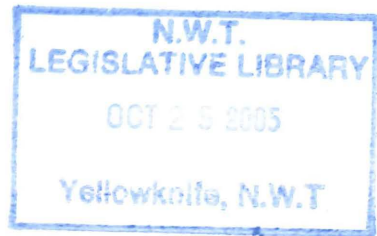




Proposed Energy Conservation Action Plan

October 24, 2005



What is the Energy Conservation Action Plan?

The Government of the Northwest Territories (GNWT) recognizes the challenges faced by residents in dealing with high costs of energy. Government departments and agencies are already helping residents manage energy use and costs. With energy costs at record highs, this need is increasing. In response, the GNWT has assembled the **Energy Conservation Action Plan** to combat the ballooning price of fossil fuels.

The **Action Plan** does three things:

1. Builds and **expands** on the significant efforts already being made to address northern energy issues;
2. Introduces **new programs**; and,
3. Identifies **new and emerging technologies** being pursued.

The GNWT's **departments, boards and agencies are carrying out the Action Plan**. As well, programs of the NWT's energy efficiency clearing house, the **Arctic Energy Alliance (AEA)** are being expanded.

This document summarizes the Action Plan. Actions include those to assist the public and commercial section and to assist the GNWT in reducing its own energy consumption.

1. Expanded Programs

Residential Programs

The following are existing programs that are being expanded to further enhance their energy efficiency activities. They include incentives, public education, government approaches to better managing its own energy efficiency in the workplace and energy efficiency research.

- Increase funding and capacity for the federal **EnerGuide for Houses Program (EGH)**. This funding will be used to:
 - Increase **grants to homeowners** for the improvements recommended by professional energy evaluators.
 - **Fund travel expenses for EGH evaluators** to increase EGH energy audits and workshops in communities outside Yellowknife.
 - **Increase the number of evaluators** trained to deliver the program (8 new evaluators).
 - **Inform previous EGH clients** of the increased grant assistance.
 - **Increase public advertising** of EGH program.
 - Introduce the **new EGH for Low-Income Houses and EGH Retrofit Programs** for low-rise rental housing and social housing.

EnerGuide for Houses

Lead Agency: Arctic Energy Alliance

Proposed

Additional Funds: \$70,000

- Continue delivery of the **Northwest Territories Power Corporation's (NTPC) Energy Assessment Program.**

NTPC Audit Program

Lead Agency: Northwest Territories Power Corporation

Proposed

Additional Funds: \$75,000

- Increase **income support officers' training** to include **energy conservation**, which will assist them in improving the energy efficiency behaviour of their clients.
 - **Make energy efficiency resource materials** available for Income Support Officers' use.

Energy Conservation: Income Support Clients

Lead Agency: Education, Culture and Employment

Proposed

Additional Funds: To be confirmed

- Update **training in energy efficient technology** for public building maintenance officers.

Building Maintenance Officer Training

Lead Agency: Public Works and Services

Proposed

Additional Funds: To be confirmed

- Develop and deliver **expanded training in energy efficiency practices** and client support to Local Housing Organizations (LHO).

LHO Training

Lead Agency: NWT Housing Corporation

Proposed

Additional Funds: To be confirmed

Commercial Programs

Government - Oriented Programs

- Produce and distribute **public education materials** providing householders and businesses with practical tips on how to reduce energy costs by cutting energy, and how to save energy with **winter driving tips**.
- Provide supplementary funding to the AEA for new **temporary program delivery staff**.
- Offer cash **incentives for commercial operators** who improve the energy efficiency of their businesses. Grants will top up the federal Energy Innovators Initiative program
- Increase **marketing and implementation of retrofit programs** for municipal and territorial public buildings and non-profit operators through the Energy Conservation Program.

Conservation Information for the Public

Lead Agency: Arctic Energy Alliance

Proposed

Additional Funds: \$15,000

AEA Staff Resources

Lead Agency: Arctic Energy Alliance

Proposed

Additional Funds: \$78,000

Commercial Operators Incentives

Lead Agency: Arctic Energy Alliance

Proposed

Additional Funds: \$45,000

Public Building Retrofits

Lead Agency: Environment and Natural Resources/AEA

Proposed

Additional Funds: \$300,000

- Coordinate information sessions with community governments to **provide energy conservation awareness and training.**

- Purchase a heat sensing camera, blower door and other **building energy efficiency testing equipment**, train staff in their use, and test buildings.

- Develop **energy performance standards** for public and community buildings.

- Research AEA and GNWT records to **identify public buildings** most in need of energy improvements.

- Evaluate and make recommendations on adoption of mandatory **energy efficient building codes.**

Community Governments

Lead Agency: Municipal and Community Affairs

Proposed

Additional Funds: To be confirmed

Public Building Testing

Lead Agency: Public Works and Services

Proposed

Additional Funds: \$100,000

Public Facility Standards Program

Lead Agency: Public Works and Services

Proposed

Additional Funds: To be confirmed

Targeted Building Retrofits

Lead Agency: Public Works and Services/Arctic Energy Alliance

Proposed

Additional Funds: To be confirmed

Building Codes

Lead Agency: Public Works and Services

Proposed

Additional Funds: To be confirmed

- Continue development of **GNWT Employees' Energy Conservation Program.**

- **Increase tracking of energy costs** by all departments, boards, and agencies

- Increase energy conservation and climate change content in **NWT schools curriculum.**

GNWT Employee Awareness

Lead Agency: Environment and Natural Resources

Proposed

Additional Funds: To be confirmed

Energy Cost Tracking

Lead Agency: Financial Management Board Secretariat

New Funding: None required

Climate Change Curriculum

Lead Agency: Education, Culture and Employment

Proposed

Additional Funds: To be confirmed

2. New Programs

Residential Programs

The programs listed below represent new energy conservation initiatives.

- Provide **cash grants to homeowners and small businesses** for maintenance of boilers and furnaces
- Develop and deliver **home winterization workshops** in 12 communities, teaching the skills of home energy efficiency.
- Introduce **Energy Star instruction workshops** to Local Housing Offices, educating staff on the availability and advantages of appliances with lower energy demand
- Develop and carry out an **NWT-wide social marketing strategy** to reshape energy use norms among all NWT citizens.

Furnace/Boiler Maintenance

Lead Agency: Arctic Energy Alliance

Proposed

New Funds: \$23,000

Winterization Workshops

Lead Agency: Arctic Energy Alliance

Proposed

New Funds: \$110,000

Energy Star Workshops

Lead Agency: NWT Housing Corporation/ Arctic Energy Alliance

Proposed

New Funds: \$20,000

Change Energy Behaviours

Lead Agency: Environment and Natural Resources/ Arctic Energy Alliance

Proposed

New Funds: \$200,000

Vehicle Programs

**Government –
Oriented
Programs**

- Investigate the feasibility of charging **vehicle registration fees** on the basis of vehicle weight and engine size (energy use).
- Develop and introduce **vehicle fleet energy efficiency guidelines** and implement **Smart Driving Program** for GNWT employees

Vehicle Fees

*Lead Agency: Transportation
Proposed
New Funds: To be confirmed*

Vehicle Efficiency

*Lead Agency:
Transportation/Financial
Management Board Secretariat
Proposed
New Funds: To be confirmed*

3. New and Emerging Technologies

The following initiatives demonstrate the Government's commitment to finding ways to mitigate energy costs through new and emerging technologies.

- Test the northern suitability of **energy efficient vehicles**, such as the Smart car and electricity-gas hybrids.
- Test fuel technology for **ferry operations**.
- Research performance of the **high efficiency Conematic residential heating system**, with installations in three Hay River duplexes and in Beaufort and Sahtu public housing units.
- Test **supplementary heaters** for maintenance vehicles, to reduce idling

Vehicle Pilot Tests

Lead Agency: Transportation

Proposed

New Funds: To be confirmed

Ferry Efficiency

Lead Agency: Transportation

Proposed

New Funds: To be confirmed

Pilot Residential Heating System

Lead Agency: NWT Housing Corporation

Proposed New Funds: \$54,000

Idling Pilot Test

Lead Agency: Transportation

Proposed

New Funds: To be confirmed

Rising Energy Costs

BACKGROUND

Additional Information, Facts and Figures....

About the cause of rising energy costs:

The price of oil has been rising steadily over the past months due to international developments and market factors. Hurricane Katrina put a number of key US refineries out of commission, temporarily shrinking supply and sparking a sharp price increase.

North American refineries have already been running at or near capacity and are unable to increase production to compensate for the non-producing refineries. Higher fuel prices have been the result.

Governments do not set or regulate the price of gas and other fuel products. There is a complex set of international market forces that influence the price of oil and refined product to the consumer.

About Fuel Taxes:

The GNWT does not tax fuels (primarily diesel fuel and propane) used for home heating. There is also no NWT tax on natural gas.

Most governments levy a tax on fuel products. The Government of the Northwest Territories is no exception - but fuel taxes in the NWT are moderate. Tax rates are set at a fixed rate per litre and do not go up or down with product prices.

The GNWT last increased its taxes on gasoline in April 1997.

The NWT is one of four Canadian jurisdictions that does not charge tax on propane used in motor vehicles. Only Alberta, Yukon and Nunavut have on-

highway fuel tax rates lower than the NWT and only Alberta and Yukon have lower diesel tax rates.

Current GNWT Fuel Tax Rates are as follows:

Motive Diesel.....	9.1 cents/litre
Non-Motive Diesel.....	3.1 cents/litre
On-Highway Gasoline.....	10.7 cents/litre
Off-Highway Gasoline*.....	6.4 cents/litre
Aviation.....	1.0 cents/litre
Railway.....	11.4 cents/litre
Heating Fuel.....	No Tax
Propane.....	No Tax
Natural Gas	No Tax

*Off Highway Gasoline means gas sold in locations more than 5 km away from the NWT's highway system.

The Government of the Northwest Territories does not benefit when fuel prices go up. Reducing taxes on gasoline and diesel fuel would reduce revenues the GNWT uses to fund programs and services for residents.

About Fuel Costs in the Northwest Territories:

In communities served by the private sector, fuel prices move with the change in the refinery rack price, regardless of the cost of any stock on hand.

The average increase in heating fuel in these communities between January 2002 and August 2005 was \$0.4865/litre and \$0.4189/litre for gasoline.

About The Petroleum Products Division (PPD):

In NWT communities not served by the private sector, the GNWT's Petroleum Products Division (PPD) provides fuel sales, dispensing and delivery services.

PPD serves 15 communities with essential fuel products. These communities are, for the most part, isolated and not located on the NWT's main highway system.

In these communities retail prices reflect the cost to purchase the fuel, transport to the community, cost for delivery services, cost to administer the program and maintain the community tank farms and fuel delivery trucks, and applicable taxes.

Retail prices do not include the cost of constructing tank farms or financing costs of carrying the communities' supply of fuel for 12 months.

Most community fuel tanks are re-supplied once a year either by winter roads or summer barge services. The costs of purchasing and transporting fuel products have continued to increase over the past 5 years.

Since September 2000, the cost of landing fuel in PPD-served communities that use winter roads and highways has increased, on average, by \$0.1381/litre for diesel and \$0.1485/litre for gasoline.

Since September 2000 the cost of landing fuel in the PPD-served communities using summer barges has increased on average by \$0.2811/litre for diesel and \$0.2497/litre for gasoline.

About Power Rates:

Electrical rates in the NWT are also impacted by rising costs of gas and diesel.

The Public Utilities Board sets rates on a community basis with each community having its own rates based on the cost of providing power in that community.

Communities served by diesel and gas have those costs included in their rates. As the price of diesel rises (or falls), the costs are passed on to (or refunded to) customers by a temporary rider per kWh.

The following riders are currently in place to recover the rising costs of fuel:

Diesel communities.....	3.37 cents/kWh
Yellowknife/Snare.....	.89 cents/kWh
Norman Wells.....	7.08 cents/kWh
Fort Resolution/Fort Smith...	.35 cents/kWh
Inuvik.....	1.33 cents per kWh

These riders will likely be increased in the near future as diesel costs continue to rise.

The Government provides protection to residential customers from the impact of these diesel riders under the Territorial Power Support Program (TPSP).

Residential consumers using less than 700 kilowatts per month pay the same rate as Yellowknife. The TPSP covers the increased cost of providing the diesel

riders. The GNWT's TPSP program subsidized rates in the diesel communities at a cost of approximately \$8.0 million annually.

In order to assist customers in lowering their usage NTPC offers energy audits and energy savings ideas to all residential customers it serves. The most common energy issues faced by consumers are poorly maintained furnaces and hot water heaters and poor door and window insulations and sealants.

About GNWT Assistance Programs:

Public housing

Historically, fuel consumption in public housing units is relatively low – a reflection of the Northwest Territories Housing Corporation's commitment to build energy efficient units and its on-going efforts to maintain and improve housing inventory to maximize unit efficiency.

For NWT residents living in public housing units, rents are income tested and tenants are assessed according to their total household income. Rising cost of home heating fuel will not directly impact tenants of public housing in the NWT.

Income Assistance

For NWT residents, eligible for income support services, the GNWT pays actual utility costs and will continue to do so, despite rising energy prices.

The GNWT's Senior's Fuel Subsidy is based on a volume formula, not a cost formula, and as such, the assistance provided is not affected by the increasing price of fuels. (The GNWT, however, will pay more.)

Conservation

The GNWT supports a wide range of energy conservation programs through the Arctic Energy Alliance (www.aea.nt.ca). These include the Commercial Building Incentive Program, Energy Innovators Initiative, Energy Conservation Program as well as advisory and consulting services for NWT residents, businesses and organizations.

About Climate Change:

Climate change is a serious concern that could, in the future, significantly disrupt the global environment, affecting the ability of northerners to lead healthy and productive lives.

The GNWT is aggressively working to control NWT greenhouse gas emissions and has identified a strategy including a wide range of initiatives and proposed actions to achieve this. (NWT Greenhouse Gas Strategy).

Between 1996 and 2001, greenhouse gas emissions rose by 60 percent in the NWT. On a per-capita basis the NWT releases over 40 tonnes of emissions per person per year - significantly higher than the national average of 22 tonnes per person per year.

About Impacts on the GNWT:

Higher fuel costs also negatively impact GNWT costs for programs and general government operations. The GNWT is facing the reality of higher energy prices - and will also be taking steps to lower its own costs.

Roughly, the GNWT spends about \$30 million a year on energy including heating fuel, electricity, diesel and gasoline. A sustained 10 percent increase in these prices could have a \$3 million impact.

About Hydro:

The GNWT is pursuing the development of hydroelectric power generation as an economic, reliable and environmentally friendly alternative energy source – as well as a means of economic development and diversification.

A Hydro development on the Bear River to serve the pipeline would mean reduced and stable power rates for up to seven communities in the Mackenzie Valley. Hydro generation is also being investigated to serve the diamond mines and portions of the Mackenzie Gas Project.

The Snare Cascades hydro facility, constructed in partnership with the Dogrib Power Corporation to provide power in Yellowknife, reduces the need for 8 million litres of fuel annually. The Bluefish hydro facility, purchased from Con Mine, reduces the need for 12 million litres of fuel annually.

About the Mackenzie Gas Project:

Today's rising costs are a reflection of increasingly unreliable offshore sources and depleting conventional basins. Meanwhile, energy consumption in North America continues to rise.

The export of Northwest Territories natural gas, when considered alongside the proposed Mackenzie Valley gas pipeline - a secure supply link to market, offers a real and viable contribution to the continental energy shortage.

Production associated with the development of the MGP could heat between 4-8 million houses (depending on type, age, size location etc.) When calculated in mega joules, this is close to total residential demand in Canada.