

MICHIGAN Country Lines



Power Poker

Also
Our New TV Costs *How*
Much To Operate?

- 4 Let's Talk About Energy!
- 5 Tree Trimming Service
- 33 What Does It Cost To Heat Water In Your House?



2231 Main Street
 Ubly, MI 48475-0157
1-800-327-0166 or 989-658-8571
 E-mail: tec@tecmi.coop
 www.tecmi.coop

BOARD OF DIRECTORS

HURON COUNTY

Randall Dhyse Director
 Kinde
Beth McDonald Secretary
 Bad Axe
Donald Wolschleger Vice President
 Harbor Beach

SANILAC COUNTY

Leonard Briolat Treasurer
 Ubly
Kim Nunn Director
 Croswell
Duane Kursinsky Director
 Sandusky

TUSCOLA COUNTY

Martin Damm Director
 Millington
Karl DeSimpelare Director
 Unionville
Louis Wenzlaff President
 Kingston

Michael Krause General Manager

PAYMENT STATIONS

Huron County

Bad Axe – Signature Bank
 Harbor Beach – Signature Bank
 Sebewaing – Signature Bank

Sanilac County

Sandusky – Signature Bank

Tuscola County

Caro – Signature Bank
 Mayville – Mayville State Bank
 Millington – Mayville State Bank

Visit Thumb Electric's website:
www.tecmi.coop

THUMB ELECTRIC COOPERATIVE

Let's Talk About Energy

Let's talk about what's going on in our energy world. For one thing, we have realized that energy makes our world go 'round. We have also discovered that if we continue using foreign-produced oil for our transportation needs we will give our country's assets away 1 gallon at a time. We also recognize, for the millionth time since 1973, that we have no national energy policy.

So, is \$4 gasoline really a surprise? I think not, if we really look at our lifestyles.

Is global warming real? I don't believe we can take the chance that it isn't. We have to reduce carbon emissions in an economical manner that won't further cripple our economy.

Then there's the experts. T. Boone Pickens wants to build wind generators to replace natural gas-fired generation in Texas, and throughout the West. Did you know that 72 percent of Texas' electricity comes from natural gas generation compared to the regional area near Michigan, which only uses 5 percent natural gas? A manufacturing facility in Texas this past summer could have experienced electricity prices as high as \$4 per kilowatt hour (kwh). Compare that to Michigan's average cost of 11 cents per kwh.

Texas' rates are so high because it has a deregulated wholesale and retail electricity market that uses natural gas to generate electricity. With natural gas trading at over \$10 per million cubic feet, electricity prices have skyrocketed. So, T. Boone's plan for converting to wind in west Texas may make economic sense for them. *However*, the issue is that where the wind blows best there are no existing transmission lines. That means another \$4.9 billion would be needed to build lines to carry the wind-generated electricity to the cities. Putting most of their eggs in one basket like this would be a big gamble. I favor a more balanced

approach of nuclear and renewables, but I am not a billionaire.

The one sure thing is that to beat our dependence on foreign oil we will have to spend a lot of money on infrastructure, so we best do it right.

I agree with the concept of using electricity for transportation, but if we do, it is likely we will have to build more generation, transmission and distribution systems to meet the new peak of charging everyone's cars. The benefit of electricity for transportation is that the energy money should stay

here. So, while wind will help reduce our carbon footprint it will also need help from other noncarbon sources, such as nuclear.

Next comes our retired vice president (Al Gore), who wants to convert all the electric generation to renewables in 10 years. Electricity is provided using two basic, interrelated concepts: energy and capacity. Some amounts of energy (kilowatt hours) are consumed constantly and joined by the need for a generator to make them. However, every day has a period (usually only a few hours) when electricity is consumed at a very high rate (peak) and the term "capacity" comes into play.

High energy use (capacity) is caused by extreme weather (usually heat) and our need for air-conditioning. In 2006, U.S. electricity users consumed 4,064,701,000,000 kilowatt hours of energy. So, how many 1,500-kilowatt (kw) windmills will it take to replace those fossil or nuclear generating plants' energy only? Assuming the average capacity factor of 35 percent, (average annual energy output of a wind generator 275 feet in the air) and multiplying it by the number of hours per year (8,760) times the nameplate of the generator (1,500 kw), it equals 4,599,000 kwh that would be generated from one windmill (1,500 kw x 8,760 hours x capacity fac-



Mike Krause
 General Manager

Talk Energy, from page 4

tor of .35 = 4,599,000 kwh). It would take 883,822 windmills, plus many miles of new transmission lines, to do the job.

In 2006, the net summer generating capacity in the U.S. was 986,214,000 kw. That's how much capacity in kilowatts it took that summer to keep the lights on during peak use. So, under Gore's plan, if we look at assuring that electricity is available on a hot summer day, and assuming no fossil or nuclear generation is used to meet the peak, we would need 1,500 kw times 12.5 percent, which equals 187.5 kw (12.5 percent is a Michigan estimate for the capacity of a wind generator during a summer peak). Or, assuming the average capacity output per 1,500 kw wind generator of 187.5 kw, it would take 5,259,808 windmills to meet the U.S. summer 2006 capacity needs. So, while it's easy to say, can wind generation really do the job at a cost we can afford?

I have become a believer that we do need to reduce carbon and other emissions, and that renewables and nuclear power will play a significant role. If one American got all his electricity from coal over a lifespan of 75 years that single person's mountain of waste would weigh 137,000 pounds. The same person with the same lifespan who got all his electricity from nuclear power could fit the waste in a Coke can. The nuclear option must play a major role in our energy independence plan. Sure there are issues with waste, but they can be solved. Today, many of our nuclear power plants are operated with uranium extracted from weapons of the Cold War that are being destroyed. *What a great idea.*

We must open our minds to renewables and nuclear power because they both have a role in energy independence and climate change. However, the economics of where these are used has to be determined on a case-by-case basis. One size does not fit all.

This can be a fascinating time of new technology and a bright future if we make decisions based on fact, not political or financial agendas, and not overly influenced by what we hear in the media. Do some reading; come to your own conclusions. A mind is a terrible thing to waste. More discussion will come in the next issue.

Important Information For Seasonal Members



As required by the Michigan Public Service Commission, Thumb Electric Co-op recently did a meter reading for seasonal members who receive electric service under Rate Class II and have an \$11.90 monthly service charge.

Billing for most seasonal member consumption during the past 12 months will occur on Sept. 30.

Each month, nearly 200 seasonal members report their meter readings and the dates they are read. They make monthly payments for electricity consumed, in addition to the monthly service charge, to avoid receiving the annual bill.

Seasonal members are encouraged to read their meters, and include the reading date whenever possible, to reduce the potential for electrical problems and billing concerns.

Seasonal members are also encouraged to sign up for our automatic bill payment plan. Using this plan eliminates the need to write a monthly check, because money is withdrawn from your checking or savings account automatically each month on the day the bill is due.

SEASONAL MEMBERS:

Read your meters and include the date whenever possible.

Tree Trimming Service Offered

Tree trimming service for members who need help with tree work is offered by Thumb Electric Cooperative (TEC).

This program should not be confused with TEC's normal clearing program to remove trees and brush near overhead power lines. This is private tree work where customers pay the co-op to have trees pruned or cut on their property.

The program offers these services:

- ▼ Pruning for safety and tree health;
- ▼ Hazardous tree removal;
- ▼ Stump grinding; and
- ▼ Small lot clearing and brush disposal.

"This program was created out of member demand," explains Rick Ewald, TEC's assistant operations supervisor. "The crews who clear our rights of way often get asked by residents if they can do additional trimming work for them. For a reasonable fee, we can now provide this service."

The service is recommended for residents who want to eliminate a hazardous situation on their property where a tree or limb could fall on their home or cause injury.

For more details, contact Thumb Electric at 658-8571 (local calls) or 1-800-327-0166 (Michigan toll-free).

Attention: DAIRY FARMERS



Thumb Electric Co-op continues to provide trained personnel to help you solve your neutral-to-earth voltage problems. If you think you have neutral-to-earth voltage, please call us at **1-800-327-0166**.

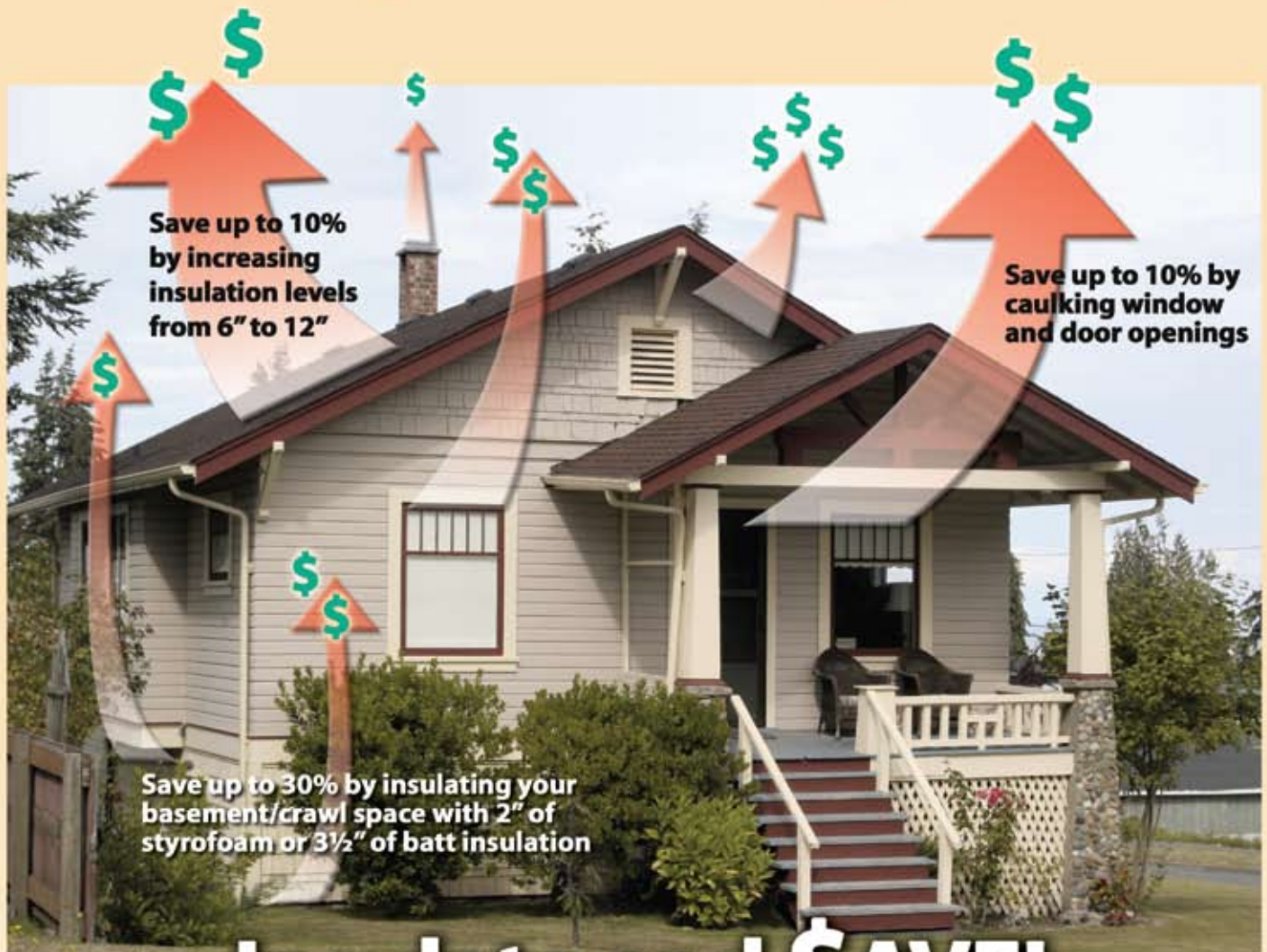
Help Us Save \$500!

If 9-1-1 is called, Thumb Electric is charged about \$500 by the local fire department to respond. Please call Thumb Electric at 1-800-327-0166 or 989-658-8571 if you see arcing or burning wires that aren't a threat. Arcing wires could be caused by trees or loose electrical connections.

Call Thumb Electric Cooperative and not 9-1-1 if there is no danger to buildings or the public.

Thank you!

Where do your heating dollars go?



Save up to 10%
by increasing
insulation levels
from 6" to 12"

Save up to 10% by
caulking window
and door openings

Save up to 30% by insulating your
basement/crawl space with 2" of
styrofoam or 3½" of batt insulation

Insulate and \$AVE!

Call the energy experts today for your free in-home analysis. We offer energy efficiency loans up to \$6,000 at 7 percent interest, payable over 7 years, to qualified members.

Ask About
Levelized Billing



989-658-8571 *or* 1-800-327-0166

***Free!**

High Efficiency TEC Water Heaters



*Includes installation by
your contractor.*



TEC Electric Water Heaters:

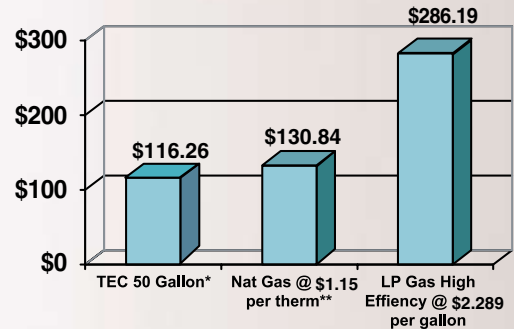
- *Save Money*
- *Includes a 10-Year Tank Warranty*
- *Lifetime Warranty On Parts*
- *And, They're Free!*

***Call TEC today
1-800-327-0166
for details**

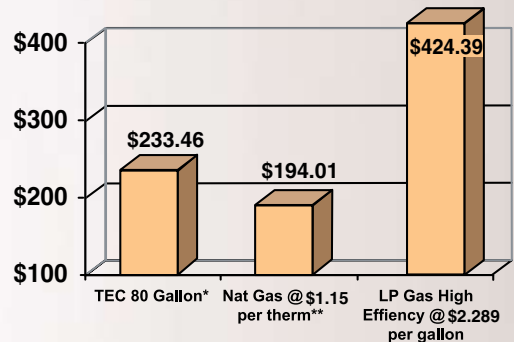
What Does It Cost To Heat Water?

Does your energy source give you the best deal for your money?

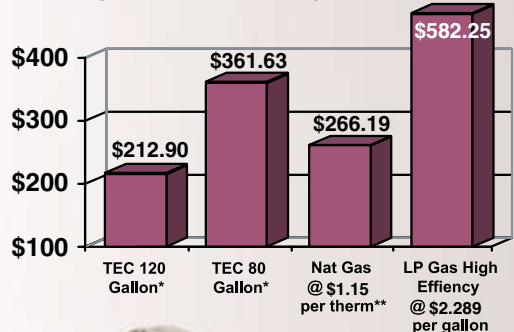
2 People doing 7 Loads of Laundry/Week:



3 People doing 10 Loads of Laundry/Week:



4 People doing 15 Loads of Laundry/Week:



Green Thumb Home Heating



Renewable energy from the earth.

Geothermal Heating-Cooling Contractors

The following contractors are trained, certified installers.

All-Temperature Geothermal Systems
1000 E. Sanilac Rd., Caro, MI 48723
989-673-5557

B & D Heating, Cooling & Refrigeration
942 S. Van Dyke Rd., Bad Axe, MI 48413
800-515-1117

Burkhard Plumbing & Heating
638 E. Huron Ave., Bad Axe, MI 48413
989-269-7532

Climatech
3274 S. Main St., Marlette, MI 48453
989-635-COOL

Cosenza Plumbing & Heating, Inc.
6725 E. Sanilac Rd., Port Sanilac, MI 48469
810-622-8347

Geo Renew Systems, Inc.
3045 Grange Hall Rd., Suite 7, Holly, MI 48442
248-531-0325

Geomasters, Inc., Plumbing & Heating
57 Ward St., Crosswell, MI 48422
810-679-2251

Ingell Refrigeration
1115 4th St., Port Huron, MI 48060
810-982-4226

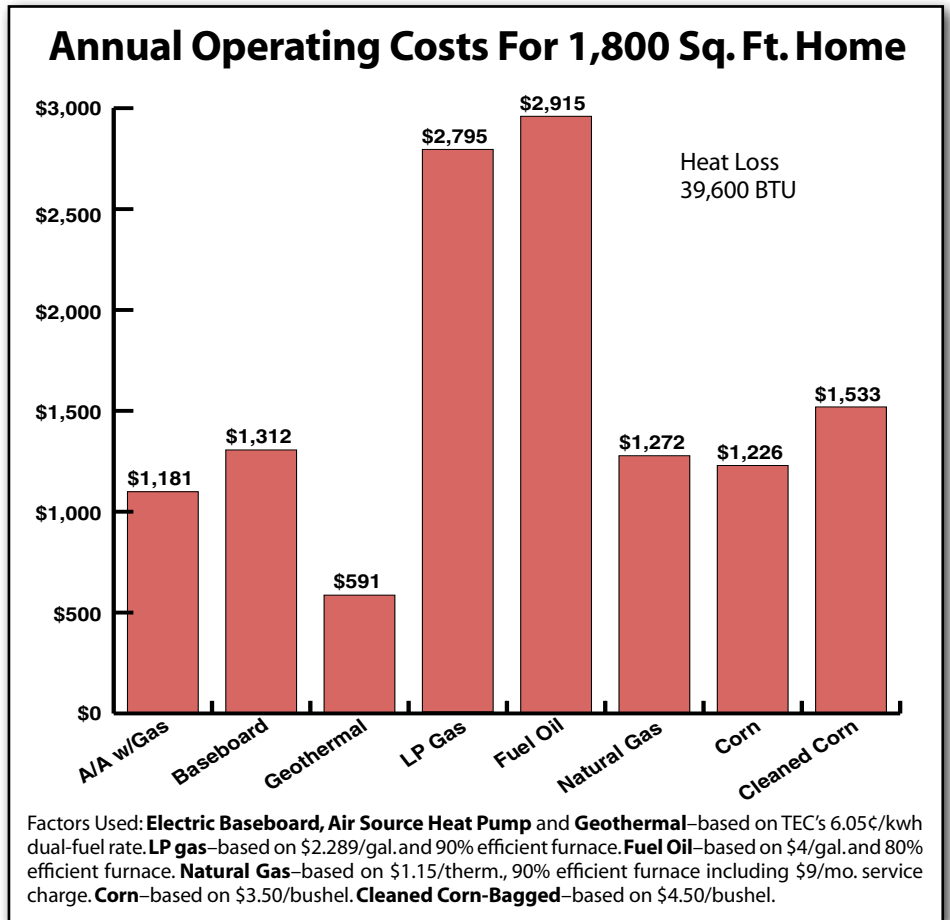
J & B Plumbing & Heating
7641 Pigeon Rd., Pigeon, MI 48755
989-453-3931

Jack McCain Plumbing & Heating
9651 Weale Rd., Bay Port, MI 48720
989-453-2277

Kulek Heating & Air Conditioning
14421 Jeddo Rd., Yale, MI 48097
810-387-4452

Kundinger & Kroll
31 E. Main St., Sebawaing, MI 48759
989-883-2770

Contact the energy experts at Thumb Electric Cooperative today for honest answers on your energy choices. Call **1-800-327-0166** for information.



Lakeshore Improvements Plumbing & Heating
7825 Big Gulley Rd., Palms, MI 48465
989-864-3833

Michigan Energy Services
8445 Main St., Whitmore Lake, MI 48189
888-339-7700

Newton Plumbing & Heating
112 N. Main St., Vassar, MI 48768
989-823-2341

Orton Refrigeration
31 W. Sanilac Rd., Sandusky, MI 48471
810-648-2252

Preferred Heating
7736 Arendt, Melvin, MI 48454
810-378-5454

Priority Service by Porter & Heckman
3056 Davison Rd., Lapeer, MI 48446
810-644-8576

Shetler Plumbing & Heating
7184 Nitz St., Pigeon, MI 48755
800-547-3651

Signature Heating & Cooling
35585 Pratt Rd., Memphis, MI 48041
810-392-3869

Superior, Inc.
3442 Cemetary Rd., Cass City, MI 48726
989-872-3305

Thumb Cooling & Heating
5599 Pochert Rd., Port Hope, MI 48468
989-428-4948

Thumb Mechanical
2194 Main St., Ubly, MI 48475
989-658-2502

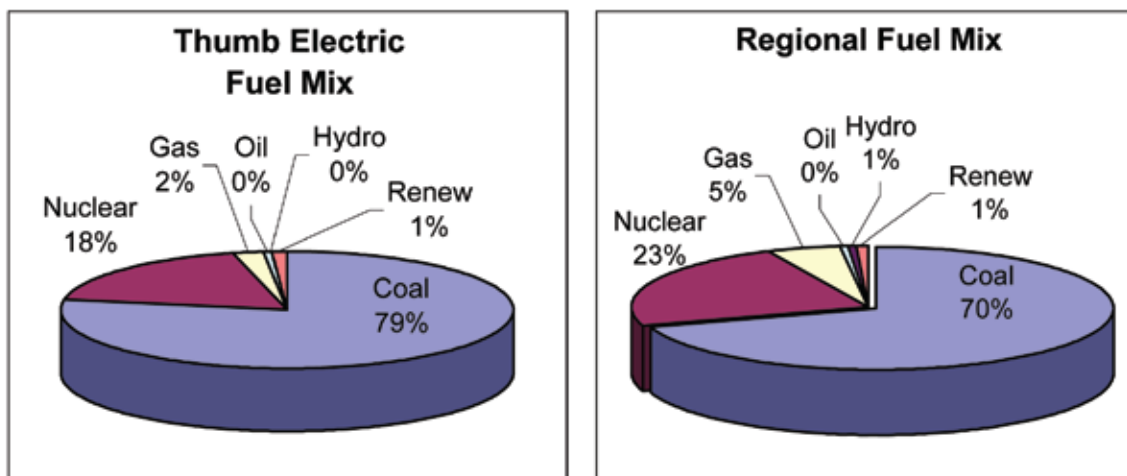
Volante Heat Transfer
3609 Lake George Rd., Dryden MI 48428
810-796-3313

Thumb Electric Cooperative

The environmental characteristics of your electricity as required by Public Act 141 of 2000.

Comparison of the Fuel Sources Used to Generate Electricity

Thumb Electric Cooperative vs. regional average for the 12-month period ended 12/31/2007



Fuel Sources	Percentage of fuel types used to produce Thumb Electric Cooperative electricity.	Percentage of fuel type used to produce electricity in Michigan, Illinois, Indiana, Ohio, and Wisconsin.
Coal	77.6	69.9
Nuclear	18.4	23.2
Gas	2.2	5
Oil	0.4	0.4
Hydroelectric	0.1	0.6
Total Renewable Fuels	1.1	0.9
Biomass	0.6	0.08
Biofuel	0	0
Solid Waste Incineration	0.4	0.34
Wind	0	0.02
Wood	0.1	0.46
Solar	0	0

Note: (1) Biomass above excludes wood; solid waste incineration includes landfill gas.

Airborne Emissions and High-Level Nuclear Waste Comparison

Thumb Electric Cooperative vs. regional average for the 12-month period ended 12/31/2007

Type of emission/waste	Thumb Electric average lbs/MWh	A regional average of all generation in Michigan, Illinois, Indiana, Ohio, and Wisconsin
Sulfur Dioxide	10.5	11.3
Carbon Dioxide	2,059	2,090
Oxides of Nitrogen	3	3.25
High-level nuclear waste	0.0055	0.0083

Note: Purchased electricity accounted for virtually 100% of the electricity sold by Thumb Electric during the period. Because the actual fuel mix characteristics of all purchased electricity could not be discerned, the fuel mix data presented by Thumb Electric is the same data offered by DTE Energy, which supplies nearly all of Thumb's purchased power. The sulfur, carbon and nitrogen emissions are for the 12-month period January 2007 to December 2007.

TEC's Green Thumb Energy Efficiency Loan Program



In an effort to help Thumb Electric Cooperative (TEC) member-owners save money and use energy efficiently, TEC has expanded its Energy Efficiency Loan Program for existing homes.

Qualified members of existing homes may borrow up to \$6,000 at 7 percent interest, payable over seven years for the following home improvements:

Water heaters and central heating and air conditioning systems that reduce energy consumption, including:

- Gas and fuel oil furnaces/boilers
- Geothermal systems
- Air-source heat pumps
- Electric furnaces and boilers
- Wall, ceiling and floor insulation
- Duct, pipe, and water heater insulation
- Clock thermostats
- Ventilation fans
- Thermal windows, storm windows, insulated doors and storm doors.



A geothermal unit uses renewable energy from the earth and can heat, cool and also heat the water in your home.



Call **1-800-327-0166** or **989-658-8571** to schedule a home energy analysis.
We will show you how much money you can save.