its predecessor companies have been engaged in the production and sale of electricity since 1885. Newfoundland Power, a regulated investor owned electric utility serves approximately 224,000 customers throughout the island portion of the province of Newfoundland and Labrador.

The Company purchases about 90 per cent of its electricity from the Crown Corporation Newfoundland and Labrador Hydro, and generates the balance from its own smaller hydroelectric stations. The enclosed map (Map A) identifies the location of these generating facilities.

Newfoundland Power services approximately 85 per cent of the electricity consumers in the province with Newfoundland and Labrador Hydro servicing the remainder. The enclosed map (Map B) depicts the geographic areas serviced by the respective utilities. Sales to residential customers represent approximately 60 per cent of the Company's operating revenue.

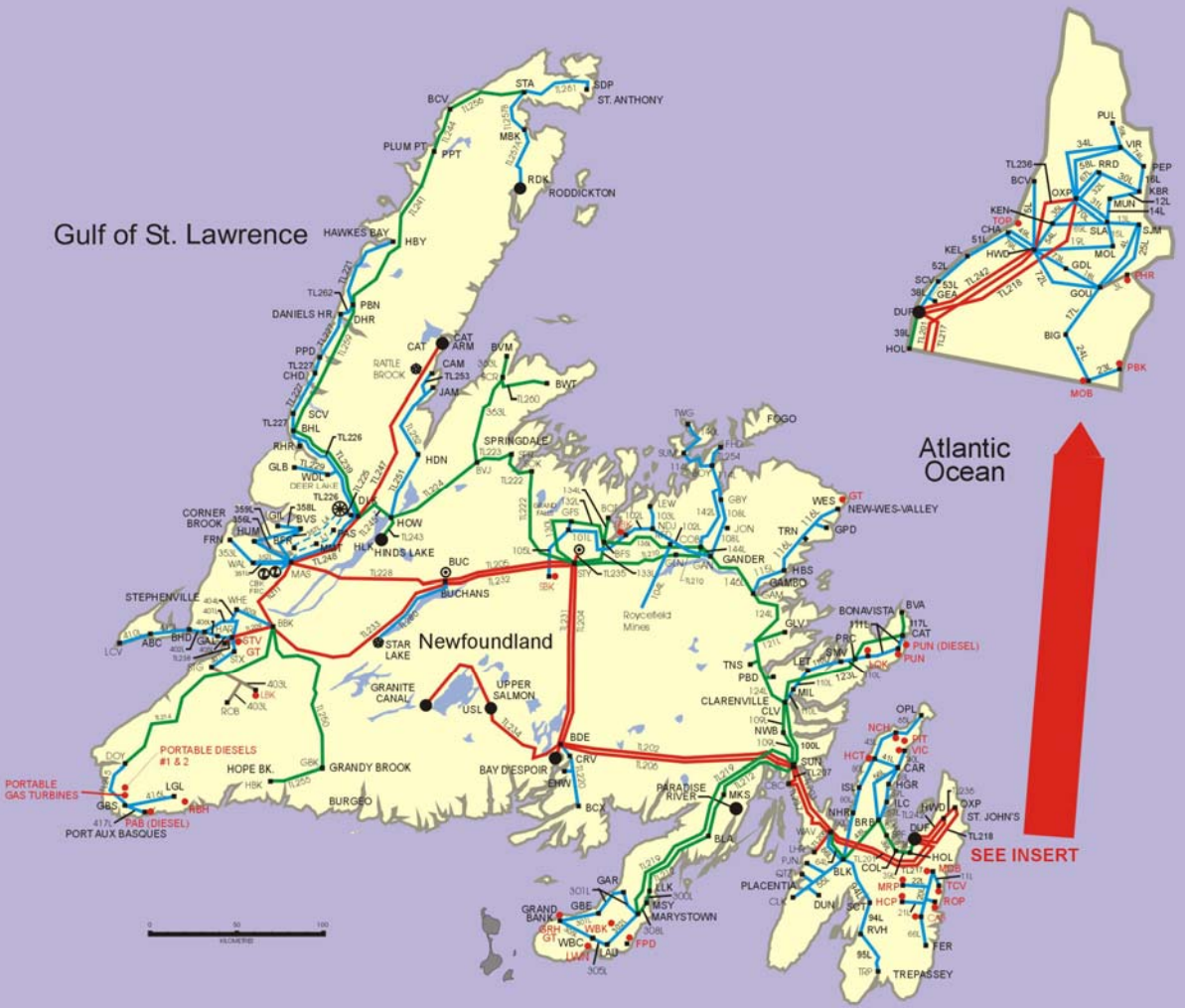
Newfoundland Power...

- Operates 23 hydro generating plants, four diesel plants and three gas turbine facilities.
- Operates 137 substations.
- Maintains 10,600 km of transmission and distribution lines.
- Has a total installed capacity of 145.5 MW.

Newfoundland Power operates under jurisdiction of the Board of Commissioners of Public Utilities of Newfoundland and Labrador which has regulatory authority over rates, policies, capital expenditures and the issue of securities.

All of the common shares of Newfoundland Power are owned by Fortis Inc., a diversified electric utility holding company.

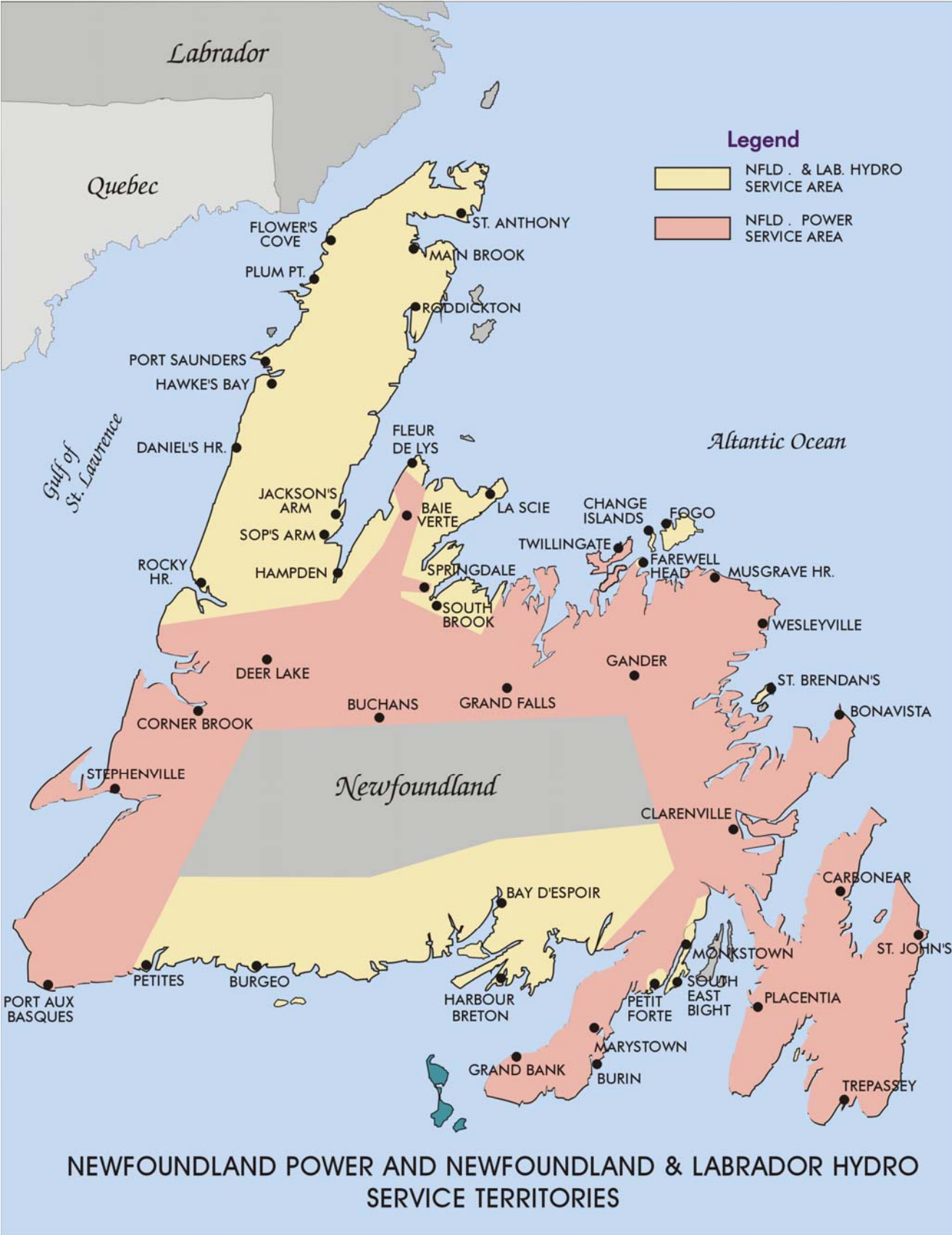
LEGEND	
	230 kV
	138 kV
	69 kV
	33 kV
	CORNER BROOK PULP AND PAPER
	INDEPENDENT POWER GENERATION
	NLH GENERATION PLANT
	NP GENERATION PLANT
	TERMINAL STATION
	NLH TRANSMISSION LINE
	NP TRANSMISSION LINE
	FREQ. CONVERTOR
	ARTIBI-CONSOLIDATED GENERATION
	CORNER BROOK PULP AND PAPER GENERATION



ISLAND GENERATION AND TRANSMISSION GRID

REV. 04/02/18

MAP A



MAP B

3. GENERAL UTILITY INFORMATION REQUIREMENTS

Table A: Generating Facilities Included in 2004 Reporting

Name of Facility	Gross Maximum Output MW
<u>Fossil</u>	
Greenhill Gas Turbine	22.00
Wesleyville Gas Turbine	14.70
Portable Gas Turbine	7.20
Port Union Diesel	0.50
Port Aux Basques Diesel	2.50
Portable Diesel (new)	2.50
Leased Unit (Diesel)	1.50
Total (Fossil)	50.90

Note:

- Portable Diesel Units #1 and #2 were decommissioned in 2004 and replaced with a new 2.5 MW unit
- Fossil fuel units are used for peaking and emergency standby only.
- Fuel used for generation is #2 Diesel.

Table A: Generating Facilities Included in 2004 Reporting (Continued)

<u>Hydroelectric</u>	
Petty Harbour	5.250
Pierres Brook	4.300
Tors Cove	6.500
Rocky Pond	3.250
Mobile	12.000
Cape Broyle	6.280
Horsechops	8.130
Topsail	2.600
Seal Cove	3.180
Hearts Content	2.370
Victoria	0.550
New Chelsea	3.700
Pitmans	0.625
Morris	1.135
West Brook	0.680
Fall Pond	0.350
Lawn	0.600
Rattling Brook	11.500
Sandy Brook	6.310
Lockston	3.000
Port Union	0.511
Lookout Brook	5.800
Rose Blanche	6.000
TOTAL (Hydroelectric)	94.621

TOTAL GENERATION**145.521**

Table B: Summary of 2004 - Generation Statistics

	Gross Generation (GWh)		Net Generation (GWh)		Station Use (GWh)	
	2003	2004	2003	2004	2003	2004
Fossil	0.706	1.374 ¹	0.385	N/A ¹	0.321	N/A ¹
Hydroelectric	404.521	417.955	401.994	415.454	2.527	2.500
Nuclear	N/A	N/A	N/A	N/A	N/A	N/A
Alternative	N/A	N/A	N/A	N/A	N/A	N/A
Totals	405.227	419.328	402.379	415.454	2.848	2.500
Purchases of Alternate Energy	N/A	N/A	N/A	N/A	N/A	N/A

(1) Station Service meter readings were not available from all fossil fuel plants. Since these plants are only used for peaking and emergency standby the gross energy production is very small. One would expect the net generation to be very low relative to gross generation.

Notes:

- While 21 of our 23 hydro plants have gross maximum output of less than 10 MW, we list all 23 plants in the hydroelectric category. We will continue to do so until such time as clear definitions and directions are given dictating otherwise. We consider all our hydro plants as naturally occurring and renewable energy sources.
- Gross Fossil Fuel Generation increased in 2004 due to a need to operate some standby generation while major repairs were being made to a transmission line.
- Hydro Generation increased slightly due to above average precipitation in 2004.

Table C: Total Length of Transmission and Distribution Lines

	2003	2004
Total Length of Distribution Lines (km)	8300	8500
Total Length of Transmission Lines (km)	2100	2100
Total Area of Transmission Rights-of-Way (ha)	N/A	4400 ¹

(1) Estimated.

4. EMS IMPLEMENTATION

EMS Value and Environmental Performance Improvement

A formal, corporate environmental policy, endorsed by the executive, is a required element of an ISO14001 modeled Environmental Management System (EMS). At Newfoundland Power one of our policy commitments states *The Company is committed to supporting and participating in community-based projects that focus on the environment. The Company recognizes the contribution environmental groups can offer on environmental issues and will participate in meaningful dialogue with these groups.*

Newfoundland Power demonstrates this commitment in many ways. For example, the following capsulizes the Company's **Community Involvement and Partnering** achievements in 2004.

EnviroFest



Newfoundland Power continued to partner with community and school groups on a number of cleanup and beautification projects throughout the Province. An estimated 5,000 community members and over 125 organizations participated in EnviroFest 2004.

EnviroFest is a family orientated event, sponsored by Newfoundland Power, that provides an opportunity to learn more about the environment around us. It's about increasing environmental awareness and demonstrating that we care about the world we live in. Our goal is to promote the preservation of our environmental for the betterment of our communities and future generations.

In 2004, the Company partnered with Tree Canada to coordinate tree planting to enhance community beautification initiatives. Shared initiatives with Tree Canada resulted in approximately 260 trees and shrubs planted throughout the Company's service area.

Environmental Performance Award



In 2004, the Newfoundland Environmental Industry Association (NEIA) presented Newfoundland Power with its “Environmental Performance Award”. This award recognized the Company’s demonstrated commitment to improved environmental performance. Theresa Critch, part of our EMS Team, is shown with the award.

**5. GUIDELINES FOR REPORTING THE ENERGY
EFFICIENCY OF LIQUID FILLED DISTRIBUTION
TRANSFORMERS PURCHASED FOR INSTALLATION
DURING THE YEAR 2004**

Data for Newfoundland Power will be found in Appendix "B".

6. INDICATORS AND PROTOCOLS

6.1 Indicators and Protocols to Support Principle 1

P1.1 Energy Conversion Efficiency of Fossil Fuel Generating Stations

	2003	2004
Net Generation (GWh)	0.385	N/A ¹
Thermal Energy Sales (GWh)	0	0
Net Energy Output (GWh)	0.385	N/A
Total Energy Input (GWh)	3.772	5.913
Fuel Conversion Efficiency (%)	10.2	N/A

(1) Only Gross Generation is available. Fossil fuel generation is very small since the units are only used for peaking and emergency standby. Due to the standby operating nature of these units one would expect the efficiency of these units to be very low.

Notes:

- The type of fuel used at Newfoundland Power Fossil Plants is #2 Diesel.
- Plants are used for standby and emergency situations only.

P1.2 Internal Energy Efficiency

For Generation:	2003	2004
Gross Generation (GWh)	405.23	419.328
Net Generation (GWh)	402.38	415.454
Generation Energy Efficiency (%)	99.30	99.08 ¹

(1) The generation efficiency includes both fossil and hydro operations. Due to the operating nature of standby fossil units one would expect the efficiency of these units to be very low. The efficiency of hydro generation is 99.40%.

In 2004 our Tors Cove Plant was refurbished thereby improving efficiency at the facility. A new water management system was installed resulting in more efficient use of our water resource. We also installed two electric governors which reduced the amount of oil in the Plant and provided better control, leading to improved plant efficiency.

For Transmission:	2003	2004
Transmission System Energy Input (GWh) ¹	5105.88	5182.63
Transmission System Energy Output (GWh) ¹	5027.10	5091.45
Transmission Energy Efficiency %	98.46	98.24

For Distribution:	2003	2004
Distribution System Energy Input (GWh) ¹	5006.39	5068.36
Distribution System Energy Output (GWh) ¹	4728.74	4771.16
Distribution Energy Efficiency %	94.45	94.14

(1) Newfoundland Power purchases energy from Newfoundland and Labrador Hydro at both the transmission and distribution levels.

P1.3 Reuse of Electrical Insulating Oil

	2003 (litres)	2004 (litres)
Volume of Insulating Oil Reused (L) following processing or cleaning at your utilities central maintenance facility(ies)	0 - Records Unavailable	0 - Records Unavailable
Volume of Insulating Oil Reused (L) following processing or cleaning during field operations	0 - Records Unavailable	0 - Records Unavailable
Volume of Insulating Oil Reused (L) following processing or cleaning by third party contractors, either in the field or through a central facility.	0 - Records Unavailable	0 - Records Unavailable
Volume of Insulating Oil Reused (A+B+C)	0	0
Volume of Insulating Oil Recycled (L) by a third party for use other than in electrical equipment	0 - Records Unavailable	0 - Records Unavailable
Volume of Insulating Oil Recovered (L) for energy recovery	202 678	175 430
Volume of Insulating Oil Disposed of as a waste	0	0
Volume of Insulating Oil Recycled, Recovered and Disposed of as waste	202 678	175 430
Percent Reuse of Insulating Oil	0 - Records Unavailable	0 - Records Unavailable
Percent of Insulating Oil Recycled	0	0

Notes:

- Records are not maintained on the volume of oil reused. Therefore, it is not possible to calculate the percentage of insulating oil reused. Insulating oil pumped from power

transformers in the field is passed through a filter press and returned to the transformer, unless the oil is unfit for reuse. If unfit, the oil is collected for energy recovery.

- The Company does not track the quantity of insulating oil disposed of as a separate figure.
- Licensed contractors collect our electrical insulating oil for energy recovery.

P1.4 Utilization of Solid Combustion By-Products

Newfoundland Power does not use solid combustible fuels.

6.2 Indicators and Protocols to Support Principle 2

P2.1 Atmospheric Emissions

Emissions of Carbon Dioxide CO₂	2003	2004
Total Gross Annual CO ₂ Emission - fossil fuel related (tonnes)	956	1499
Total CO ₂ Emission Offsets and Credits (tonnes)	0	0
Total Net Annual CO ₂ Emission (tonnes)	956	1499
Mass Gross CO ₂ Emitted Per Unit of Net Fossil Generation (kg/kWh)	2.483	N/A
Mass Gross CO ₂ Emitted Per Unit of Net System Generation (kg/kWh)	0.0024	0.0036
Mass Net CO ₂ Emitted Per Unit of Net Fossil Generation (kg/kWh)	2.483	N/A
Mass Net CO ₂ Emitted Per Unit of Net System Generation (kg/kWh)	0.0024	0.0036

Note:

- Newfoundland Power did not claim CO₂ offsets or credits in 2004.
- Gross Fossil Fuel Generation increased in 2004 due to a need to operate some standby generation while major repairs were being made to a transmission line.

Emissions of Sulphur Dioxide SO₂	2003	2004
Total Gross Annual SO ₂ Emission (tonnes)	1.213	1.901
Total SO ₂ Emission Offsets and Credits (tonnes)	0	0
Total Net Annual SO ₂ Emission (tonnes)	1.213	1.901
Mass Gross SO ₂ Emitted Per Unit of Net Fossil Generation (g/kWh)	3.151	N/A
Mass Gross SO ₂ Emitted Per Unit of Net System Generation (g/kWh)	0.0030	0.0046
Mass Net SO ₂ Emitted Per Unit of Net Fossil Generation (g/kWh)	3.151	N/A
Mass Net SO ₂ Emitted Per Unit of Net System Generation (g/kWh)	0.0030	0.0046

Note:

- In 2004 Newfoundland Power did not claim SO₂ offsets or emissions reduction credits.

Emissions of Nitrogen Oxides NO_x	2003	2004
Total Gross Annual NO _x Emission (tonnes)	5.374	18.709
Total NO _x Emission Offsets and Credits (tonnes)	0	0
Total Net Annual NO _x Emission (tonnes)	5.374	18.709
Mass Gross NO _x Emitted Per Unit of Net Fossil Generation (g/kWh)	13.958	N/A
Mass Gross NO _x Emitted Per Unit of Net System Generation (g/kWh)	0.0134	0.045
Mass Net NO _x Emitted Per Unit of Net Fossil Generation (g/kWh)	13.958	N/A
Mass Net NO _x Emitted Per Unit of Net System Generation (g/kWh)	0.0134	0.045

Notes:

- Greenhouse gas emissions (GHG) from reservoirs are not available. These will be included when either industry or government establishes a methodology to calculate these emissions.
- Fossil fuel generating units were used only in emergencies and for peaking purposes thereby keeping emissions from these facilities to a minimum.
- NO_x emissions is a blended total, including both NO and NO₂. The percentage breakdown is not readily available.

P2.2 Spills and Unintended Releases

Annual SF₆ Release Data – Existing Equipment in Use

Newfoundland Power estimates that 32 Kg of SF₆ gas were used in 2004. The number would have been higher had not two SF₆ Gas Recovery Units been purchased to reduce the amount of SF₆ released into the environment.

2004 ECR Spill Reporting Information

	2003	2004
Number of Reportable Spills	8	7
Number of Priority Spills	4	2
Total volume of Liquid Reportable Spills (litres)	884	760
Total volume of Liquid Reportable Spills recovered/cleaned up	-	N/A ⁽¹⁾
Total volume of Solid Unintended Releases (m ³)	0	0
Total volume of Gaseous Unintended Releases (m ³)	0	0
Total kg of SF ₆ used for maintenance purposes (topping up)	-	32 ⁽²⁾

Note:

- (1) We report to the Regulatory Body all reportable spills. All spills are cleaned up and available for review by the Regulatory Body. We do not maintain data on the quantity recovered/cleaned up.
- (2) Total value of SF₆ is based on an estimation using vendor information.

2004 Reportable Spill Information

Size Category	Number of Reportable Spills	Source – Generation, Transmission or Distribution
0 to 20 L	2	1 Generation, 1 T & D
21 to 200 L	4	1 Generation, 3 T & D
201 to 500 L	1	1 T & D
> 500 L	0	N/A
Total	7	2 Generation, 5 T & D

2004 Priority Spills Information

Priority Spill #1

Did the priority spill involve a petroleum product?	Yes	
Did the priority spill involve a PCB contaminated substance?		No
Was the priority spill volume greater than 500 litres?		No
Did the spilled substance enter a waterway?	Yes	
Did the priority spill attract local, provincial or national attention?		No
What was the source of the spill?	Heat Exchanger	

Priority Spill #2

Did the priority spill involve a petroleum product?	Yes	
Did the priority spill involve a PCB contaminated substance?		No
Was the priority spill volume greater than 500 litres?		No
Did the spilled substance enter a waterway?	Yes	
Did the priority spill attract local, provincial or national attention?		No
What was the source of the spill?	Generator	

Notes:

- A significant effort has been put in place to train employees on the importance of reporting spills.
- The Company records those spills resulting from its operation, including those of its contractors.

While Newfoundland Power's focus is on identifying risks and acting upon them before environmental incidents take place such as inspection and replacement of deteriorated transformers with stainless steel, incidents sometime occur. The Company has an emergency response plan in place to effectively and efficiency react to these situations.

Spill response materials are available at various locations throughout the Company, as well as on line trucks. The Company has contracts in place with companies qualified to expeditiously react to spill situations. With these resources available, Newfoundland Power has positioned itself to address these occurrences in a prompt and environmentally responsible manner.

We believe that our approach to risk identification and mitigation, coupled with employee environmental awareness training, has been effective. By way of example, our ongoing, proactive program to identify and remove PCB's is working, as we have had only one reportable PCB spill throughout our entire operating area in 2004.

In 2004 Newfoundland Power installed a new portable diesel at our Grand Bay Substation. As part of this project the Company installed a new double walled fuel storage tank. In addition, the Company replaced the old fuel storage system supplying the gas turbine with a new double walled tank. These new fuel storage systems further demonstrate the Company's commitment to continual improvement and prevention of pollution in accordance with the ISO 14001 standard.



P2.3 Environmental Aspects Indicator for Fish (Hydroelectric Generation)

Again this year Newfoundland Power replaced an aging, creosoted penstock with steel. This replacement initiative was sited at our New Chelsea Plant. The elimination of this deleterious substance (creosote) will provide a more hospitable habitat for aquatic life in the immediate area.

The original New Chelsea Penstock, which was installed in the 1950's, was at the end of its useful life. The use of steel is beneficial both from an environmental and operational perspective. This is in keeping with Newfoundland Power's commitment to prevention of pollution and continual improvement, in accordance with the ISO 14001 standard. This project resulted in 886 metres of creosote penstock being replaced with steel which will reduce leakage and improve efficiency.



In addition to the penstock replacement, there were other components to this project that reduced oil usage and increased overall plant efficiency and water utilization. These initiatives include:

- All electric governor installation
- Installation of solenoids on cooling system
- Modernized plant HVAC
- Improvements to plant controls and protection.

P2.4 PCB Management

	2003	2004
Total inventory of high level PCB material in storage (tonnes) – (estimate)	0.0	0.1
Total inventory of low level PCB material in storage (tonnes) – (estimate)	13.1	1.7
Total amount of high level PCB material sent for destruction (tonnes)	0.6	0.2
Total amount of low level PCB material sent for destruction (tonnes)	20.2	19.5
Total amount of high level PCB material taken out of service (tonnes)	0.6	0.3
Total amount of low level PCB material taken out of service (tonnes)	29.0	21.2

For Information Purposes Only (not part of indicator)	2003	2004
Total estimated inventory of high level PCB material in service (tonnes)	3	3
Total estimated inventory of low level PCB material in service (tonnes)	86	65

The Company has an ongoing program to minimize its inventory of PCB waste. In 2004, PCB waste in inventory was disposed of through a licensed PCB waste disposal company. As further inventories of PCB waste are generated, due to the removal of PCB waste from oil filled electrical equipment in service, it will be disposed of in an environmentally responsible manner.

P2.5 Generation of Low and Intermediate Level Radioactive Waste

Not applicable as Newfoundland Power does not have nuclear powered plants.

P2.6 Species at Risk and Habitat Stewardship

Our continued dialogue with officials of the Endangered Species and Biodiversity Section of the Provincial Department of Forest Resources and Agrifoods has not identified areas of concern whereby Newfoundland Power's operations are in conflict with "Species at Risk". We will continue to communicate with the Endangered Species and Biodiversity Section to flag and address issues, if any, when they arise.

Projects proposed by Newfoundland Power, including construction, larger maintenance and decommissioning are applied for under the Environmental Assessment Regulations, created under jurisdiction of the Environmental Protection Act. The environmental assessment staff forward referrals to all parties identified as being potentially impacted by the proposed undertaking. Should the Endangered Species and Biodiversity Section express concerns, alternatives will be explored in an effort to avoid identified sensitive areas. If avoidance is impractical, mitigative measures will be developed in partnership with the Endangered Species and Biodiversity Section.

Newfoundland Power has shown its commitment to the environment by being a Fish Friends corporate sponsor in Newfoundland and Labrador since 1998. Fish Friends is a hands-on education program for grades four, five, and six students, that teaches them about the importance of conserving healthy salmon and trout populations and diverse aquatic ecosystems.

Newfoundland Power has provided financial support for Fish Friends that totals nearly \$50,000. In addition, many Newfoundland Power employees participate in the program by delivering salmon eggs to schools, providing assistance in the classrooms and participating in the fry releases later in the spring."



As part of the Fish Friends program, children observe the eggs as they hatch and become fry, monitor water quality and temperature, feed the fry, and clean waste from aquariums. Teachers use accompanying lessons in the Fish Friends curriculum to teach a variety of lessons, including the challenge of sustaining natural resources, while satisfying economic and social needs.

6.3 Indicators and Protocols to Support Principle 3

P3.1 Public Reporting of Environmental Performance

	2003	2004
Number of residential customers	191 314	193 912
Does the utility produce a publicly available report on environmental performance?	Yes	Yes
Does the utility include environmental or sustainable development indicators as part of its publicly available report on environmental performance?	Yes	Yes
Does the utility include environmental or sustainable development objectives and targets as part of its report on environmental performance?	Yes	Yes
Does the utility report achievements in comparison to the objectives and targets that are described in its report on environmental performance?	Yes	Yes
Does the report include a public feedback and response mechanism?	Yes	Yes

Newfoundland Power distributed approximately 1,500 copies of our Annual Report in 2004. Newfoundland Power utilizes the Internet to provide unrestricted access to its Annual Reports, ECR Reports and other environmental information, which as a total package, addresses the public reporting requirements of this indicator. We do not specifically track the number of website hits on our Annual Reports.

Newfoundland Power's parent company, Fortis Inc., distributed approximately 30,000 copies of its Annual Report in 2004. There is an environmental section in this report that discusses environmental issues at Fortis' subsidiaries including Newfoundland Power.

P3.2 Responding to External Input Concerning Environmental Performance

All Business Units (T/D/G)	2003	2004
Does the utility have a procedure in place to <i>document</i> relevant information and requests on environmental performance from external interested parties?	Yes	Yes
Does the utility have a procedure in place to <i>respond to</i> relevant information and requests on environmental performance from external interested parties?	Yes	Yes
Does the utility track responses to document, non-government external inquiries to ensure they are timely?	Yes	Yes
Does the utility have a process in place to consider documented, non-government external inputs as part of its decision-making?	Yes	Yes
Is there documentation in place describing how documented, non-government external inputs are considered as part of the utility's decision-making?	Yes	Yes

Queries of an environmental nature are addressed through a formalized process. Inquiries are captured through an electronic tracking system entitled "Environmental Communications Report". When an inquiry has been received it is inputted into this system and assigned to appropriate personnel for action. The Environmental Management Representative (EMR) monitors all Environmental Communications Reports to ensure prompt attention and closure.

Newfoundland Power solicits input and commentary from interested parties through both a formal, regulated process and an informal, voluntary process.

Proposed undertakings that satisfy specific criteria are presented for consideration through the environmental assessment process. Governmental departments, regulatory authorities and the general public are afforded an opportunity to comment.

Other proposed projects may not receive as broad an announcement. However, we are transparent and forthright in advertising our proposed projects. We contact governmental departments/agencies and municipal councils. Also, we may hold public meetings.

6.4 Indicator and Protocol to Support Principle 4

P4.1 Evidence of an Effective Employee Awareness and Training Program

All Business Units (T/D/G)	2003	2004
Has the utility implemented a procedure to identify environmental training needs?	Yes	Yes
Has the utility implemented procedures or information systems to track the number of employees that require environmental training?	Yes	Yes
Is your training consistent with ISO 14001 requirements?	Yes	Yes

All employees of Newfoundland Power receive environmental awareness training. Job specific training modules have been developed for delivery to those employees whose job activities may impact the environment.

Annually, environmental aspects are ranked to determine significance. For each significant aspect a plan must be in place to manage the identified risk. Also, training needs originating from the significant aspects are determined. Affected personnel then receive this training.

7.0 PILOT INDICATORS AND PROTOCOLS TO SUPPORT PRINCIPLE 2

7.1 Pilot Indicator for Treated Wood Poles

	2003	2004
Which of the recommendations set out in the User Guidance Document has your utility committed to implementing by the end of 2003?	All	All
Has a schedule been prepared for the implementation of each recommendation?	Yes	Yes
When will the recommendations that you have committed to be fully implemented?	Dec.31 2002	Dec.31 2002

All poles treated with either PCP or CCA will be reused, providing they are no older than 25 years and are in suitable condition. Treated poles up to 10 years of age will be reused as if new. Those between 10 and 25 years will be reused for secondary purposes, e.g. service and street light poles. Treated timbers are reused, when practicable to do so.

With the exception of a small inventory of approximately 50 larger transmission poles, Newfoundland Power does not store poles. As part of contractual agreements, contractors store poles at their premises. Ownership becomes vested in Newfoundland Power after the poles have been installed, as directed by Newfoundland Power. When poles are removed, they become property of the contractor removing the poles. The contract document stipulates that the contractor will handle, use, and dispose of chemically treated poles and timbers in accordance with the CCME publication "Wood Treatment, the Canadian Perspective".

Newfoundland Power is unable to quantify the amount of treated wood going to landfills. As previously mentioned, contractors own the poles after removal. They are responsible to dispose of the used poles that are unsuitable for reuse.

In 2004 Newfoundland Power installed approximately:

- 30 PCP treated transmission poles
- 119 CCA treated transmission poles
- 512 PCP treated distribution poles
- 5104 CCA treated distribution poles

While Newfoundland Power has investigated life-enhancing treatment for poles, we have decided not to embark upon any formalized program.

Appendix A

Success Stories and Pictures

(These will also be sent electronically)

SF₆ Recovery



Newfoundland Power uses Sulphur Hexafluoride (SF₆) in its circuit breakers. Sulphur Hexafluoride, being a fully fluorinated compound (FFC), contributes significantly to global warming. Newfoundland Power, in its efforts to limit the amount of SF₆ released, has purchased two SF₆ Gas Recovery Units. These units capture for reuse SF₆ that previously would have been released into the environment.

This project is an example of the following Principles of the ECR Program:

- Principle 2 – To Reduce the Adverse Environmental Impact of Our Business.

Steel Poles Used in Rebuild through Water Supply



An aging and deteriorating Newfoundland Power transmission line was rebuilt in 2004. Since a 3.3km section of the line runs through a Public Protected Water Supply Area, the design of the new line used 48 steel poles and armless framing, which does not require the use of preservatives, for poles within the watershed.

This project is an example of the following Principles of the ECR Program:

- Principle 2 – To Reduce the Adverse Environmental Impact of Our Business.

Bright Ideas



Get the most out of your energy dollar

with **Bright**  **Ideas**

www.newfoundlandpower.com 1-800-663-2802

from **NEWFOUNDLAND POWER**
A FORTIS COMPANY

Saving energy makes sense!

The advertisement features a white background with a blue footer. The text is centered and includes a lightbulb icon. The footer contains a small illustration of houses and the slogan 'Saving energy makes sense!'.



Newfoundland Power continues to provide customers the information they need to get the most out of their energy dollar. In 2004, the Company refreshed its *Bright Ideas - Saving Energy Makes Sense!* campaign, which centers around providing customers with practical tips to help them with the wise and efficient use of electricity.

The campaign, which includes print, radio and billboard advertising, as well as a dedicated section on the Company's website and promotion at various trades shows throughout the year, provides helpful information on everything from insulating your home to energy efficient water heating.

The Company also works one-on-one with customers to provide energy efficiency solutions. In 2004, Newfoundland Power Customer Service Specialists set up displays in shopping malls as a means of becoming more accessible to customers to provide energy efficiency advice.

This project is an example of the following Principles of the ECR Program:

- Principle 3 – To be Accountable to our Constituents

Appendix B

Energy Efficiency of Liquid Filled Distribution Transformers Purchased for Installation During the Year 2004

(These will also be sent electronically)

Note: Transformer data includes information received
from the manufacturers as of March 24, 2005.

CEA – ECR Program 2004 Electronic Data Reporting Template

Transformer Data for the year of 2004

Utility Name : Newfoundland Power (Combined manufacturers data)

	kVA Size	Transformer Quantity	Total Compliant kVA	Total Non-compliant kVA	S kVA (Compliant and Non-compliant)	S(kVA x Efficiency)	Average Efficiency at 50% load, weighted by kVA : S(kVA x Eff.) / S kVA
1f	25 & below	1600	32140	0	32140	3181222	98.98014935
1f	37.5 - 75	1395	80475	0	80475	7968206	99.01467537
1f	100 - 167	261	28997	0	28997	2880491	99.33755216
1f	250 - 833	2	1500	0	1500	149662	99.77466667
3f	45 and below	0	0	0	0	0	#DIV/0!
3f	75 - 300	12	3600	0	3600	357483	99.30083333
3f	500 - 750	25	15000	0	15000	1491227.5	99.41516667
3f	1000 - 3000	17	23500	0	23500	2338840	99.52510638
TOTAL		3312	185212	0	185212		

Instruction :

1. This sheet is to be completed by the utility representative with the information provided by all of the transformer manufacturers.
2. The value of Efficiency is to be in percent.

Appendix C

CEA – ECR Program 2004 Electronic Data Reporting Template

(These will also be sent electronically)

CEA – ECR Program 2004 Electronic Data Reporting Template (02/03/05)

NOTES

Company Name: Newfoundland Power

Table A - Generating Facilities Included in 2004 Reporting

(Not part of the electronic data template it is to be included in your company ECR Utility Progress Report only)

Table B: Summary of Generation Statistics

Gross Generation (GWh)

B1	Fossil	1.374	
B2	Hydroelectric	417.955	
B3	Nuclear	N/A	Not applicable
B4	Alternative	N/A	Not applicable
B5	Total	419.328	
B16	Alternative Energy purchased from non-CEA members	N/A	Not applicable

Net Generation (GWh)

B6	Fossil	N/A	Not available
B7	Hydroelectric	415.454	
B8	Nuclear	N/A	Not applicable
B9	Alternative	N/A	Not applicable
B10	Total	415.454	

Station Use (including plant losses)(GWh)

B11	Fossil	N/A	Not available
B12	Hydroelectric	2.500	
B13	Nuclear	N/A	Not applicable
B14	Alternative	N/A	Not applicable
B15	Total	2.500	

Table C: Total Length and Area of Transmission and Distribution Lines

C1	Total Length of Distribution Lines (km)	8500
C2	Total Length of Transmission Lines (km)	2100
C3	Total Area of Transmission Rights-of-Way (ha)	4400

Table D: Status of EMS Implementation – [Only for member utilities that have not completed EMS implementation]

D1	Name of business units or facilities for which an EMS is to be implemented.	
D2	Planned date of implementation	dd/mm/yy

Section 6 - Guideline for Reporting the Energy Efficiency of Liquid Filled Distribution Transformers Purchased for Installation during the Year 2004
 (SEE SEPARATE WORKSHEET (TAB) "EE_Transformers" TO INPUT DATA)

P1.1 Energy Conversion Efficiency of Fossil Fuel Generating Stations

P1.1A	Net Generation (GWh)	N/A	Not available
P1.1B	Thermal Energy Sales (GWh)	0	
P1.1C	Net Energy Output (GWh)	N/A	Not available
P1.1D	Total Energy Input (GWh)	5.913	
P1.1E	Fuel Energy Conversion Efficiency (%)	N/A	Not available

P1.2 Internal Energy Efficiency For Generation:

P1.2A	Gross Generation (GWh)	419.328	
P1.2B	Net Generation (GWh)	415.454	
P1.2C	Generation Energy Efficiency (%)	99.08%	

P1.2 Internal Energy Efficiency For Transmission:

P1.2F	Transmission System Energy Input (GWh)	5182.63	
P1.2G	Transmission Energy Output (GWh)	5091.45	
P1.2H	Transmission Energy Efficiency (%)	98.24%	

P1.2 Internal Energy Efficiency For Distribution:

P1.2I	Distribution System Energy Input (GWh)	5068.36	
P1.2J	Distribution System Energy Output (GWh)	4771.16	
P1.2K	Distribution Energy Efficiency %	94.14%	

P1.3 Reuse of Electrical Insulating Oil

P1.3A	Volume of Insulating Oil Reused (L) following processing or cleaning at your utilities central maintenance facility(ies)	0	
P1.3B	Volume of Insulating Oil Reused (L) following processing or cleaning during field operations	0	

P1.3C	Volume of Insulating Oil Reused (L) following processing or cleaning by third party contractors, either in the field or through a central facility.	0	
P1.3X	Volume of Insulating Oil Reused (A+B+C)	0	
P1.3D	Volume of Insulating Oil Recycled (L) by a third party for use other than in electrical equipment	0	
P1.3E	Volume of Insulating Oil Recovered (L) for energy recovery	175430	
P1.3F	Volume of Insulating Oil Disposed of as a waste	0	
P1.3G	Volume of Insulating Oil Recycled, Recovered and Disposed of as waste (D+E+F)	175430	
P1.3I	Percent Reuse of Insulating Oil	0	
P1.3J	Percent of Insulating Oil Recycled	0	

P1.4 Utilization of Solid Combustion By Products

P1.4A	Total Ash + FGD/FBC Residue Produced (tonnes)	N/A	Not applicable
P1.4B	Total Ash + FGD/FBC Residue Utilized (tonnes)	N/A	Not applicable
P1.4C	Percent Utilization	N/A	Not applicable
P1.4D	Amount sent to landfill (tonnes)	N/A	Not applicable
P1.4E	Amount sent to recoverable storage (tonnes)	N/A	Not applicable

P2.1 Atmospheric Emissions - Carbon Dioxide CO2

P2.1A	Total Gross Annual CO2 Emission - fossil fuel related(tonnes)	1499	
P2.1B	Total CO2 Emission Offsets and Credits (tonnes)	0.0	
P2.1C	Total Net CO2 Emission (tonnes)	1499	
P2.1D	Mass Gross CO2 Emitted Per Unit of Net Fossil Generation (kg/kWh)	N/A	Not available
P2.1E	Mass Gross CO2 Emitted Per Unit of Net System Generation (kg/kWh)	0.0036	
P2.1F	Mass Net CO2 Emitted Per Unit of Net Fossil Generation (kg/kWh)	N/A	Not available
P2.1G	Mass Net CO2 Emitted Per Unit of Net System Generation (kg/kWh)	0.0036	

P2.1 Atmospheric Emissions - Sulphur Dioxide SO2

P2.1H	Total Gross Annual SO2 Emission (tonnes)	1.091	
P2.1I	Total SO2 Emission Offsets and Credits (tonnes)	0.0	
P2.1J	Total Net SO2 Emission (tonnes)	1.901	
P2.1K	Mass Gross SO2 Emitted Per Unit of Net Fossil Generation (g/kWh)	N/A	Not available
P2.1L	Mass Gross SO2 Emitted Per Unit of Net System Generation (g/kWh)	0.0046	
P2.1M	Mass Net SO2 Emitted Per Unit of Net Fossil Generation (g/kWh)	N/A	Not available
P2.1N	Mass Net SO2 Emitted Per Unit of Net System Generation (g/kWh)	0.0046	

P2.1 Atmospheric Emissions - Nitrogen Oxides NOx

P2.1O	Total Gross Annual NOx Emission (tonnes)	18.709	
P2.1P	Total NOx Emission Offsets and Credits (tonnes)	0.0	
P2.1Q	Total Net NOx Emission (tonnes)	18.709	
P2.1R	Mass Gross NOx Emitted Per Unit of Net Fossil Generation (g/kWh)	N/A	Not available
P2.1S	Mass Gross NOx Emitted Per Unit of Net System Generation (g/kWh)	0.045	
P2.1T	Mass Net NOx Emitted Per Unit of Net Fossil Generation (g/kWh)	N/A	Not available
P2.1U	Mass Net NOx Emitted Per Unit of Net System Generation (g/kWh)	0.045	

P2.2 Spills and Unintended Releases

P2.2A	Number of Reportable Spills (use Reportable Spills tab for categorizing the size and source of all reportable spills)	7	
P2.2B	Number of Priority Spills	2	
P2.2C	Total volume of Liquid Reportable Spills (litres) [Note: Reportable Spills includes Priority Spills]	760	
P2.2D	Total volume of Liquid Reportable Spills Recovered / Cleaned Up (litres)	N/A	See Report
P2.2E	Total volume of Solid Unintended Releases (m ³)	0.0	
P2.2F	Total volume of Gaseous Unintended Releases (m ³)	0.0	
P2.2G	Total kg of SF ₆ Used for Maintenance Purposes (topping up)	32	

Priority Spills Information (SEE SEPARATE WORKSHEET (TAB) "Priority_Spills" TO INPUT DATA)

		# Yes	# No
P2.2H	Did the priority spill involve a petroleum product?	2	0
P2.2I	Did the priority spill involve a PCB contaminated substance?	0	2
P2.2J	Was the priority spill volume greater than 500 litres?	0	2
P2.2K	Did the spilled substance enter a waterway?	2	0

P2.4 PCB Management

P2.4A	Total inventory of high level PCB material in storage (tonnes)	0.1
P2.4B	Total inventory of low level PCB material in storage (tonnes)	1.7
P2.4C	Total amount of high level PCB material sent for destruction (tonnes)	0.2
P2.4D	Total amount of low level PCB material sent for destruction (tonnes)	19.5
P2.4E	Total amount of high level PBC material taken out of service (tonnes)	0.3
P2.4F	Total amount of low level PBC material taken out of service (tonnes)	21.2

For Information Purposes Only (Not part of Indicator)

P2.4G	Total estimated inventory of high level PCB material in service (tonnes)	3
P2.4H	Total estimated inventory of low level PCB material in service (tonnes)	65

P2.5 Generation of Low and Intermediate Level Radioactive Waste		N/A	Not applicable
P2.5A	Total volume of low level radioactive waste sent to storage (m3)	N/A	Not applicable
P2.5B	Total volume of intermediate level radioactive waste sent to storage (m3)	N/A	Not applicable
P2.5C	Number of Nuclear Units Generating Radioactive Waste	N/A	Not applicable
P2.5D	Rate of generation of low and intermediate radioactive waste (m3/unit)	N/A	Not applicable

For Information Purposes Only (Not part of Indicator)

P2.5E	Total Weight of High Level Radioactive Waste (used/spent fuel) in Storage to Date (Mg uranium)	N/A	Not applicable
-------	--	-----	----------------

P3.1 Public Reporting of Environmental Performance

P.3.1F	Number of residential customers	193912	
P3.1A	Does the utility produce a publicly available report on environmental performance?	Yes	
P3.1B	Does the utility include environmental or sustainable development indicators as part of its publicly available report on environmental performance?	Yes	
P3.1C	Does the utility include environmental or sustainable development objectives and targets as part of its report on environmental performance?	Yes	
P3.1D	Does the utility report achievements in comparison to the objectives and targets that are described in its report on environmental performance?	Yes	
P3.1E	Does the report include a public feedback and response mechanism?	Yes	

P3.2 Responding to External Input Concerning Environmental Performance

P3.2A	Does the utility have a procedure in place to <u>document</u> relevant information and requests on environmental performance from external interested parties?	Yes	
P3.2B	Does the utility have a procedure in place to <u>respond to</u> relevant information and requests on environmental performance from external interested parties?	Yes	
P3.2C	Does the utility <u>track responses</u> to documented, non-government external inquiries to ensure they are timely?	Yes	
P3.2D	Does the utility have a <u>process in place</u> to consider documented, non-government external inputs as part of its decision-making?	Yes	
P3.2E	Is there <u>documentation in place</u> describing how documented, non-government external inputs are considered as part of the utility's decision-making?	Yes	

P4.1 Evidence of an Effective Employee Awareness and Training Program

P4.1A	Has the utility implemented a procedure to identify environmental training needs?	Yes	
P4.1B	Has the utility implemented procedures or information systems to track the number of employees that require environmental training?	Yes	

P4.1C Is your training consistent with ISO 14001 requirements? Yes

7.1 Pilot Indicator for Treated Wood Poles

Which of the recommendations set out in the Draft User Guidance Document has your utility implemented or committed to implement?

- | | | |
|---------|---|----------|
| 7.1.1.1 | Use purchasing policies that make certain any treated wood purchased has been treated appropriately. | Yes |
| 7.1.1.2 | Address potential impacts appropriately in locating storage facilities for treated wood. | Yes |
| 7.1.1.3 | Address potential impacts appropriately in managing storage facilities for treated wood. | Yes |
| 7.1.1.4 | Consider, where practicable, alternatives to the use and in-service re-treatment of wood treated with CEPA-toxic substances in areas that may be sensitive in terms of the environment and human health, such as areas in close proximity to potable water supplies and aquatic resources. | Yes |
| 7.1.1.5 | Encourage the original user to re-use treated wood to the extent practicable, and where such reuse occurs, make every reasonable effort to manage the handling of that wood and any by-products (e.g., wood chips, saw dust, extracted preservatives) in a manner that prevents or minimizes:
a) preservatives being released to the environment; and
b) risks to human health. | Yes |
| 7.1.1.6 | Develop procedures to keep account of treated wood taken out of service. Whenever the transfer of possession of treated wood occurs, make every reasonable effort to include an advisory bulletin for the subsequent user that details:
a) that wood has been treated with a wood preservative; and
b) any suggested management practices related to its future handling and use. | Yes |
| 7.1.1.7 | When the user is disposing of treated wood, make every reasonable effort to utilize the recommended waste management hierarchy that includes reuse, recycle, recovery options for treated wood. | Yes |
| 7.1.1.8 | Make every effort to continually improve the handling and management practices of treated wood | Yes |
| 7.1.2 | Has a schedule been prepared for the implementation of each recommendation? | Yes |
| 7.1.3 | When will the recommendations that you have committed to be fully implemented? | 31/12/02 |

Appendix D

CEA – ECR Program 2004 Priority Spills

(These will also be sent electronically)

CEA – ECR Program 2004 Electronic Data Reporting Template

(complete the number of columns as required for each spill)

Priority Spills Information		# Yes	# No	Spill # 1	Spill # 2
P2.2H	Did the priority spill involve a petroleum product?	2	0	Yes	Yes
P2.2I	Did the priority spill involve a PCB contaminated substance?	0	2	No	No
P2.2J	Was the priority spill volume greater than 500 litres?	0	2	No	No
P2.2K	Did the spilled substance enter a waterway?	2	0	Yes	Yes

Appendix E

CEA – ECR Program 2004 Reportable Spills

(These will also be sent electronically)

CEA – ECR Program 2004 Electronic Data Reporting Template

Please categorize all reportable spills in the table below

P2.2A

Size Category	Number of Reportable Spills	Source – Generation, Transmission or Distribution
0 to 20 L	2	1 Generation, 1 T & D
21 to 200 L	4	1 Generation, 3 T & D
201-500 L	1	1 T & D
>500L	0	N/A
Total	7	2 Generation, 5 T & D