**2014**

**Conservation and Demand Management Plan**

**Beginning in the year: 2012**

Tarbutt & Tarbutt Additional Township is a small rural Municipality with a population of 400 persons and a full time staff of 2, part time staff of 3.

This plan is for a period of five years, reviewed annually and is due by July 1st of each year. The plan begins in 2012 and will always lag behind so that complete year end analysis can be completed.

**Required Elements of the Plan are:**

1. Information on the Municipalities annual **ENERGY CONSUMPTION** during the last year for which complete information is available for the full year.
2. The **GOALS AND OBJECTIVES** of the Municipality to conserve and reduce energy consumption.
3. The Municipalities proposed **MEASURES AND PLAN FOR COST SAVINGS** (estimates), proposed measures and the estimated length of time these measures will be in place.
4. A report on any **RENEWABLE ENERGY GENERATION FACILITY** operated by the Municipality. (NOT APPLICABLE)

**ENERGY CONSUMPTION**

Reporting Year: 2012

Facilities included in this report:

*Municipal Office*

 Municipal office is heated with electricity and has florescent lighting.

 53.75 sq feet

 40 hrs per week

 12,299. kWh

 GHG Emissions (Kg) 983.92

 Energy Intensity (ekWh/Mega Liters) 21.25725

*Municipal Garage*

 Municipal Garage is heated with both Oil and Propane and has florescent lighting.

 267.50 sq. feet

 40 hrs per week

 12,299. kWh

 Oil 1 & 2 – 252. litres

 Propane 2,031.5 litres

 GHG Emissions (Kg) 4,807.82981

 Energy Intensity (ekWh/Mega Liters) 10.17475

*Municipal Fire Hall*

 Municipal Fire Hall is heated with electricity/propane and has florescent lighting.

 251.93 sq. feet

 6 hrs per week

 9,945. kWh

 Propane 2,798. litres

 GHG Emissions (Kg) 5,115.66723

 Energy Intensity (ekWh/Mega Liters) 10.92118

*Municipal Community Hall*

 Municipal Community Hall is heated with propane and has florescent lights

 263.81 sq feet

 18 hrs per week

 19,716. kWh

 Propane 4,461.8 litres

 GHG Emissions (Kg) 8,466.22781

 Energy Intensity (ekWh/Mega Liters) 17.98943

**GOALS AND OBJECTIVES**

Reporting Year: 2012

Facilities included in this report:

*Municipal Office*

The objective is:

To be energy efficient, cost effective while at the same time meeting needs of the Municipality.

The goal is:

To have routines in place to reduce energy consumption in off peak periods

To seek funding and/or create a reserve to afford to increase energy efficiency of building

To consider the validity and accessibility of technology to reduce consumption of energy

*Municipal Garage*

The objective is:

To be energy efficient, cost effective while at the same time meeting needs of the Municipality.

The goal is:

To have routines in place to reduce energy consumption in off peak periods

To seek funding and/or create a reserve to afford to increase energy efficiency of building

To consider the validity and accessibility of technology to reduce consumption of energy

*Municipal Fire Hall*

The objective is:

To be energy efficient, cost effective while at the same time meeting needs of the Municipality.

The goal is:

To have routines in place to reduce energy consumption in off peak periods

To seek funding and/or create a reserve to afford to increase energy efficiency of building

To consider the validity and accessibility of technology to reduce consumption of energy

*Municipal Community Hall*

The objective is:

To be energy efficient, cost effective while at the same time meeting needs of the Municipality.

The goal is:

To have routines in place to reduce energy consumption in off peak periods

To seek funding and/or create a reserve to afford to increase energy efficiency of building

To consider the validity and accessibility of technology to reduce consumption of energy

**MEASURES AND PLAN FOR COST SAVINGS**

*Municipal Office*

*Technical Measures:* In 2012 we completed the retro fit of all florescent lighting in the office. In 2013 installed LEED outside lighting. Look at more cost effective heating and cooling options. Plan to upgrade the energy efficiency of the building. These options for heating and cooling and improving energy efficiency will be budget items and will be funded through energy programs that come available or through the creation of a reserve for capital improvements.

*Organizational Measures:* There is no new construction in the foreseeable future, however if there was to be it is the position of the Municipality to seek the highest, most affordable and practical options in construction and equipping to meet energy conservation and efficiencies targets.

*Behavioral Measures:* All of staff is involved in the budgeting process and how it affects each department, therefore having an understanding of the need for saving on energy costs when able. Staff is asked for their suggestions on how to achieve savings on energy costs and new purchases and changes are discussed with respect to their efficiency and effectiveness.

*Municipal Garage*

In 2013 installed LEED outside lighting. Look at more cost effective heating options. Plan to upgrade the energy efficiency of the building. In 2014 we completed the retro fit of all florescent lighting in the garage. Some retrofitting had been done over the years on a maintenance schedule as repairs were done. The final retrofit of all remaining lights was completed in April 2014. The small business energy saving program funding up to 1500.00 dollars and the Municipal portion is 931.12 including HST. This final stage showed an estimated annual energy savings (.11 cents/kWh) of 153.09, or 640w with a payback in 5.38 years.

*Organizational Measures:* There is no new construction in the foreseeable future, however if there was to be it is the position of the Municipality to seek the highest, most affordable and practical options in construction and equipping to meet energy conservation and efficiencies targets.

*Behavioral Measures:* All of staff is involved in the budgeting process and how it affects each department, therefore having an understanding of the need for saving on energy costs when able. Staff is asked for their suggestions on how to achieve savings on energy costs and new purchases and changes are discussed with respect to their efficiency and effectiveness.

*Municipal Fire Hall*

In 2014 we completed the retro fit of all florescent lighting in the Fire Hall. In 2013 installed LEED outside lighting. Look at more cost effective heating options. Plan to upgrade the energy efficiency of the building. Some retrofitting had been done over the years on a maintenance schedule as repairs were done. The final retrofit of all remaining lights was completed in April 2014. The small business energy saving program funding up to 1500.00 dollars and the Municipal portion is 1059.94 including HST. This final stage showed an estimated annual energy savings (.11 cents/kWh) of 211.93, or 886w with a payback in 4.43 years

*Organizational Measures:* There is no new construction in the foreseeable future, however if there was to be it is the position of the Municipality to seek the highest, most affordable and practical options in construction and equipping to meet energy conservation and efficiencies targets.

*Behavioral Measures:* All of staff is involved in the budgeting process and how it affects each department, therefore having an understanding of the need for saving on energy costs when able. Staff is asked for their suggestions on how to achieve savings on energy costs and new purchases and changes are discussed with respect to their efficiency and effectiveness.

*Municipal Community Hall*

In 2013-2014 we completed the retro fit of all florescent lighting in the Hall. In 2013 installed LEED outside lighting. Look at more cost effective heating and cooling options. Plan to upgrade the energy efficiency of the building. Some retrofitting had been done over the years on a maintenance schedule as repairs were done. The final retrofit of all remaining lights was completed in April 2014. The small business energy saving program funding up to 1500.00 dollars and the Municipal portion is 0.00. This final stage showed an estimated annual energy savings (.11 cents/kWh) of 138.14, or 660w with a payback in N/A years.

*Organizational Measures:* There is no new construction in the foreseeable future, however if there was to be it is the position of the Municipality to seek the highest, most affordable and practical options in construction and equipping to meet energy conservation and efficiencies targets.

*Behavioral Measures:* All of staff is involved in the budgeting process and how it affects each department, therefore having an understanding of the need for saving on energy costs when able. Staff is asked for their suggestions on how to achieve savings on energy costs and new purchases and changes are discussed with respect to their efficiency and effectiveness.

**RENEWABLE ENERGY GENERATION FACILITY**

N/A