

2005

# Environment & Sustainability Report



# Message from the Executive Vice President & Chief Operating Officer

As we go about our daily operations, Aliant employees have become increasingly conscious of the impacts of our actions and our business on the environment.

These actions impact the growth of our business, our employees and of course our customers.

In 2005, Aliant repositioned its Environment Program to strengthen the strategic management of our activities and operations. And it's no coincidence that these efforts see our environmental impact "footprint" continue to shrink, even as our business is growing.

Environmental protection is a vital part of doing business, and Aliant is committed to minimizing the impact of our business on the environment through a continuous improvement process.

We believe every business unit and employee can contribute to making the world more sustainable - striking the often delicate balance between economic growth, environmental protection and the needs of society.

Employees have become involved and engaged like never before. Whether focused on effectively managing our fuel consumption, energy conservation, managing our waste through recycling and composting, encouraging sustainable practices such as responsible purchasing, or corporate social responsibility. The efforts of Aliant employees have contributed to ensuring the health and well being of our communities and our environment.

I am extremely proud of what we have achieved together. On behalf of our customers and our future generations, I thank you for continuing to keep the environment at the heart of our operations.

Frank



Executive Vice President and  
Chief Operating Officer  
Aliant

June 5, 2006



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## At Aliant... we're making the environment our business

**E**nvironmental protection is a vital part of doing business at Aliant. We are committed to minimizing the impact of our activities and operations on the environment while working to create a sustainable future by integrating long-term economic, environmental and social considerations into the way we operate our business.

We take this responsibility seriously. Our employees have worked diligently and as a result have made great strides in demonstrating our organization's positive commitment to the environment. Our Environment Program ensures Aliant complies with regulatory requirements and achieves results that minimize risk to the environment through a continuous improvement process.

# Governance

Aliant's Environment Program derives its mandate from our Corporate Environment Policy and supporting objectives. The program is managed through our Environmental Governance Process in keeping with our Environmental Management System. Aliant has both an internal and external "regulatory" mandate to fulfill. Internally, a formal due diligence and reporting structure is in place, requiring semi-annual reporting to the Board of Directors and annual Environmental Assurance reporting to Bell Canada. Externally, Aliant must meet all Federal, Provincial and Municipal environmental laws in the four Atlantic Provinces in which we operate. This requires reporting of all contaminant releases to the environment as well as scheduled reporting of controlled substances such as ozone depleting substances.

To ensure, Aliant continues to meet its "regulatory" mandates, the environment program is governed through the Environmental Council, made up of senior leaders of all key business units. The Environment Council is mandated to ensure our environmental policy remains consistent with Aliant's responsibilities, commitments and corporate direction, and provide assurance that Aliant is taking the necessary actions to comply with its policy.

The Environmental Action Team (EAT), composed of key business units whose actions and operations drive the Environment Program, supports the Council in meeting its mandate. The EAT ensures an effective environmental management program exists by: providing the drive and priority for the program, developing and implementing the annual Environmental Action Plan, and providing direction to ensure corporate due diligence and awareness. This team develops program objectives and ensures appropriate action is taken to achieve desired results, including the improvement of the gaps between the present and desired positions in environmental issues and procedures. The team is responsible to provide direction and procedures for day to day attention to the environment and that compliance is achieved. The team also monitors the operation for activities against regulations to ensure that any potential for non-compliance is identified and to discover new initiatives toward continually improving Aliant's Environmental Program.

## Environmental Governance Structure



# Environmental Management System

In 2005 Aliant commenced the integration and implementation of an environmental management system (EMS) based on the ISO 14001 model which establishes a framework for prioritizing, documenting, tracking, evaluating and communicating environmental performance, with a commitment to continual improvement. An EMS helps ensure that major environmental risks and liabilities are identified, minimized and managed.

The idea is simple; Aliant manages its environmental issues in the same way we manage our aspects of our business by: setting environmental policy; planning to ensure success of the policy; implementing practices, programs and procedures; monitoring and measuring to evaluate environmental performance, checking and correcting problems; and periodically reviewing the entire system.



# Internal Audits

**E**nvironmental auditing is an essential program within Aliant. It is a necessary process in providing assurance that Aliant is minimizing risks to the environment and meeting its corporate due diligence, compliance and regulatory obligations. Auditing ensures an objective examination, transparency in reporting and that corrective measures are implemented.

The Internal Audit department conducts an audit of at least one aspect of the environmental program each year. Selection is based on a number of factors including level of risk, extent of regulations and corporate objectives. For each audit, a team is formed to design, implement, assess, report and provide follow-up. The audit report is presented to the Environmental Council for acceptance. This is followed by a rigorous corrective action and follow-up process in areas of reported non-conformance. Progress reports and completion of corrective actions are reported to the Board of Directors and the Environmental Council.

Internal Audits				
Year	Aspect Audited	Rating	Findings	Corrective Actions
2002	Environmental Emergency Response	B	Minor Control Issues	2 Recommendations
2003	Halon Systems	B	Minor Control Issues	1 Recommendation
2004				
2005	Fuel Storage Systems	C	Control Improvement Required	6 Recommendations



# Managing Risk

**R**isk management in today's business environment is complex and rapidly changing.

Corporate responsibility, societal expectations and competitive pressures place demands on Aliant that go beyond compliance. Our goal is to minimize our risks through due diligence and continuous improvement processes, and exceed regulatory standards whenever possible.

Aliant manages our environmental risks through our Governance Process and Environmental Management System. More specifically, Aliant has conducted a systematic evaluation of the environmental aspects of our business that have the potential to adversely impact the environment. We then manage those aspects through the use of processes, practices, techniques, materials, products, services or energy. We can then avoid, reduce or control the creation, emission or discharge of any type of pollution or waste in order to reduce adverse environmental impacts.

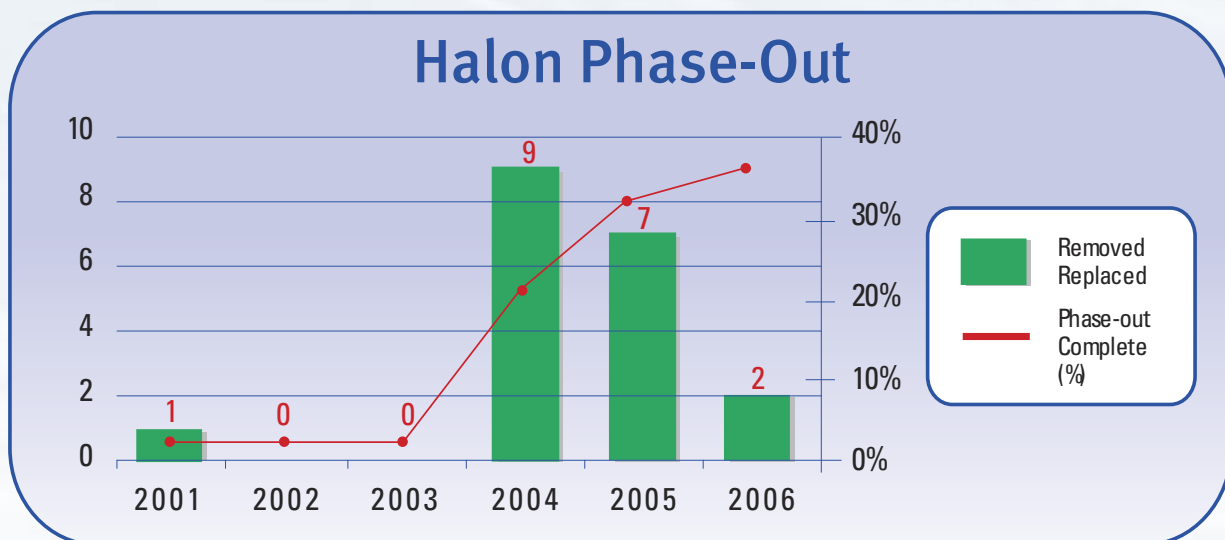
# Ozone Depleting Substances

The stratospheric ozone layer protects the planet from ultraviolet radiation. The release of certain manmade chemicals containing chlorine and bromine damage the ozone layer, resulting in harm to human health and the environment. Halocarbons are synthetic, carbon-based compounds that contain carbon and halogen atoms such as fluorine, chlorine and bromine. Aliant uses halocarbons in a number of applications including: refrigeration, air conditioning and fire suppression systems. Halocarbons are of concern because, when released to the atmosphere, they cause stratospheric ozone depletion and also contribute to global warming, better known today as climate change. Ozone Depleting Substances (ODS), include many substances such as chlorofluorocarbons (CFCs), hydrofluorocarbons (HFCs) and halon.

Halon is a strong stratospheric ozone depleting substance and has been a primary component of our fire protection systems in remote areas of Newfoundland and Labrador. All other Atlantic Provinces do not use halon for fire protection. Aliant has commenced a process for the removal or replacement of halon charged fire suppression systems with either non-ODS substances or installation of very early warning fire detection systems. Since 2001, of the remaining 53 systems, 32 per cent have been phased-out and work will continue until complete.

A series of international agreements, beginning with the Vienna Convention for the protection of the Ozone Layer (1985) and the Montreal Protocol (1987), established a timetable for phasing out ozone-depleting substances. Canadian consumption of CFCs dropped 76% between 1986 and 1995, while Canadian consumption of HCFCs increased 76% in the same time span. Although HCFCs have only two to five per cent of the ozone-depleting potential of CFCs, they still have a long-term impact on the ozone layer. Under international agreements, HCFCs are to be phased out by 2020. According to Statistics Canada, Canadian production of ozone-depleting substances fell from 27.8 kilotonnes in 1987 to 1.0 kilotonne in 1996. Despite this progress, Canada ranked 13th among the 16 nations for whom OEDC has data.

<http://www.environmentalindicators.com/htdocs/index.html>



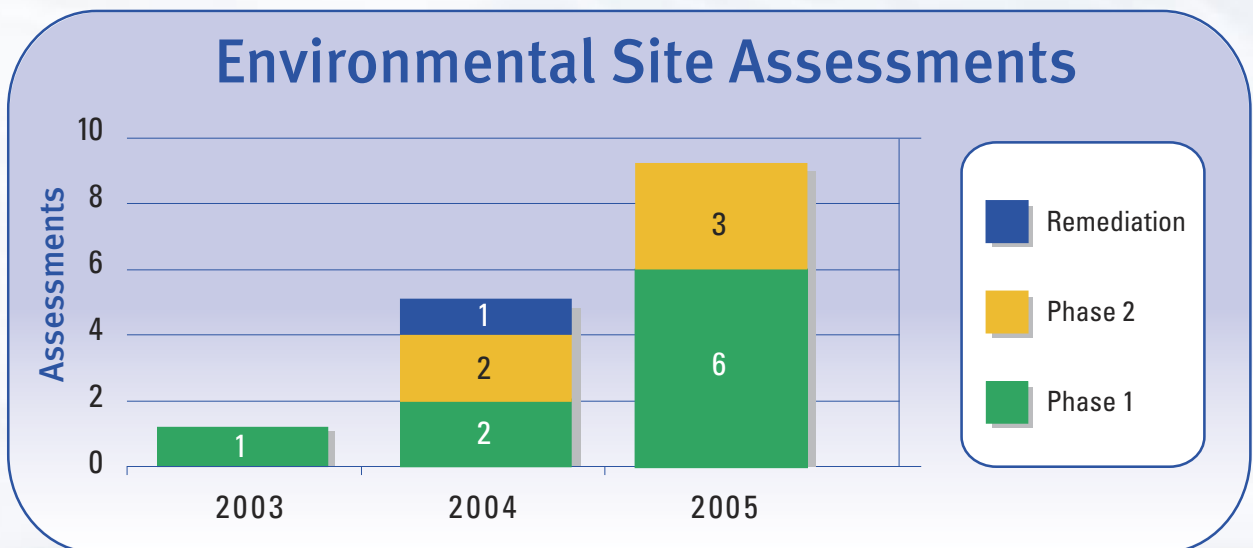
# Environmental Site Assessments

Environmental site assessments are performed primarily to assess environmental conditions of high-risk sites when we buy, lease or sell properties or when contamination is suspected. Despite improving practices and training, spills or releases could potentially occur at some of our facilities and create the contamination of soil and groundwater. In addition, our properties can be contaminated by third parties. The extent of the site assessment varies based on a variety of factors including past land-use history, risk to receptors, future land-use and the degree and type of contamination.

Environmental site assessments are performed by independent third-party environmental consultants, while our own team oversees and monitors site activities. Assessments conducted prior to the purchase, sale or construc-

tion greatly reduce our exposure to environmental liabilities and allow us to exercise due diligence in our approach while meeting the requirements of applicable legislation. The increase in site assessments is indicative of better environmental management of our assets.

*“ Environmental site assessments are performed by independent third-party environmental consultants ”*



# Lead Acid Batteries

Lead acid batteries are required to support the electronics used in Aliant's network infrastructure. These batteries are charged using commercial power (AC) from the power utility companies. They provide essential direct current (DC) storage capacity that is necessary to maintain network access during commercial power outages. Essential voice (telephone) and data services (such as Internet) are supported by the battery reserve maintained within our network.

Aliant uses two types of lead acid batteries: valve regulated lead acid (VRLA) and flooded. VRLA are typically used in smaller applications whereas flooded are used in applications requiring longer duration. The most familiar example of a flooded lead acid cell is the 12-volt automobile battery. VRLA batteries typically have a longer life and are the preferred op-

tion for use in smaller, less centralized applications. The batteries are sealed and non-spillable preventing the end-user from contact with the batteries internal components, including the electrolyte, during installation and operation.

Unless we recycle the spent batteries, certain toxic components (lead and acid) pose a potential risk to the environment and human health.

The quantity of batteries for recycling varied according to the capacity and renewal activities in our network. VRLA batteries are sent to an approved recycle facility for recovery of lead and plastics. The neutralized acids (flooded batteries) are either disposed of or reused in production of sodium sulphate. In 2005, a total of 293 metric tonnes of batteries were removed from operation and recycled.

## Recycling:

### Saves Resources:

By making products from recycled materials instead of virgin materials, we conserve land and reduce the need to mine for more minerals.

### Saves Energy:

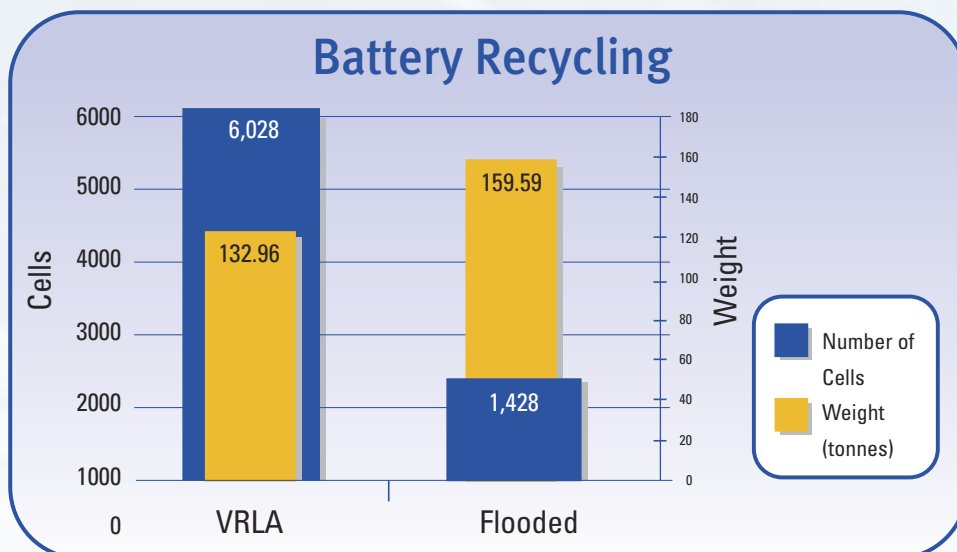
It takes less energy to make a recycled battery. In fact secondary lead bullion, for example, requires four times less energy to make than primary lead.

### Saves Clean Air and Water:

In most cases, making products from recycled materials creates less air pollution and water pollution than making products from virgin materials.

### Saves Landfill Space:

When the materials that you recycle go into new products, instead of landfills or incinerators, landfill space is conserved.



# Incidents - Spills and Releases

## Incidents:

### Minor Incident:

employees qualified and able to take the action necessary to remediate the incident.

### Moderate Incident:

employees are equipped and trained to take required corrective action, but may need support from other employees.

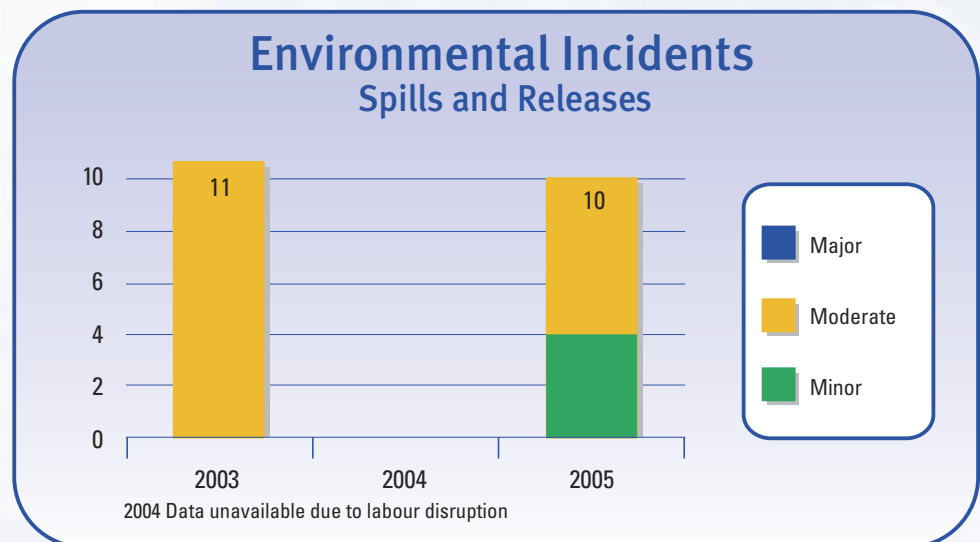
### Major Incident:

response team and outside contracted help required due to the volume of a spill, spread of contamination, or sensitivity of the receiving environment.

Aliant recognizes that operational incidents have the potential to impact the environment. Such impacts can result from broken hydraulic hoses on company vehicles, fuel spills, fuel storage systems spills, acid battery spills, and releases to the air from chillers, air conditioners and fire suppression systems. We train our team members to report spills and releases to our 24-hour Aliant Network Operations Centre (ANOC). Our environment group then works with ANOC to report spills to regulators as required, within appropriate time frames, to investigate the root causes of all spills and to implement steps to prevent their re-occurrence. Our team members are trained and equipped to control and clean-up most minor spills. Major incidents may require the assistance of specialized contractors. The final step is a follow-up visit to the site, as required, to ensure that it has been

restored to its original condition or better. In 2003, 11 incidents were reported. All 11 were determined to be minor in nature. Incident statistics are not available for 2004 due to the five-month labour disruption. In 2005, there were 10 incidents reported. Of the 10, four were determined to be minor and six were considered to be moderate.

*Our team members are trained and equipped to control and clean-up most minor spills.*



# Manhole Effluents

Aliant has 3,179 manholes. Our manholes contain network components, such as cables and splice closures.

Liquid and solid material collected in a manhole typically comes from rain water, surface runoff, ground water and in some rare cases sea water. Sludge accumulates from leaves, dirt and other material that may wash in with runoff.

Aliant adheres to strict municipal regulations and internal/external guidelines regarding manhole effluents. Most major municipalities within the Atlantic Provinces have implemented regulations governing allowable concentrations of materials entering sanitary and storm sewers. When the manhole effluent concentrations exceed standards, the manholes can not be pumped into storm or sanitary sewers.

For the safety of our workers and in accordance with the Canada Occupational Health and Safety Regulations under the Canada Labour Code, it is essential that manholes be pumped out, washed and flushed before working in them. In these cases, the materials in the manhole are taken by licensed contractors and are disposed of properly, regardless of the level of contaminants.

A 2001 survey conducted in the Halifax

area found that contaminants from Aliant's manholes were in-fact below regulated limits. However, Aliant has continued to pump-out manholes to ensure that our operations are not contributing to potential contamination of the sanitary and storm sewers, and ultimately our streams, rivers, lakes and oceans.

In areas where there is no regulation regarding manhole effluents, Aliant follows our stringent internal procedure. Employees are trained to follow this procedure. This procedure was developed in 2001 to instruct employees to evaluate a manhole as contaminate-free, contaminated or as possibly contaminated. In cases where there is recognizable contamination, our standard procedure is to contract a vacuum truck to properly dispose of the material. It is mandatory that we use licensed contractors to do this work.

Aliant continues to update contracts and procedures that follow the current regulations and environmental due diligence practice within Aliant. We continue to train and instruct employees on proper environmental procedure; maintain data collection to ensure compliance and due diligence so as to minimize risks to our employees and contractors and to minimize the discharge of contaminants to our lakes, rivers, streams and oceans wherever possible.

*“We continue to train and instruct employees on proper environmental procedure; maintain data collection to ensure compliance and due diligence so as to minimize risks to our employees and contractors and to minimize pollutants to our lakes, rivers, streams and oceans wherever possible.”*

# Utility Poles

“ *Untreated cedar or CCA treated poles are used in environmentally sensitive areas, such as protected water supplies or aesthetically sensitive areas.* ”

Chemical treatment of wood is a standard practice to preserve its structural integrity, extend its lifetime (from less than 10 years to 40 years) and protect its appearance. However, it may result in adverse public health and environmental related hazards, especially if the treated wood is not properly used and handled. The degree and extent of hazard will largely depend on location, soil types, climatic conditions and the chemical composition of the wood preservative. Therefore, the proper use and handling of treated wood utility poles is extremely important to prevent negative impacts on public health and the environment.

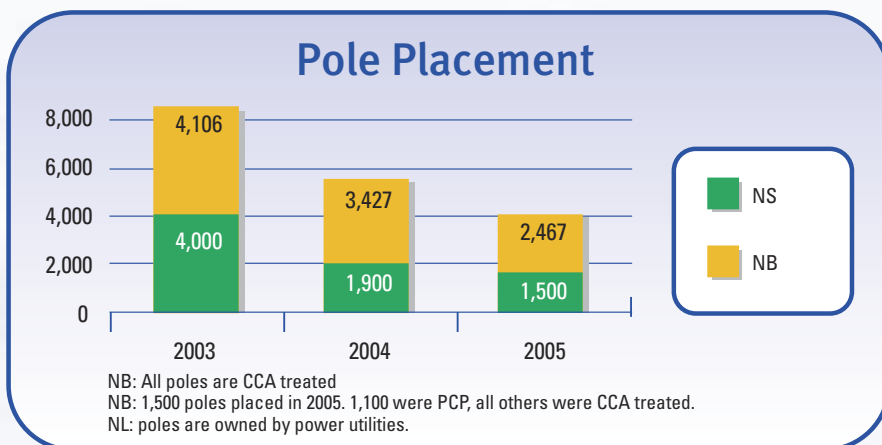
Aliant and our power utility partners use the registered chemicals Pentachlorophenol (PCP) and Copper, Chromium, Arsenate (CAA) for the protection and longevity of utility poles. In environmentally sensitive areas, such as protected water supplies, untreated cedar or CCA treated poles are used.

Commercial preparations of PCP may

result in the bi-product production of micro-contaminants, some of which are highly toxic, accumulate in the food chain, are slow to decay, cause reproductive problems in animals and are suspected of inducing cancer in humans. Research suggests that CCA preservative, (e.g., “wolmanized” brand) is permanently fixed in the wood by the full-cell pressure treatment process. Soon after treatment, the chemicals are highly leach-resistant and non-toxic to humans and vegetation when properly applied. However, a potential health impact of low-level exposure in drinking water is still a point of debate.

It is important to remember that although the treatment chemicals may pose a hazard, their presence in the pole does not make the pole a hazardous material.

Aliant currently has joint-use agreements in place with the various power utilities throughout Atlantic Canada that share the use of poles. These agreements also provide guidelines and procedures to follow when installing or replacing poles to ensure all companies can use the same structures. The joint-use agreements exemplify a cooperative spirit between Aliant and the power utilities, thereby minimizing duplication which results in fewer poles being placed and therefore less impact to the environment.



# Fuel Storage Tank Systems

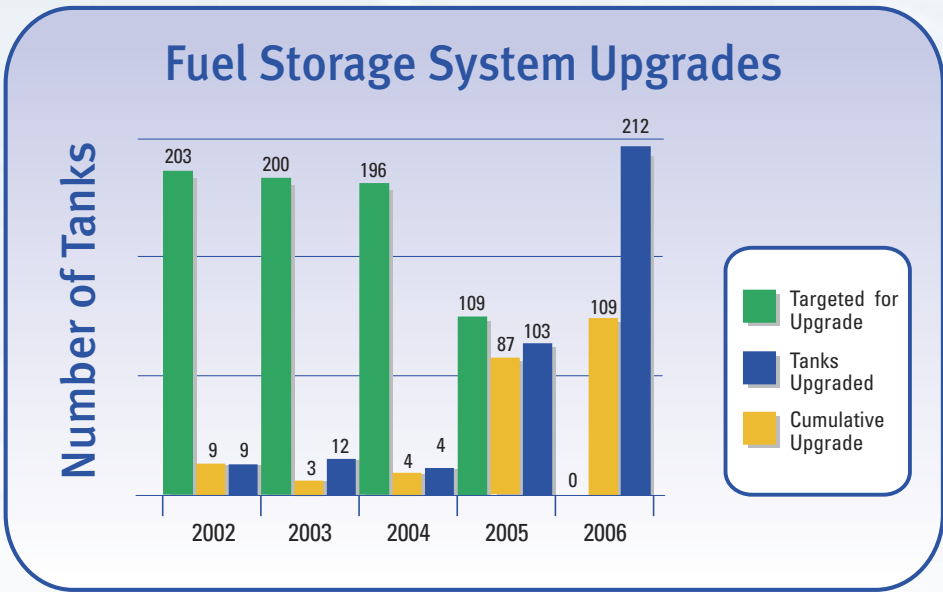
Aliant stores fuel for a variety of purposes. Diesel is stored at remote locations for generators which provide the sole source of power or back-up for commercial power at critical business locations. Furnace oil is also stored for heating purposes at a limited number of locations. We use 432 tanks of all sizes, and of those 395 (91%) are above-ground systems. Above-ground tanks are typically 910 liters or less, which is similar in volume to the normal residential installation.

Aliant is compliant with government regulations on registration and installation criteria of fuel storage tank systems. Maintenance personnel inspect tanks and piping systems as a routine requirement of their monthly building inspection program.

Additionally, a full inspection is conducted on an annual basis.

Risk to the environment is reduced through a variety of design and operational measures such as: minimizing the quantity of fuel stored at a site, above-ground tanks (where feasible), double walled or fiberglass tanks, installing secondary containment, continuous leak detection and alarming systems. These features have been incorporated into our fuel storage system upgrade project, which Aliant has aggressively implemented and will complete by year end 2006. In 2005, Aliant upgraded 87 of the 212 tanks scheduled for replacement. When completed, 212 tanks, or roughly half of all tanks, will have been replaced. This will significantly reduce the potential risk to the environment.

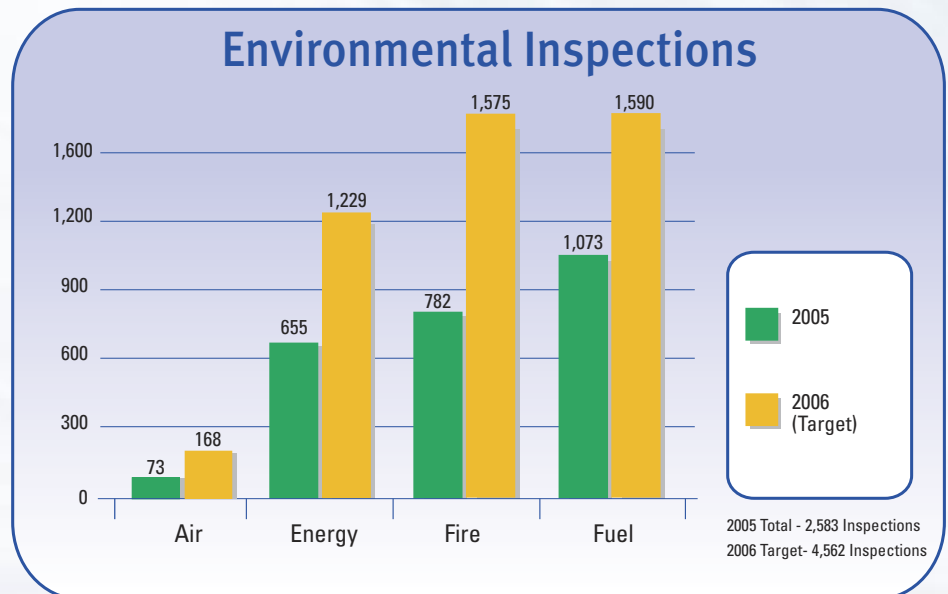
*“ We reduce risk to the environment through a variety of design and operational measures such as: minimizing fuel stored; installing above-ground, double walled or fiberglass tanks; and leak detection and alarming systems. ”*



# Environmental Related Inspections

Our operations and equipment, including back-up generating systems, fire suppression systems and equipment, climate control systems, and construction decommissioning and disposal activities can generate risks to the network and have a detrimental impact to the environment. We prioritize our efforts based on the probability of risk (type and age of infrastructure) the potential severity of impact (pathways to sensitive environmental features), and our regulatory and due diligence requirements. To assess, monitor and prevent risk and impacts to the environment, we conduct site inspections of equipment, operations and systems. Fire extinguishing equipment is checked to ensure the equipment can be operated correctly in the event of a fire. In addition, halon fire suppression systems (which contain ozone depleting substances) are checked to ensure the integrity of the

system and verify there is no product loss. Buildings are also inspected to assess energy requirements and conservation measures. Typically an inspection would include checking light timers, weather stripping, heating and ventilation controls and turning off idle equipment. In 2005, no less than 2,583 environmentally related inspections were conducted by our technical staff. In 2006, our target is to perform 4,562 inspections.

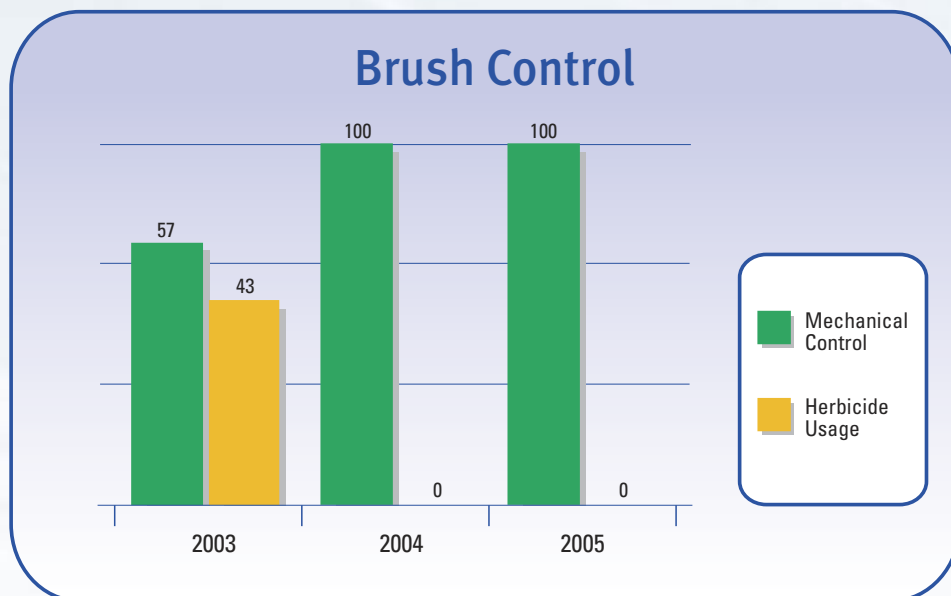


# Vegetation Management

Aliant has adopted a practice where weeds and other vegetation are controlled using mechanical techniques (cutting, chipping or mulching) organic lawn care, alternative landscaping and site naturalization. This practice prevents water pollution and protects people, ecological processes and useful organisms including earthworms and bees. Annually, the Vegetation Management Program assesses the condition of the grounds of each of Aliant's tower and remote buildings. The primary objective of this program is to keep vegetation from growing too near to critical infrastructure, thus reducing fire hazard and risk of physical damage, while improving security, safety and the aesthetic appearance of our sites. Over the past several years, Aliant has moved from the use of herbicides for vegetation management,

to control of vegetation by mechanical means.

Of the four Atlantic Provinces, only New Brunswick used herbicides for vegetation control up to 2003. In 2004, Aliant moved to brush cutting as the method of vegetation management. In 2005, it became an Aliant policy that vegetation would be managed without the use of pesticides. Consistent with this policy, in instances where grounds and lawns are maintained through landscaping contractors, no pesticides (herbicide or insecticide) are to be applied for aesthetic purposes. Fertilizer and lime can be used when required. Any use of pesticides will require prior approval from Aliant Environmental Services following the principles of "integrated pest management", and only by contracted, certified applicators.





# Enhancing Sustainability

As evident by our actions, Aliant is proving that being the leading Information and Communications Technology (ICT) provider in Atlantic Canada is compatible with making a significant contribution to the economic, social and environmental well-being of the communities in which we live and operate. Identifying opportunities and integrating sustainability into business processes is a priority area of focus and can drive value within Aliant. Key business groups from Procurement to Real Estate to Customer Service are now adopting a sustainability mind set in their decision-making and development of new initiatives. It is in this spirit of collaboration that Aliant will continue to work towards *Our Common Future*. (Bruntland, G (ed) (1987). *Our Common Future: The World Commission on Environment and Development*, Oxford: Oxford University Press.)

# Automotive Fleet - Fuel Consumption and Efficiency

Aliant had 1,433 vehicles in its fleet in 2005. Our fleet is effectively managed by adapting fuel consumption and efficiency programs into the business.

Aliant has equipped its fleet with the Telepod™ telematics system to assist in managing Aliant's fleet efficiency targets. This Global Positioning System (GPS) is connected to the computer within the vehicle. It can monitor idling time and has the ability to dispatch our resources more efficiently based on knowledge of vehicle locations and service areas. This will help to decrease fuel consumption. The power and emissions that are being generated from the telepods is minimal.

Aliant effectively increases fuel efficiency through the purchase of more fuel efficient vehicles for 2006. By March of 2006, fuel consumption was reduced by 12 per cent. By this date, fuel consumption was down 6,900 litres (equivalent to 166 tonnes of

CO2). During this same period, an increase in business resulted in an increase of 138,000 kilometers driven. Full data for 2006 will be available at year end.

As a commitment to Aliant's Environmental Action Plan, Aliant took part in the "Repair Our Air - Fleet Challenge" (sponsored by Natural Resources Canada). This challenge provides participants with accurate data on the extent and pattern of idling incidents, and tools to assist with its reduction.

The following fleets were registered in 2005

## **Repair Our Air-Fleet Challenge**

### **Municipal & Govt.**

Guelph  
Hamilton  
Kitchener  
Richmond Hill  
Winnipeg  
MTO

### **Utility: Aliant**

Hydro One-Brampton  
Hydro One  
Bell  
B.C. hydro  
Enmax  
Manitoba Hydro  
MTS

### **Heavy Duty:**

Canadian Tire  
Canada Cartage  
Muir's Cartage  
HBC  
OK Transport  
RST  
Sunbury  
MorTrans

### **Coach:**

Pacific Western  
Greyhound

### **Transit:**

Guelph  
Hamilton Street Railway

## Fleet Fuel Efficiency Statistics

	Number of Vehicles	Equipped with Telepod	Fuel Consumption (Litres)	Distance Travelled (km)	Fuel Efficiency (L/100km)	Tons of CO <sub>2</sub> produced
2003	1,613	0	7,232,639	37,054,763	19.5	17,358
2004	1,583	3	5,935,910	32,809,624	18.1	14,246
2005	1,433	1,401	6,653,159	34,018,156	19.6	15,968

# Office Waste Recycling

## Recycling Facts

By the age of six months, each Canadian has consumed as many resources as a person in the developing world consumes in a lifetime.

Canadians produce over 30 million tonnes of garbage annually, or more than a tonne per person.

It takes only 2-3 minutes per day, per person, to recycle.

Recycling one tonne of paper saves 17 trees, 3 cubic meters of landfill, 4,000 kilowatt hours of energy, 29,000 litres of water and 30 kg of air pollution effluent.

Recycled cardboard products use one-quarter of the energy and create one-half the pollution as making them from new materials.

A littered aluminum can will take 300 years to disintegrate.

It takes 95 per cent less energy to produce new aluminum from discarded aluminum pop cans than from raw materials.

A littered glass bottle will take a million years to disintegrate.

For every tonne of new glass produced, 12.6 kg of air pollution is created.

New products are produced from recycled plastic, including non-food containers, plastic rulers, carpet and clothing.

Composting can reduce the amount of total waste going to landfill by up to one third.

From: [www.waterfordfoundation.nf.ca/facts.html](http://www.waterfordfoundation.nf.ca/facts.html)

Aliant recognizes our leadership role in doing our part to minimize the impact of day-to-day office activities on the environment. Not just for our betterment, but also for future generations.

Tracking the amount of waste created at our facilities has posed a challenge due to the large number of facilities, the different types of operations, the remote placement of sites and the varying methods of tracking or paying for waste collection. In most instances, waste collection is not invoiced on a weight basis, but rather on a quantity of collection. As a result, the data presented in this section is based on our best estimates.

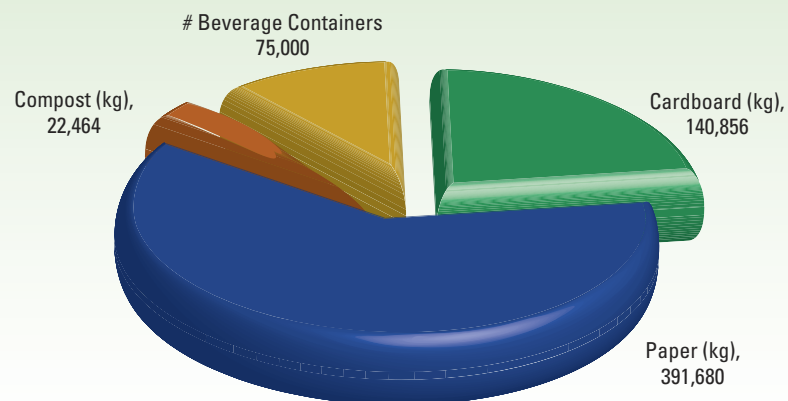
Statistics gathered from major Aliant Centers indicate that in 2005 we recycled an estimated 392 tonnes of paper and 141 tonnes of cardboard. Combined, this is equivalent to saving

9,000 mature trees or a four hectare (10 acre) forest. Many Aliant employees already compost at home. In 2005, our employees also compost at several other office centers. It is estimated that in 2005 alone we diverted 22 tonnes of organic waste, equivalent to 7.3 tonnes of compost.

## Saint John, NB – Pilot Project

An employee waste reduction pilot initiative, championed by our Employee Environmental Stewardship Team (EEST), was launched in October, 2005 on four floors in the Aliant, Brunswick Square office tower in Saint John, NB. The goal was to work with employees to design and implement a model recycling program. Approximately 300 employees participated in the pilot program, which continues into 2006. The objective of the program was to trial a new office com-

## Office Recycling - Major Aliant Centres



# Office Waste Recycling (con't)

posting program, plus enhance the existing recycling efforts. Since a typical employee generates more paper than any other waste, employees were provided with desk-side paper recycling blue bins while trash bins were removed, to avoid cross contamination and encourage participation. Large waste bins, for the five targeted waste streams (compost, cardboard, paper, beverage containers and trash) were located in common areas, kitchens and washrooms. At the mid-point of the pilot, EEST designed an online employee survey.

The survey was designed to gain valuable feedback on program participation, acceptance, potential barriers, areas for improvement, and gather suggestions for consideration when the program is launched throughout Aliant.

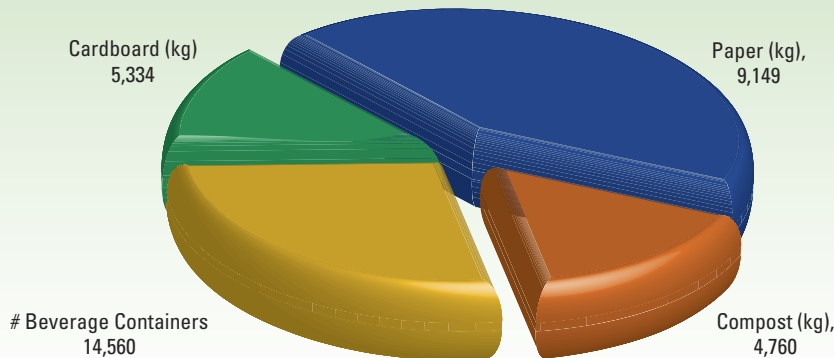
Concurrent with this trial, approximately 200 employees from the Millidgeville Aliant offices in Saint John continued to follow a similar recycling program which commenced in 2003.

“ Since the October launch, Aliant’s two large office locations in Saint John, NB have recycled over five tonnes of cardboard; close to 10 tonnes of paper, five tonnes of organics and about 14,560 beverage containers. That’s roughly equivalent to saving 247 mature trees and producing 1.6 tonnes of compost.”

## Employee Recycling - Survey Results

	Always Recycle	Satisfied (% of employees)	Very Satisfied (% of employees)	Satisfied or V. Satisfied
Paper	100%	29%	71%	100%
Cardboard	100%	29%	57%	86%
Compost	86%	29%	43%	72%
Beverage Containers	100%	14%	86%	100%

## Office Waste Recycling Initiative Saint John



# Energy Usage and Conservation Management

**Aliant's participation in energy conservation projects saves money and contributes to protecting the environment. We consistently achieve these goals by:**

Use of the latest energy efficient materials and practices in all new buildings.

Using the latest technology in heat pumps and economizers for buildings climate control.

Conversion to digital control, providing remote access capability, monitoring and adjustments.

Usage of electronic ballasts and energy efficient bulbs.

Usage of motion sensors which automatically turn lights on and off.

Improvements to the efficiency of ventilation, air conditioners and heating systems (HVAC).

Decommissioning buildings.

Shutting down old boilers.

Turning off unused network equipment and buildings.

Since 2002, Aliant has saved total of 13,230 megawatt hours of energy through energy conservation initiatives. This is equivalent to 14,879 tonnes of carbon dioxide (CO<sub>2</sub>).

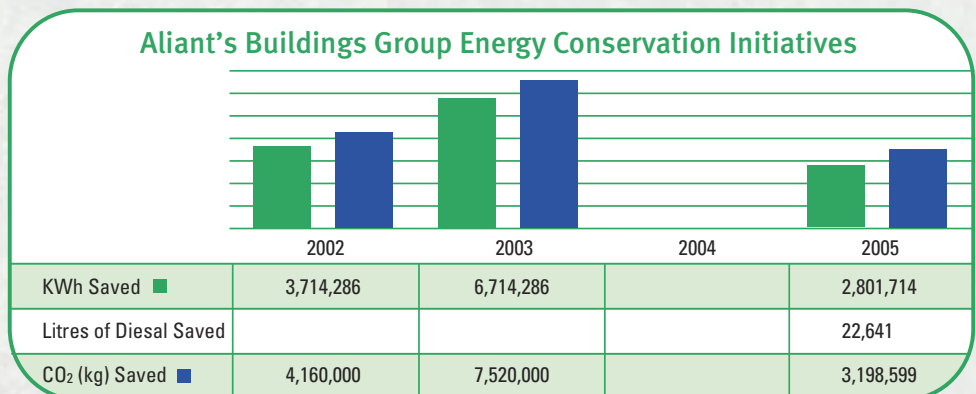
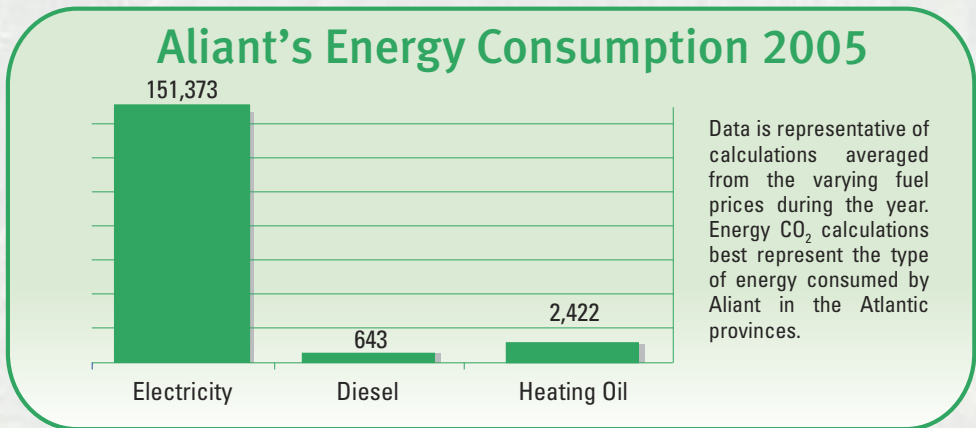
This is comparative to taking approx. 2,570 cars off the road, or planting 1,640 hectares of forest

<http://www.mtholyoke.edu/org/ccc/website/campaigns/energy.htm>

Aliant's approximate 8,400 employees work within 2,424,027 square feet of building space in order to operate our business. Energy is required to power our telecommunications equipment, to operate our buildings and run our vehicles. Sources of traditional energy, whether fuel, electric or other, have a major impact on all aspects of the natural environment - land, water and air. This also includes the production of greenhouse gases that contribute to climate change. Climate change is considered by many scientists to be the most serious threat facing the world today. The Kyoto Protocol is an international agreement to cut greenhouse gas emissions that contribute

to climate change. Canada's commitment is to reduce greenhouse gas emissions by six per cent below 1990 levels by 2012.

The proceeding table is representative of energy converted to the tonnes of carbon dioxide (CO<sub>2</sub>) that Aliant has produced through its buildings operations. In 2005, Aliant took on an additional energy conservation initiative which identified energy and greenhouse gas savings simply by turning off unused network equipment. In 2005, this resulted in savings of 3,952 megawatt hours of energy, or approximately 4,426 tonnes of carbon dioxide (CO<sub>2</sub>).



# Clean Energy

Aliant is a proud participant in clean energy projects. Aliant has solar power and wind generated power stations at remote locations in Labrador.

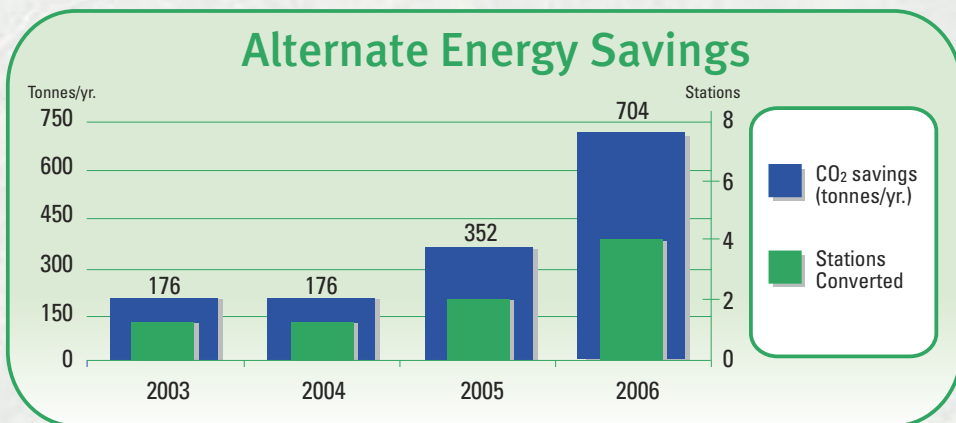
Solar power is a completely renewable resource that results in considerable energy efficiency. Solar power technology is available at 15 Aliant sites. Originally, the sites were designed with sufficient diesel fuel storage to last for a year of continuous diesel generator operation. The addition of the solar power systems has reduced fuel consumption at these sites, such that the costly re-fueling process is now only required once every five years. The reduction of re-fueling trips, made possible only by helicopter, results in a corresponding reduction in handling, which significantly reduces the risk of spills and other related impacts. It also reduces the greenhouse gas emissions (calculated as carbon dioxide or CO<sub>2</sub>

equivalents) from burning fossil fuels.

The environmental, economic and operational successes have driven Aliant to continue to use the solar power technology. In recent years, clean energy efforts have expanded to create “hybrid stations” by integrating the solar power technology with wind generated power, which over time will allow all 15 stations to be a stand-alone alternative to the traditional diesel fuel energy supply. The savings increase by 50 per cent when converting the solar power sites to the combined usage of wind and solar power.

In 2005, Aliant added two wind stations to the 15 existing solar powered sites. In 2006, Aliant will add wind generated power to four additional sites resulting in an estimated CO<sub>2</sub> savings of 704 tonnes per year.

*“Power is called “clean” when it is produced by tapping into clean sources such as the sun, wind, waves, fuel cells and other renewable technologies. These technologies produce little or no pollution, and they generate power from energy sources that are in plentiful supply and virtually never run out. That’s why clean energy is the power of the future.”*



# Paper Consumption and Conservation

## Tips for reducing office paper waste

### Use both sides

Set computer defaults to print double-sided.

Make double-sided copies when possible.

Use one-sided paper in your fax machine or as scratch paper.

### Think before you print or copy

Preview documents before printing.

Print only the pages you need.

Print only the number of copies needed for the meeting etc..

### Go electronic

Use revision features in word processing software. Edit draft documents on screen instead of making hand-written comments.

Send information electronically instead of fax or letters. It's faster.

Create an electronic filing system for quick, easy retrieval.

Hold paperless meeting using electronic projectors and features such as Net Meeting.

### Keep forms and lists up-to-date

Reduce unwanted mail.

Eliminate unnecessary forms and make them electronic.

### Close the loop on recycling

Recycle all of your office paper.

Buy recycled content paper.

### Be nice to your copier...

Many times copiers are used until all the toner is gone and that wears down machines. A copier that works well is less likely to jam and this helps save paper!

### Compound savings

Send document in the mail double-sided saves on paper and postage..

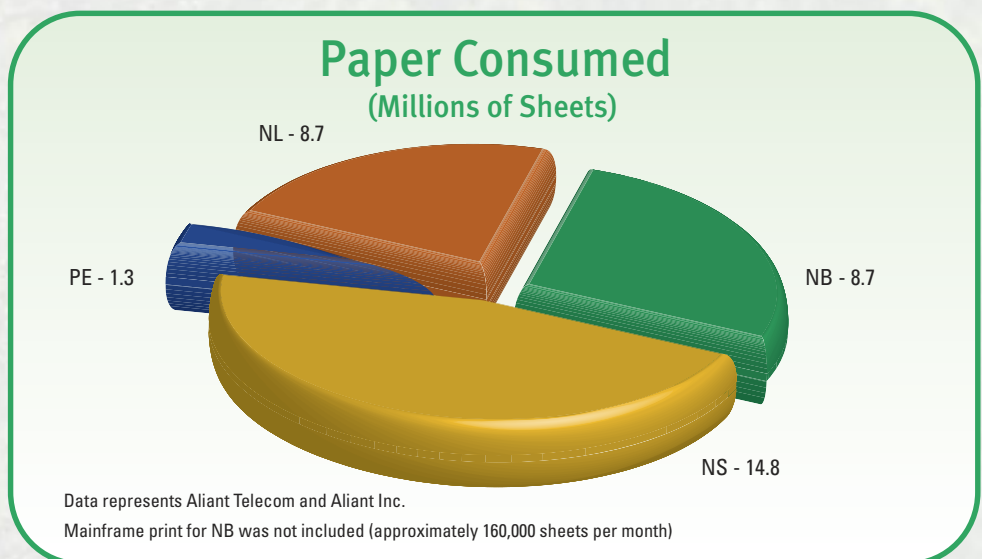
<http://www.moea.state.mn.us/campaign/paper/index.html>

Reducing the amount of paper that we use is an important initiative within Aliant. Gathering statistics on usage and reduction initiatives occurred for the first time in 2005, and we will continue to track our progress in subsequent years.

Paper usage is being reduced due to a number of internal initiatives such as setting the default on all print devices to print double-sided, and purchasing only printers with this option. Over the past five years, Aliant has promoted increased use of electronic transaction channels which have contributed toward reducing the use of paper and printing supplies. Corporate initiatives such as e-Procurement, Access Care, Centralized Travel and Expense reporting, and P-Cards accounted for more than 84,000 electronic transactions in 2005.

In 2005, approximately 34 million sheets of paper were consumed by approximately 8,400 Aliant employees. That's the equivalent to 4,000 sheets of paper per employee. However, it is estimated that the average office worker (in the United States) uses 10,000 sheets of copy paper each year. This means that Aliant employee's use 60 per cent less paper than an average office worker. It is our goal to see paper consumption continue to drop in future years.

It should be noted that Aliant has comprehensive paper recycling programs in all of our major centres throughout the Atlantic Provinces. Further details on our successful recycling programs can be found in the section [Office Waste Recycling](#).



# Operational Materials Recycling

Over the years, Aliant has implemented various collection processes to re-use or recycle the materials remaining from the construction, maintenance and removal of our telecommunications operations.

As reflected in the table below (Plastics - phones), Aliant continues to refurbish telephone sets and components through its Inventory Recovery Centres. These centres allow for the recycling of parts and the reduction of waste. These operations have led to the recycling of a significant number of cords, boxes and paper documentation used in the refurbishment process. In addition to telephone sets, handsets

and line cords, the receiving centres also recycle receiver cords, wall mounts, batteries, user guides, boxes and packaging. Obsolete sets are broken down and the components are recycled.

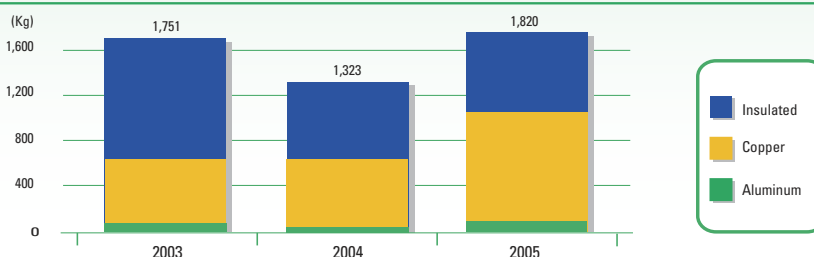
Residual materials from our network operations such as copper cables, steel hardware and lead sleeves are sent to recyclers for secondary markets. Equipment in good operating condition is sold for re-use, and any hazardous materials are handled according to environmental legislation. In 2005 alone, 1,820 kg of wire (including insulated, copper and aluminum) were collected from over 50 depots in the Maritime Provinces for recycling.

Focusing on re-use and recycle principles, materials remaining from our operations are collected from work centers, central offices and depots and re-used, repaired or recycled. Materials include paper, cardboard, metals, plastics and wood. They are carefully managed to minimize the amount of material that is ultimately disposed at our landfills.

## Operations Material Management

Product/ Material	Recycled (Avg. %)	Reused/Repaired (Avg. %)	Disposed (Avg.%)
Wooden Pallets	0.0%	95.0%	5.0%
Plastics (phones/pallet wrap)	70.0%	30.0%	0.0%
Batteries	100.0%	0.0%	0.0%
Paper	99.0%	0.0%	1.0%

## Cable Metals Recovered



# Environmental Solutions

For Aliant, achieving sustainability means not just reducing our operational footprint, but it also extends to helping others diminish their's by offering Information and Communications Technology (ICT) environmental solutions that enhance the movement of information, communications and ideas rather than the movement of people, goods and services. To be successful, we need to broaden our vision. It's about more than minimizing operational impacts to the environment. In fact, the role ICT products and services can play in helping deliver sustainable development is already gaining momentum and credibility.

Against this backdrop, in 2001 a number of major ICT companies, including Bell Canada, with the support of United Nations Environment Program, launched a global initiative for sustainable development - otherwise known as GeSI.

<http://www.gesi.org/>

# Teleconferencing

Teleconferencing in lieu of travel saves money and reduces greenhouse gas emissions and fossil fuel usage. Burning fossil fuels emits nitrogen oxides, sulfur dioxide, particulate matter, volatile organic compounds, carbon monoxide and heavy metals into our air. These emissions are all elements of smog and are a detriment to our health and our environment.

Aliant employees participated in approximately 30,000 teleconference calls in 2005<sup>1</sup>. The approximate number of participants in each call was five. The greenhouse gas emissions that Aliant employees avoided producing as a result of using teleconferencing instead of traveling in 2005 is roughly equivalent to 13,500 tonnes of CO<sub>2</sub><sup>2</sup>.

An even greater reduction in greenhouse gas emissions (40,500 tonnes) was a direct result of Aliant's customers participating in roughly an additional 90,000 teleconference calls during 2005. Aliant provides valuable tools via teleconferencing and videoconferencing to enable its customers to save money and contribute to positive effects on our health and the environment.

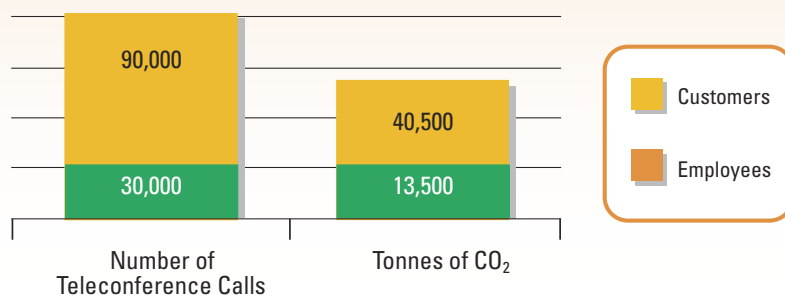
"The "Climate Change Plan for Canada" calls for cutting annual greenhouse gas emissions, through a variety of strategies, by 240 megatonnes. Meeting this target, the plan acknowledges, is a large challenge "that will require nothing less than a national effort."

The plan also acknowledges prominently and frequently that technology will play an important role in meeting our climate change targets. The climate change plan states: "By acting now, Canadian companies and individuals can get ahead of the curve and create a sustained competitive advantage. The development of new products and services, in turn, will stimulate economic growth, expand exports and create jobs for Canada."

The plan goes on to discuss the innovations that will deliver these outcomes – cleaner fossil fuel technology, next generation energy systems and biotechnology. However, the report overlooks the significant contribution that present and emerging information and communications technologies can make to the achievement of Canadian climate change goals."

(Summarized excerpt from: THE ISSUE: INNOVATION, INFORMATION TECHNOLOGY AND CLIMATE CHANGE, ITAC Position Paper, January 6, 2003)

## Aliant Teleconferencing - CO<sub>2</sub> Reduction



1 The number of teleconference calls is based upon an average number of calls that occurred in one month of business at Aliant.

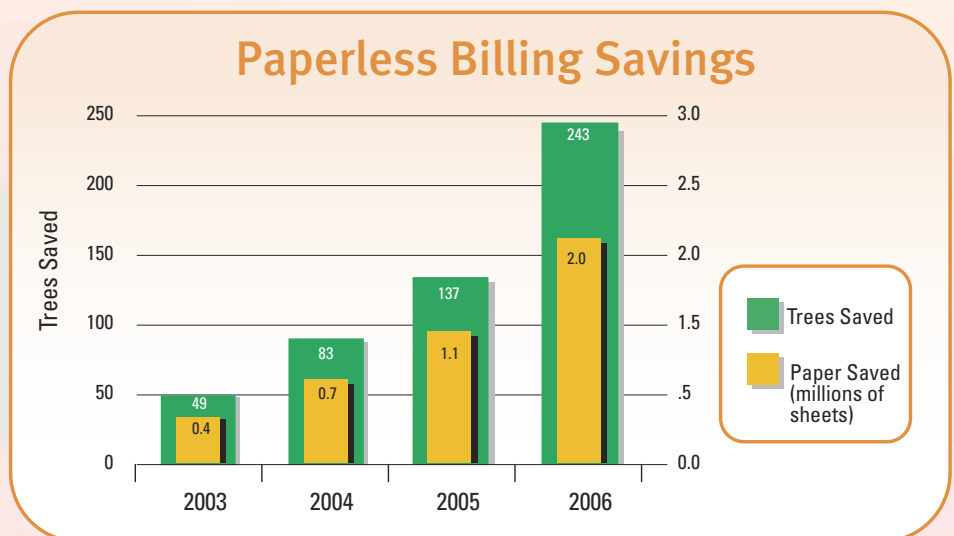
2 This is based on the assumption that each participant had to travel 300km round-trip to attend the meeting. Source for calculations is Climate Change Solutions (CCS).

# Paperless Billing

Aliant, continually strives to provide products and services that meet the rapidly evolving needs of our customers while making their daily lives simpler and perhaps more sustainable. Thus, in 2003, we began a program to transform our business, customers and employees to an electronic medium where more and more of our transactions and services could be provided with greater efficiency and without the need for paper. Since our beginning in 2003, we have seen tremendous support and savings. By the end of 2005

over 28,000 customers and employees had switched to paperless billing. It is estimated that in just three years, over 2.2 million sheets of paper were saved. In conservation terms, that is equivalent to saving over 269 trees. Our target for 2006 is to double the participation and see 50,000 customers and employees switching to paperless billing.

Paperless Billing				
	2003	2004	2005	2006
Customers (thousands)	10	17	28	50
Paper Saved (millions of sheets)	0.4	0.7	1.1	2.0
Paper Saved (tonnes)	2.0	3.4	5.6	10
Equivalent Trees Saved	49	83	137	243



# Product Responsibility

Our newly approved Green Procurement Policy supports the procurement of goods and services that are consistent with our strategic objectives, while minimizing the use of natural resources, toxic materials and the creation of wastes and pollutants over the product life cycle. We consider life-cycle analysis in our purchase of products - from network builds to the purchase of cleaning products.

Aliant has taken major steps in the responsible purchase of environmentally friendly cleaning products (non-toxic, neutral and biodegradable). In 2005, we increased the use of such products and established plans to increase this even more in 2006. We are also establishing methods to control and track the use of these products to measure environmental performance. In 2005, 70 per cent of the cleaning products used in New Brunswick were environmentally friendly. Most products have the environmental logos supported by the Environmental Choice Program. All products used in Newfoundland, Nova Scotia and New Brunswick are scent free due to requirements of our contracts with suppliers. In addition, our cleaning products suppliers support recycled packaging, recycling of waste materials (paper, cardboard, drums,

etc.) and promote customer returnable and/or re-usable packaging.

Product responsibility is also a requirement of our standard supplier agreements and major requests for proposals (RFP). These legal documents include clauses pertaining to environment, health and safety with reference to ensuring compliance, meeting all applicable regulations, and managing potential environmental emergencies. We are committed to dealing with suppliers who seek to minimize their environmental impacts and are asking major suppliers to complete an environmental survey form, prior to entering into new contracts. In addition we are engaging and encouraging others to embrace environmentally responsible procurement and assisting suppliers who face potential barriers when adopting green product procurement.

## ***Green Procurement - Supporting Principles:***

Deal with suppliers who seek to minimize their environmental impacts while engaging and encouraging others to embrace environmentally responsible procurement.

Purchasing decisions should be based on: The 4 R's (reduce, reuse, recycle and recover); Have a long service-life; and can be economically repaired or upgraded

Purchasing decisions should be based on a life-cycle cost that includes liabilities from production, usage and disposal.

When evaluating cost competitive products or services, preference will be given to suppliers demonstrating environmental responsibility.

Efficient use of resources (energy, water, etc.) will be a key criteria in all purchasing decisions

Meet or exceed all environmental legislative and regulatory requirements in the procurement of products and services.

Raise overall awareness within Aliant regarding environmentally responsible procurement.

Consider the problems suppliers will face when adopting green product procurement, and assist them in understanding the reasons for our shift in purchasing philosophy and policy.

Publicly communicate Aliant's commitment to environmentally responsible procurement thereby enhancing shareholder value.

# Cellular Phones

## CWTA Guiding Principles

In the Development of a National Mobile Telecommunications Products Recycling Program

1. As the telecommunications industry is federally regulated, and as the products move across provincial boundaries frequently and easily, any diversion program for end-of-life handsets must be national in scope.
2. The program will follow the four principles of reduce, reuse, recycle and recover

**Reduce** - manufacturers of handsets commit to making continued efforts to reduce product hazard and increase the recyclable content of phones.

**Reuse** - carrier refurbishment programs extend the life of mobile phones. These programs must result in handsets that meet the manufacturer's standards. The program will not resell the refurbished phones in the Canadian market.

**Recycle** - using approved recyclers, handset components will be recycled.

**Recovery** - using approved approaches, materials will be recovered as far as possible from end of life handsets.

3. The diversion program must be cost effective.
4. The diversion program must be self-funding.
5. Historical and orphan waste will be handled on a voluntary basis and any targets/costs will be based on current sales.
6. Stewards are committed to work together within a national program and will be guided by an approved governance model.
7. While each carrier may run a unique front end to the diversion program, there should be a common back end to the program.

Our corporately owned dealer channel, DownEast Communications launched a cellular reuse and recycling program in 2003. As part of this program, phones returned to DownEast Communications are assessed for reusability, and are often directed into our ever expanding fleet of loaner phones, to ensure the highest level of service to our customers when their phones are unavailable during a repair. Phones that are not reusable are directed into the "Phones for Food" program, which uses the funds from recycled handsets to fund local food banks. This program not only diverts electronic waste from our landfills, but provides much needed funding to these food banks. Since the launch of the Phones for Food program with DownEast Communications late in 2003, we have donated over 3,000 phones, representing almost one tonne of waste diverted, not including the countless phones reused in our loaner program. A large majority of our other independent dealer channels also have recycling programs in place, or plans to launch such programs.

Environmental concerns relating to the management of used/end of life electrical and electronic equipment has rapidly become a major policy issue across Canada. Provincial governments have already adopted or are in the process of adopting mandated waste electrical and electronics diver-

sion programs. Some of these already include used/end of life mobile telecommunication products, while others propose to capture these in future.

Aliant, as a member of the Canadian Wireless Telecommunications Industry (CWTA) and a representative on the CWTA Cell Phone Recycling Committee, is committed to the environmental stewardship of its products throughout their life cycle.

In 2005, building on existing initiatives, the CWTA members, representing Canada's major wireless carriers and manufacturers/importers of mobile telecommunication products, collectively agreed on a national program framework to meet the challenges associated with the management of a diversion program for mobile telecommunication product. The foundation of the program is based on series of guiding principles for the development of an environmentally sound and cost effective program for managing used/end of life mobile telecommunication products in Canada. In 2006, Aliant Mobility will continue to work in partnership with the CWTA members to further advance the development and implementation of the national program.

# Stakeholder Engagement

**A**liant is committed to engaging stakeholders who impact and influence our business, and whose input can help us make better business and environmental decisions. We strive to engage both internal and external sources including our employees, industry stakeholders, non-government organizations and government regulators.

The production and release of this year's comprehensive Environment and Sustainability report is yet another important step in disclosing, in a transparent and credible manner, our risks and accomplishments. We hope in doing so, we will further engage our stakeholders, create dialogue and feedback, and build trust and assurance that Aliant is indeed a leader in our community.

# Communications and Awards

In an effort to positively influence policy in Atlantic Canada, the Environment team participates with various stakeholders including the Conference Board of Canada Business Council for Sustainability, the Canadian Wireless Telecommunications Association, the Canadian Manufacturers and Exporters, Atlantic Environment Committee, the Atlantic Coastal Action Program, the City of Saint John Environment Committee. We also participated at various workshops on sustainability and pollution prevention. We communicate our environmental sustainability performance to internal and external stakeholders through our Environment & Sustainability annual report which is available on CD or online at [www.aliant.ca](http://www.aliant.ca)

We believe every business unit and employee can contribute to making the world more sustainable - striking the often delicate balance between economic growth, environmental protection and the needs of society. Engaging our employees begins with communication.

In mid-2005, due to mounting employee interest, an ad-hoc Employee Environmental Stewardship Team (EEST) was formed for the specific purpose of introducing an office waste composting and enhanced recycling program within the One Brunswick Square Office Tower. This program called for a significant change in employee behaviour. No longer would employees be able to simply dispose of their waste in one trash-can located at their desk. But employees would actually have to make conscious decisions about the waste they generate and deposit that waste in the appropriate communal bins. We recognized that in order to be successful we had to implement the principles of "Change Management" by creating Awareness, Desire, Knowledge, Ability and Reinforcement. The programs success is largely attributed to the EEST, comprised of key individuals who embraced the concept and became the "Floor Champions" or "Change Agents". Further details of the program can be found under the section "[Office Waste Recycling](#)". As a result of this highly successful pilot initiative, which will be rolled-out through-out Aliant, we received two (2) Environment Awards, at the time of this publication.

## **Awards**

The City of Saint John Environment Award, Business Class

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The Building Owners and Managers Association (BOMA) Atlantic, Environmental Stewardship Award

## **Communications Highlights**

Aliant hosts 50 corporate social responsibility leaders in Halifax (February)

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Corporate social responsibility strengthened through new environment manager (May)

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Clean Air Day celebrated during Environment Week (June)

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Mandatory office paper program is law for St. John's area September 1 (August)

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Waste Reduction Week at Aliant (October)

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Waste reduction and recycling - we're making it our business (October)

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Repair our air - Aliant joins the challenge (November)

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Keep in the heat – save the environment and your money (December)

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2005 - A year full of environmental successes (December)

## **Features relating to environmental initiatives**

Join the revolution program - switching to paperless billing

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Employee composting pilot and relaunch of recycling program

# Contributors

The Aliant 2005 Environment and Sustainability Report was produced for Aliant's employees, customers, shareholders and stakeholders by Xerox Managed Services. This could not have been possible without the contributions of Mark Lavin, Isabelle Robinson, Brenda MacKinnon and Susan Atkinson.

This report would not have been possible without the continuous support of the Aliant Environment Council, the Environmental Action Team, and the leadership of Perry Jarvis and Gary Lund.

## Acknowledgements

The contributors would like to thank all those who assisted with the production of this report, and would specifically like to acknowledge the following individuals for providing statistics, information and valuable feedback in the drafting of the report:

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