



Newfoundland Power is committed to ensuring it operates in an environmentally responsible manner within the communities it serves. The following Environmental Commitment and Responsibility (ECR) reports are one of the tools that can be used to assess the Company's environmental performance. Background information on the ECR program and a combined industry report is available at:

http://www.canelect.ca/connections_online/this_week/roles_&_responsibilities.htm

Environmental Commitment & Responsibility (ECR) Program

April 8, 2002

SECTION 2 – GENERAL REPORTING REQUIREMENTS

2 d) Criteria for Success Stories

Refer to Appendix A

SECTION 3 – GENERAL UTILITY INFORMATION REQUIREMENTS

Table A: Generating Facilities Included in 2001 Reporting

Plant	Gross Maximum Output MW
<u>Fossil (1)</u>	
Greenhill Gas Turbine	25.00
Salt Pond Gas Turbine	14.70
Portable Gas Turbine	7.20
St. John's Diesel	2.50
Port Union Diesel	0.50
Port Aux Basques Diesel	2.50
Portable Diesel #1	0.70
Portable Diesel #2	0.67
Lease Unit	1.50
Total (Fossil)	55.27
<u>Hydroelectric</u>	
Petty Harbour	5.250
Pierries Brook	4.300
Tors Cove	6.500
Rocky Pond	3.250
Mobile	11.968
Cape Broyle	6.280
Horse Chops	8.100
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	6.450
Lockston	3.000
Port Union	0.511
Lookout Brook	5.800
Rose Blanche	5.800
TOTAL (Hydroelectric)	94.499

TOTAL GENERATION

149.769

Note: (1) Fossil fuel units are used for only peaking/standby. Fuel used for generation is #2 Diesel.

Table B: Summary of 2001 Generation Statistics

	Gross Generation (GWh)	Net Generation (GWh)	Station Use (GWh)
Fossil	0.539	0.050*	0.489
Hydroelectric	368.970	366.598	2.372
Nuclear	Not Applicable	Not Applicable	Not Applicable
Alternative Energy Source	Not Applicable	Not Applicable	Not Applicable
Total	369.509	366.648	2.861

*At some fossil fuel plants the Net Generation was negative because more Station Service was consumed than energy generated. Neither of the fossil fuel plants have time-lagged station service meters, meaning Station Service can be calculated only for those hours that the plants generate electricity. Also, there are a small number of fossil fuel plants that do not have station service meters, thereby, possibly resulting in slightly higher numbers than actual.

Table C: Total Length of Transmission and Distribution Lines

	2001
Total Length of Distribution Lines (km) (Approx.)	8000
Total Length of Transmission Lines (km)	2100

SECTION 4 – EMS IMPLEMENTATION

Table D: Status of EMS Implementation – Transmission and Distribution Companies and Corporate Headquarters

Name of business units or facilities for which an EMS is to be implemented by December 31, 2002	The remaining sections of the Company. This includes transmission, distribution, substations, transportation, etc. Note - the Company is not divided into distinct business units (at the end of 2001 a fully implemented EMS was in place for the entire Company)
Date of implementation	December 31, 2001 (one year earlier than the 2002 date)
Was there a schedule, approved by Senior Management, in place to achieve the implementation date?	Yes
Were financial resources in place to achieve the schedule?	Yes

Environmental Management System (EMS)

In 2001 training continued with all employees having received environmental awareness training. Working toward EMS implementation continued throughout the year, culminating in confirmation by an external, independent auditor that the Company's EMS was consistent with the ISO 14001 Standard. We were one year earlier than the timeframe established by CEA.

Environmental objectives, targets, and programs are put in place to reduce the adverse environmental impacts of an organization's operations. The following example demonstrates Newfoundland Power's commitment to mitigating the potential adverse impacts of its activities upon the environment.

?? **Objective:** Reduce the release of petroleum products into the environment originating from hydroelectric facilities.

?? **Target:** A 20% reduction in the number of reportable spills by December 31, 2001, based upon 1999 figures.

?? **Program:**

1. Replace three cooling coils/heat exchangers
2. Replace six solenoid valves
3. Replace petroleum based lubricating oils in 12 machines
4. Replace petroleum based greases in all plants

Continual Improvement

Prior to the development of the Environmental Management System (EMS) for Generation the environmental considerations inherent in projects were informally communicated to contractors. There was a contract clause stating that the contractor must adhere to all applicable environmental laws and regulations. Our EMS identified the porosity and possible ineffectiveness of this approach.

Today, all bidders are given an electronic copy of our operational control procedures, developed to manage possible environment impacts originating from certain actions. Also, those potential environmental impacts associated with the particular project are discussed with the contractor, utilizing a checklist. The contractor must attest that (s)he understands both the environmental implications of the project and the mitigative procedures in place to deal with any harmful environmental impacts that may occur. As the project proceeds an inspector regularly visits the jobsite completing another environmental checklist.

**SECTION 5 – GUIDELINES FOR REPORTING ON DAY-TO-DAY
ACTIVITIES THAT CONTRIBUTE TO THE UTILITY'S
ENVIRONMENTAL PERFORMANCE**

Refer to Appendix B

**SECTION 6 – GUIDELINES FOR REPORTING THE ENERGY
EFFICIENCY OF LIQUID FILLED DISTRIBUTION
TRANSFORMERS PURCHASED FOR INSTALLATION
DURING THE YEAR 2001**

Refer to Appendix C

SECTION 7 – INDICATORS AND PROTOCOLS

7.1 Indicators and Protocols to Support Principle 1

P1.1 Energy Conversion Efficiency of Fossil Fuel Generating Stations

	2001
Net Generation (GWh)	0.05
Thermal Energy Sales (GWh)	0
Net Energy Output (GWh)	0.05
Total Energy Input (GWh)	3.18
Fuel Conversion Efficiency (%)	1.57

Note:

Fossil Fuel Units are used for only peaking/standby. These Units are in operation for very short periods of time thus the reason for the low efficiency.

P1.2 Internal Energy Efficiency

For Generation:	2001
Gross Generation (GWh)	369.5
Net Generation (GWh)	366.6
Generation Energy Efficiency (%)	99.2

For Transmission:	2001
Transmission System Energy Input (GWh)	4848.7
Transmission System Energy Output (GWh)	4785.5
Transmission Energy Efficiency %	98.7

For Distribution:	2001
Distribution System Energy Input (GWh)	4766.9
Distribution System Energy Output (GWh)	4510.6
Distribution Energy Efficiency %	94.62

Note:

The Company has always focused on maximizing the efficiency of its generation, transmission and distribution systems, therefore, the efficiency levels are high. As such it is difficult to make significant gains in efficiency in these areas.

A 1% increase in distribution energy efficiency would result in enough energy saved to supply approximately 3,200 residential customers.

P1.3 Reuse of Electrical Insulating Oil

	2001(litres)
Volume of Insulating Oil Reused (L) following processing or cleaning at your utilities central maintenance facility(ies)	(Records not available)
Volume of Insulating Oil Reused (L) following processing or cleaning during field operations	(Records not available)
Volume of Insulating Oil Reused (L) following processing or cleaning by third party contractors, either in the field or through a central facility.	(Records not available)
Volume of Insulating Oil Reused (A+B+C)	(Records not available)
Volume of Insulating Oil Recycled (L) by a third party for use other than in electrical equipment	(Records not available)
Volume of Insulating Oil Recovered (L) for energy recovery	53106
Volume of Insulating Oil Disposed of as a waste	0
Volume of Insulating Oil Recycled, Recovered and Disposed of as waste	53106
Volume of New Oil Purchased (L)	6150
Percent Reuse of Insulating Oil	(Records not available)

Notes

Records are not maintained on the volume of oil reused. Therefore, it is not possible to calculate the percentage of insulating oil reused. However, all waste oil is used for energy recovery.

The Company does not track the quantity of insulating oil disposed of as a separate figure.

The volume of oil purchased does not include oil already in new transformers or other equipment received from the equipment manufacturer.

P1.4 Utilization of Solid Combustion By-Products

Not Applicable

7.2 Indicators and Protocols to Support Principle 2

P2.1 Atmospheric Emissions

Emissions of Carbon Dioxide CO₂	2001
Total Gross Annual CO ₂ Emission - fossil fuel related (tonnes)	805.0
Total CO ₂ Emission Offsets and Credits (tonnes)	0 (Not Applicable)
Total Net Annual CO ₂ Emission (tonnes)	805.0
Mass Gross CO ₂ Emitted Per Unit of Net Fossil Generation (kg/kWh) –	16.100
Mass Gross CO ₂ Emitted Per Unit of Net System Generation (kg/kWh)	0.0022
Mass Net CO ₂ Emitted Per Unit of Net Fossil Generation (kg/kWh) –	16.100
Mass Net CO ₂ Emitted Per Unit of Net System Generation (kg/kWh)	0.0022

Emissions of Sulphur Dioxide SO₂	2001
Total Gross Annual SO ₂ Emission (tonnes)	1.021
Total SO ₂ Emission Offsets and Credits (tonnes)	0 (Not Applicable)
Total Net Annual SO ₂ Emission (tonnes)	1.021
Mass Gross SO ₂ Emitted Per Unit of Net Fossil Generation (g/kWh)	20.420
Mass Gross SO ₂ Emitted Per Unit of Net System Generation (g/kWh)	0.0028
Mass Net SO ₂ Emitted Per Unit of Net Fossil Generation (g/kWh)	20.420
Mass Net SO ₂ Emitted Per Unit of Net System Generation (g/kWh)	0.0028

Emissions of Nitrogen Oxides NO_x	2001
Total Gross Annual NO _x Emission (tonnes)	4.265
Total NO _x Emission Offsets and Credits (tonnes)	0 (Not Applicable)
Total Net Annual NO _x Emission (tonnes)	4.265
Mass Gross NO _x Emitted Per Unit of Net Fossil Generation (g/kWh)	85.300
Mass Gross NO _x Emitted Per Unit of Net System Generation (g/kWh)	0.0116
Mass Net NO _x Emitted Per Unit of Net Fossil Generation (g/kWh)	85.300
Mass Net NO _x Emitted Per Unit of Net System Generation (g/kWh)	0.0116

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. However, the emissions emitted on a per unit of net fossil generation is high due to the operating nature of these units.

P2.2 Spills -

Total Number of Reportable & Priority Spills	2001
Number of Reportable Spills	7
Number of Priority Spills	4
Total volume of above (litres)	194

The number of reportable spills was lower than 2000. Also, the volume decreased dramatically.

Priority Spill #1

Priority Spills Information		
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?	Hydro Plant	

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?	Hydro Plant	

Priority Spill #3

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?	Hydro Plant	

Priority Spill #4

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?	Hydro Plant	

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.

The above numbers have been updated based on the latest available information.

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

Management of Fish Issues

In 2000, Newfoundland Power completed construction of a Fish Habitat Compensation Pool in Raymond's Brook, located immediately downstream of Bay Bulls Big Pond Dam. This work, which consisted of construction of a 600m² pool lined with spawning gravels, was required to compensate for the loss of productive habitat associated with the reconstruction of Bay Bulls Big Pond Dam. In 2001, site inspection and maintenance were completed, confirming that the Compensation Pool was performing as intended.

Also in 2001, Newfoundland Power completed habitat compensation improvements at Moose Pond, in the Pitman's Pond Hydroelectric System. This channel was originally constructed in 1998 to compensate for the loss of productive habitat associated with the construction of an upstream diversion dam. Annual monitoring has been conducted since. Based upon the recommendations of Fisheries and Oceans Canada (DFO), further initiatives were suggested to improve the channel's effectiveness. Additional work included modifications to the entrance weir, placement of extra spawning gravels, and inclusion of timber and overhangs in the channel.

P2.4 PCB Management

	2001
Total inventory of high level PCB material in storage (tonnes) – (estimate)	0.4
Total inventory of low level PCB material in storage (tonnes) – (estimate)	5.5
Total amount of high level PCB material sent for destruction (tonnes)	1.1
Total amount of low level PCB material sent for destruction (tonnes)	17.1

For Information Purposes Only (not part of Indicator)

	2001
Total estimated inventory of high level PCB material in service (tonnes)	24
Total estimated inventory of low level PCB material in service (tonnes)	143

Management of PCB Waste

The Company has an ongoing program to minimize its inventory of PCB waste. In 2001, all 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

7.3 Indicators and Protocols to Support Principle 3

P3.1 Public Reporting of Environmental Performance

		2001
P3.1A	Does the utility produce a publicly available report on environmental performance?	Yes ¹
P3.1B	Does the utility include environmental or sustainable development indicators as part of its publicly available report on environmental performance?	Yes ²
P3.1C	Does the utility include environmental or sustainable development objectives and targets as part of its report on environmental performance?	Yes ³
P3.1D	Does the utility report achievements in comparison to the objectives and targets that are described in its report on environmental performance?	Yes ⁴
P3.1E	Does the report include a public feedback and response mechanism?	Yes

Notes – While there is public reporting on environmental performance it is limited in scope as described below:

- (1) There is no separate report on the environment. The Company includes a brief, high-level overview on the environment in its Annual Report.
- (2) A very brief overview of some environmental indicators are discussed in the Annual Report. This is generally qualitative in nature.
- (3) In 1997 and 1998, the Company provided very limited information on environmental objectives and targets. In the 1999, 2000, and 2001 Annual Reports the objectives and targets were expanded upon.
- (4) There is limited general discussion on some of the achievements relative to objectives and targets.

P3.2 Responding to External Input Concerning Environmental Performance

Generation		2001
P3.2A	Does the utility have a procedure in place to <i>document</i> relevant information and requests on environmental performance from external interested parties?	Yes ¹
P3.2B	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 ¹
P3.2C	Does the utility track responses to document, non-government external inquiries to ensure they are timely?	Yes ¹
P3.2D	Does the utility have a process in place to consider documented, non-government external inputs as part of its decision-making?	Yes ¹
P3.2E	Is there documentation in place describing how documented, non-government external inputs are considered as part of the utility's decision-making?	Yes ¹

Transmission and Distribution		2001
P3.2A	Does the utility have a procedure in place to <i>document</i> relevant information and requests on environmental performance from external interested parties?	Yes ¹
P3.2B	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 ¹
P3.2C	Does the utility track responses to document, non-government external inquiries to ensure they are timely?	Yes ¹
P3.2D	Does the utility have a process in place to consider documented, non-government external inputs as part of its decision-making?	Yes ¹
P3.2E	Is there documentation in place describing how documented, non-government external inputs are considered as part of the utility's decision-making?	Yes ¹

Note: (1) Prior to 1999 there was an informal process in place that was not documented. In 1999, the Company established an EMS consistent with the ISO 14001 Standard for Generation, likewise for the remainder of the Company in 2001.

7.4 Protocol to Support Principle 4

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

Generation	2001
Has the utility implemented a procedure to identify environmental training needs?	Yes
Has the utility implemented procedures or information systems to track the number of employees that require environmental training?	Yes
Is your training consistent with ISO 14001 requirements?	Yes

Transmission and Distribution	2001
Has the utility implemented a procedure to identify environmental training needs?	Yes
Has the utility implemented procedures or information systems to track the number of employees that require environmental training?	Yes
Is your training consistent with ISO 14001 requirements?	Yes

SECTION 8 – PILOT INDICATORS AND PROTOCOLS TO SUPPORT PRINCIPLE 2

8.1 Pilot Indicator for Treated Wood Products

	2001
Which of the recommendations set out in the User Guidance Document has your utility committed	All 8*
Has a schedule been prepared for the implementation of each recommendation?	Yes
When will the recommendations that you have committed to be fully implemented?	2002/12/31

*Newfoundland Power has implemented all eight recommendations, save for the first section of recommendation six “*Develop procedures to keep account of treated wood taken out of service.*” These procedures have yet to be developed.

Notes:

- ?? 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. Creosoted materials are not reused.
With the exception of a small inventory of 34 larger transmission poles, Newfoundland Power does not store poles. These 34 poles are currently stored at two company owned sites. As part of contractual agreements, contractors store distribution 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.
- ?? Newfoundland Power installed 438 transmission poles in 2001. We estimate that 276 were CCA treated, while the remaining 162 were treated with PCP.
- ?? In 2001, Newfoundland Power installed 4258 distribution poles. We estimate that 2683 were treated with CCA, while 1575 were PCP.
- ?? While Newfoundland Power has investigated life-enhancing treatment for poles, we have yet to embark upon any formalized program.

8.2 Pilot Indicator for Species at Risk and Habitat Stewardship

Periodic discussions have been, and will continue to be, held with officials of the *Endangered Species and Biodiversity Section of the Provincial Department of Forest Resources and Agrifoods*. Preliminary indicators suggest very little interaction between Newfoundland Power's operations and "Species at Risk".

Projects proposed by Newfoundland Power, including construction, larger maintenance and decommissioning are applied for under jurisdiction of the *Environmental Assessment 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. This being impractical, mitigative measures will be developed in partnership with the *Endangered Species and Biodiversity Section*.

Appendix A

Criteria for Success Stories

2001 ECR Progress Report

NEWFOUNDLAND POWER'S SUBMISSION FOR SUCCESS STORIES

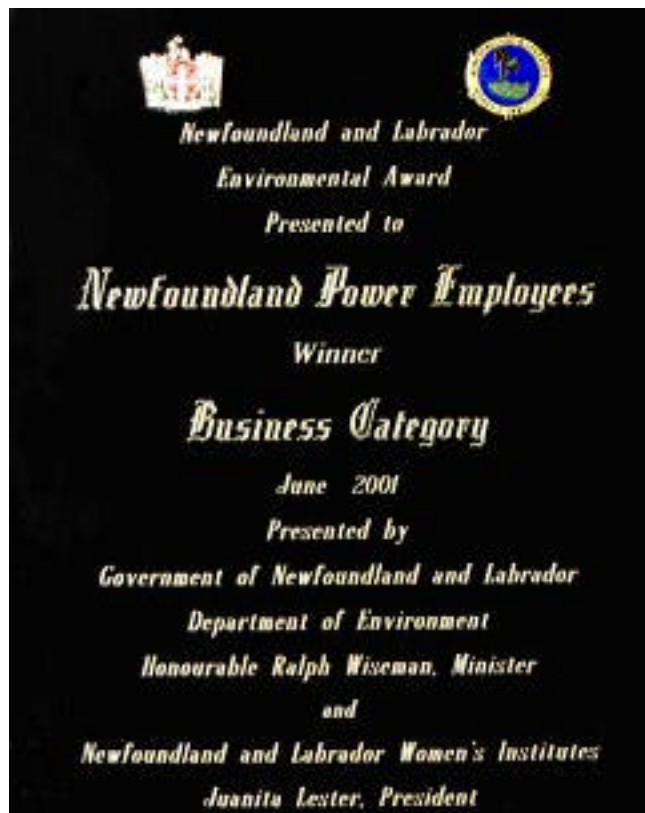
Success Story #1: Newfoundland Power's Environmental Commitment Recognized (ECR Principle #2 and #3)

Newfoundland Power Wins Newfoundland and Labrador Provincial Environment Award

In 2001, Newfoundland Power kicked off National Environment Week in style by being presented with the Newfoundland & Labrador Provincial Environmental Award as "the business that has demonstrated an exemplary attitude and concern for the environment."

Nora Duke, Vice-President of Customer and Corporate Services, accepted the award from the Provincial Environment Minister on behalf of Newfoundland Power employees. The award recognizes Newfoundland Power's commitment to work untiringly to make a difference that positively impacts not only us now, but our future generations as well.

Newfoundland Power attributes the award to its employees. Over the past four years, employees have worked to protect the Newfoundland environment and raise environmental awareness both within the Company and the community.



Success Story #2: Newfoundland Power's Commitment to Environmental Standards (ECR Principle #1-#4)

Newfoundland Power Achieves Consistency with ISO 14001 Standard for EMS

In 2001, Newfoundland Power achieved consistency with the ISO 14001 Standard for its Environmental Management System company-wide, and did it in record time – a full year ahead of schedule!

Newfoundland Power and its employees are committed to continual improvements in environmental management. Consistency with the ISO 14001 Standard enables Newfoundland Power to create a framework that gives it the ability to recognize and address environmental issues in an ongoing manner.

Newfoundland Power is committed to the environment through continual improvement, prevention of pollution and meeting legislative requirements.



Success Story #3: Tree Canada and Newfoundland Power Partner to Make Annual EnviroFest More Successful Than Ever (ECR Principle #2 and #3)

Students *Root* for a Greener Environment During 2001 EnviroFest

Newfoundland Power employees teamed up with four schools and their students to *root* for a greener environment during National Environment Week 2001. As part of the Company's annual EnviroFest activities, students took part in Tree Canada tree-planting blitzes. In an effort to make our province a little greener, over 800 trees were planted during Newfoundland Power's environment week activities and a number of recycling blitzes and community clean-ups also took place.

The Province-wide EnviroFest festivals are becoming an event to look forward to in Newfoundland. This year, approximately 5,000 community members participated in the eight EnviroFest events.

EnviroFest is part of Newfoundland Power's Environmental Commitment Program, a testament to the Company's long-term commitment to protecting and enhancing the environment. Over the past three years, employees, retirees and family members have helped organize more than 200 environmental projects across the island.



Appendix B

Guidelines For Reporting On Day-To-Day Activities That Contribute To The Utility's Environmental Performance

Subject (or Activity)	Environmental Aspect	Objective	How Implemented (by a Manual, Policy, Procedure, Guideline, etc.)	Result(s)	Can Provide A Copy Upon Request	Utility Contact Department
TRANSMISSION & DISTRIBUTION ACTIVITIES						
Installing Poles in a Protected Public Water Supply Area	Leaching of pole treatment.	Minimize and mitigate contamination caused by preservatives	Procedure	Reduced adverse impact on habitat Minimized potential impact on potable water	Yes	Bernie Ryan, Environment Section bryan@newfoundlandpower.com (709) 737 2929
Brush and Tree Clearing	Normally, brush to be chipped, removed or piled. Burning is permitted only in specific cases. In some cases the public uses the mulch for horticultural purposes.	Improvements in Work Methods	Procedure	Reduced emissions	Yes	Bernie Ryan, Environment Section bryan@newfoundlandpower.com (709) 737 2929
Management of Poles	The Company purchases poles that have been treated with approved chemicals. There are restrictions on where these poles can be installed. The Company also has procedures on the disposal of unsalvageable poles	Reduce chances of treated pole damaging environment.	Procedure	Reduced contamination	Yes	Bernie Ryan, Environment Section bryan@newfoundlandpower.com (709) 737 2929

Subject (or Activity)	Environmental Aspect	Objective	How Implemented (by a Manual, Policy, Procedure, Guideline, etc.)	Result(s)	Can Provide A Copy Upon Request	Utility Contact Department
Inspecting Oil Filled Electrical Equipment	Preventing spill of petroleum by identifying and replacing rusty units	Eliminate petroleum spills from oil filled equipment	Corporate objective	Reduction in petroleum releases due to rust	Yes	Bernie Ryan, Environment Section bryan@newfoundlandpower.com (709) 737 2929
PCB Phase Out	Eliminate PCB release to environment	Complete removal of PCB's from the system	Corporate objective	Reduced the potential for PCB release	Yes	Bernie Ryan, Environment Section bryan@newfoundlandpower.com (709) 737 2929
Controlling Siltation During Construction and Maintenance	Disruption of habitat	Limit siltation resulting from these activities	Procedure	Reduced harmful effects on habitat	Yes	Bernie Ryan, Environment Section bryan@newfoundlandpower.com (709) 737 2929
HYDROELECTRIC GENERATION ACTIVITIES						
Maintenance of Adequate Water Flows and Levels	Preservation of fish habitat Efficient use of resource	Minimize effect on fish Efficient use of water resources	Procedure	Fish habitat maintained Improved resource utilization	Yes	Bernie Ryan, Environment Section bryan@newfoundlandpower.com (709) 737 2929

Subject (or Activity)	Environmental Aspect	Objective	How Implemented (by a Manual, Policy, Procedure, Guideline, etc.)	Result(s)	Can Provide A Copy Upon Request	Utility Contact Department
Inspection and Maintenance of Oil Filled Equipment in Hydro Plants	Prevention/ minimization of petroleum releases into water.	Reduce impact on habitat	Procedure	Reduced impact on fish habitat	Yes	Bernie Ryan, Environment Section bryan@newfoundlandpower.com (709) 737 2929
Regular Maintenance	Optimum use of resource Displace emissions from fossil fuel powered generators	Avoid unscheduled down time Maximum use of resource Reduce emissions	Procedure	Better resource utilization Reduced Emissions	Yes	Bernie Ryan, Environment Section bryan@newfoundlandpower.com (709) 737 2929
Controlling Siltation Due to Construction and Maintenance	Disruption of habitat	Limit siltation as a result of activities	Procedure	Fish habitat maintained	Yes	Bernie Ryan, Environment Section bryan@newfoundlandpower.com (709) 737 2929
THERMAL GENERATION (e.g., Fossil, Nuclear) ACTIVITIES						
Inspection of Bulk Fuel Storage	Prevention/ minimization of petroleum release.	Reduce impact on habitat Resource conservation	Procedure	Protection of the environment Better resource Utilization	Yes	Bernie Ryan, Environment Section bryan@newfoundlandpower.com (709) 737 2929

Subject (or Activity)	Environmental Aspect	Objective	How Implemented (by a Manual, Policy, Procedure, Guideline, etc.)	Result(s)	Can Provide A Copy Upon Request	Utility Contact Department
Inspection of Fuel Pipelines and Hoses	Prevention/ minimization of petroleum release	Reduce impact on habitat Resource conservation	Procedure	Protection of the environment Better resource Utilization	Yes	Bernie Ryan, Environment Section bryan@newfoundlandpower.com (709) 737 2929

OTHER ACTIVITIES (e.g.; Procurement, Services, Waste Management, Strategic Planning)

PCB Storage Inspections	Reduce risk of PCB spills	Safely contain PCB's and minimize spills of PCB material by conducting inspections of the PCB storage facility at least once weekly	Procedure	No release of stored PCB material	Yes	Bernie Ryan, Environment Section bryan@newfoundlandpower.com (709) 737 2929
Yard Inspections	Minimize impact of non-PCB oil leaks	Early detection/elimination of oil spills from spare equipment stored at NP's Electrical Maintenance Centre via daily inspections	Procedure	Containment of severely rusted equipment prior to leakage Identification and containment of oil weeps	Yes	Bernie Ryan, Environment Section bryan@newfoundlandpower.com (709) 737 2929

Subject (or Activity)	Environmental Aspect	Objective	How Implemented (by a Manual, Policy, Procedure, Guideline, etc.)	Result(s)	Can Provide A Copy Upon Request	Utility Contact Department
SF6 Gas Reclaiming	Significantly reduce SF6 gas released as a consequence of equipment maintenance	To significantly reduce the amount of SF6 gas released to the atmosphere from equipment that is being repaired or maintained by utilizing SF6 Gas Reclaimer Technology	Procedure	Recapture and reuse of greater than 95% of SF6 gas from equipment maintained in conjunction with a SF6 Gas Reclaimer. Reduction of SF6 release associated with the repair of leaky SF6 bushings	Yes	Bernie Ryan, Environment Section bryan@newfoundlandpower.com (709) 737 2929
Oil Pumping	Reduce/eliminate cross contamination of oil	Three levels of oil PCB levels have been defined 1) less than 2 ppm (PCB free) 2) less than 50 ppm (Non PCB) 3) greater than or equal to 50 ppm (PCB) Separate oil pumps and equipment are used for each level to avoid cross contamination	Electrical Maintenance Personnel	Reduction/Elimination of cross contamination which, otherwise, would unknowingly increase PCB contamination.	Yes	Bernie Ryan, Environment Section bryan@newfoundlandpower.com (709) 737 2929

Subject (or Activity)	Environmental Aspect	Objective	How Implemented (by a Manual, Policy, Procedure, Guideline, etc.)	Result(s)	Can Provide A Copy Upon Request	Utility Contact Department
Oil Filtering / Testing	Reduce the quantities of waste oil generated, thereby lowering the new oil requirement.	To utilize oil filtering and testing technology in order to maximize the reuse of oil.	Procedure	PCB free (< 2 ppm) oil which meets electrical specifications may be reused in any equipment Non PCB (< 50 ppm) oil which meets electrical specifications is returned to its originating equipment	Yes	Bernie Ryan, Environment Section bryan@newfoundlandpower.com (709) 737 2929
Garage Contracts	Proper Waste Oil Disposal. Recycling of used tires.	Reduce hazardous waste disposal. Minimize use of land fills	Procedure, Contracts	Less demand on natural resources Reduced stress on landfills	Yes	Bernie Ryan, Environment Section bryan@newfoundlandpower.com (709) 737 2929
Land Management	Control of contaminated land	Before we dispose of a property we have a Phase I Environmental Site Assessment completed. Also, we manage any environmental concerns associated with an existing contaminated property, as well as a property we are decommissioning	Procedure	Reduction in spread of contamination Management of contaminated sites	Yes	Bernie Ryan, Environment Section bryan@newfoundlandpower.com (709) 737 2929

Subject (or Activity)	Environmental Aspect	Objective	How Implemented (by a Manual, Policy, Procedure, Guideline, etc.)	Result(s)	Can Provide A Copy Upon Request	Utility Contact Department
Using ATV's	Disruption of habitat	Before deviating from approved areas with ATV's, we have the locations where we wish to travel approved. (ATV's are used in an environmentally responsible manner)	Procedure	Disruption of habitat limited	Yes	Bernie Ryan, Environment Section bryan@newfoundlandpower.com (709) 737 2929
Fording Water Bodies	Minimizing damage caused during fording of water bodies	Approvals are received from both the Federal & Provincial authorities before we ford water bodies. (Fordings conducted in an environmentally responsible manner)	Procedure, Guidelines	Disruption of habitat limited	Yes	Bernie Ryan, Environment Section bryan@newfoundlandpower.com (709) 737 2929
Supervising Contractors	Ensuring contractors are aware of and follow company policies and procedures	Reduce the number of Contractor related environmental incidents	Procedure, Contract	Reduced impact on the environment caused by contractors	Yes	Bernie Ryan, Environment Section bryan@newfoundlandpower.com (709) 737 2929
Recycling	Reduce stress on landfill Reduce consumption of natural resources	Increase Company recycling efforts ranging from office waste to construction materials	Procedure	Less waste to landfill	Yes	Bernie Ryan, Environment Section bryan@newfoundlandpower.com (709) 737 2929

Subject (or Activity)	Environmental Aspect	Objective	How Implemented (by a Manual, Policy, Procedure, Guideline, etc.)	Result(s)	Can Provide A Copy Upon Request	Utility Contact Department
Waste Management	Ensuring waste is properly disposed	Waste is handled as required	Procedure	Less waste to landfill Lessened mixing of waste streams	Yes	Bernie Ryan, Environment Section bryan@newfoundlandpower.com (709) 737 2929
Asbestos Management	Controlling asbestos contaminated material	Eliminating asbestos from the work place Disposing of asbestos in the correct manner	Procedure	Improved work environment Reduced contamination of other property	Yes	Bernie Ryan, Environment Section bryan@newfoundlandpower.com (709) 737 2929
Controlling and Limiting the Use of Ozone Depleting Substances	Adversely affecting the ozone layer	Reduce the amount of damage to the ozone	Procedure	Lessened ozone depletion	Yes	Bernie Ryan, Environment Section bryan@newfoundlandpower.com (709) 737 2929

Appendix C

Energy Efficiency of Liquid Filled Distribution Transformers Purchased for Installation During the Year 2001

? **Transformer Data for the Year of 2001**

? **Utility Name :** **(Combined manufacturers data)**

**Average Efficiency
at 50% load,
weighted by kVA :
? (kVA x Eff.) / ? kVA**

? kVA Size	Transformer Quantity	Total Compliant kVA	Total Non-compliant kVA	? kVA and Non-compliant)?	(Compliant Non-compliant)?	? (kVA x Efficiency)?	? (kVA x Eff.) / ? kVA
???	25 & below	1396	27115	0	27115	2684769	99.0141619
???	37.5 - 75	1028	57725	0	57725	5728516	99.2380338
???	100 - 167	70	7050	0	7050	700299	99.3331915
???	250 - 833	5	4749	0	4749	472553	99.5057907
?							
???	45 and below	0	0	0	0	0	0
???	75 - 300	7	2100	0	2100	208506	99.2885714
???	500 - 750	21	13000	0	13000	1292400	99.4153846
???	1000 - 3000	4	6500	0	6500	646710	99.4938462
?							
?	TOTAL	2531	118239	0	118239		

? **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.

?