

Energy Conservation using less energy-yields financial savings

- turning off the lights
- cut consumption
 - reuse, recycling, reduce, repurpose, repair
- zero waste challenge---compost



buy local foods and goods
use public transportation,
walk, bike, share trips to
the store

Energy efficiency - use of technology that requires less energy.

- A compact fluorescent light bulb
- Weatherize ...insulate, caulk, window wrap
- Programs like NEAT, TC Saves
- Electric cars, Higher mph cars
- Zero energy buildings...insulation, passive solar
- Energy star appliances



A few examples of Residential Energy Efficiency Needs in Michigan

from the 2011 MPSC Report

- 40% of homes still don't have high-efficiency showerheads
- 82% don't have pipe insulation on hot water pipes
- A fourth of all homes still have no CFL lightbulbs
- 3/4s of homes with crawl spaces or unfinished basements had no floor insulation or crawl space/basement wall insulation

A few more examples of Mi. Residential Energy Efficiency needs

- Nearly 30% with finished basements had no basement wall insulation
- Over one-fourth of homes still have single-pane windows
- Less than half (44%) of homes had programmable thermostats
- Only 14% of washing machines were “Energy Star” qualified
- One-fourth of homes still have operating second refrigerators

A few examples of Commercial Energy Efficiency Needs in Michigan from the 2011 MPSC Report

- Nearly 30% of commercial buildings have no wall insulation
- Nearly half (49%) have roof insulation with R-value of R-12 or less
- Less than 5% have the high-efficiency “Super T-8 or T-5
- 90% of do not have automated lighting controls

LWV Energy Survey

- Methodology
 - identify potential respondents in region
 - letter sent outlining focus of study and guaranteeing confidentiality
 - sent survey via mail or email for preliminary review
 - interviews completed via personal or telephone interview or self-administered and returned by mail or email

Participants

- 13 completed surveys

Leelanau County

- township supervisors – 4
- county representative – 1

Regional Representatives

- area transportation – 1
- industry experts – 2

State Senator – 1

Energy providers - 4

Q. 1 Three major perceived challenges facing regional residents, now and in the future, relative to access to and availability of energy sources, either for home heating, generation of electricity, or transportation

1. The increasing cost of energy sources is the foremost challenge- either for current sources or to develop alternative sources (e.g., subsidies)
2. Restrictive government regulations relative to the environment for construction of generation plants or mandates for change.
3. Public attitudes (NIMBY) and resistance to new technologies perceived to cost more.
4. Lack of information re: cost for conversion and tax incentives

Q. 2 **Barriers to Providing More Effective Delivery of Energy Sources to Regional Consumers**

- Cost – investment in infrastructure, retrofitting old plants, road restrictions and conditions, distance from sources, outdated electrical grid
- Physical barriers- trees near power lines, county topography to lay gas pipelines, swampy terrain
- Lack of public understanding – risks, benefits, burdens

Q.3 In your role, **what are you working on or expect to become involved in**, relative to the physical delivery of energy resources to regional consumers?

- A number are not actively involved in any efforts.
- Others are working through associations and on small projects, essentially studying what is coming such as solar gardens for renewable energy or analyzing and reporting to public policy makers.
- One respondent is training his workforce to reduce barriers for integration of various energy resources.
- Having dialog with CPE, MIcon/DTE, local wind and solar advocates

Q. 4 What is the **proper role of government** to facilitate access to energy sources?*

- There are positions on both sides
 - government should get out of the way: reduce regulations and expand drilling permits.
 - government needs to be actively involved to protect the environment, invest in distribution, plan for long term change with research, exercise oversight, and support advanced technologies
- From both perspectives, clearer policies are required.

* open-ended question

Q. 5 Support for existing and potential energy sources for **electricity generation for our region (multiple responses allowed)**

- | | | | |
|--|----|-----------|---|
| • Natural gas | 11 | • Hydro | 8 |
| • Solar | 10 | • Nuclear | 6 |
| • Geothermal | 10 | • Wind | 7 |
| • Biomass(ethanol, biodiesel, wood, waste) | 8 | • Coal | 5 |
| | | • Oil | 4 |

Q. 6 Which approaches might have the **greatest impact**, now and in the future, on reducing our dependence on oil in this region? (multiple responses allowed)

- Mass transportation 8
- Car pooling 8
- Railroads* 7
- Public bike trails 6
- Alternative energy 5
- All of the above** 2

*especially for food transportation

**not asked but respondent checked all



Q.7 Heating homes and buildings in our region is largely dependent on propane, natural gas, heating oil, and electricity. What will have the strongest impact on reducing use of these energy sources and cost to users? (one response allowed)

	Single	Responses Multiple	Total
•Weatherizing and building efficiency	6	3	9
•Conservation	2	2	4
•Bonuses for Reducing energy use	1	4	5

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- Checked all of the above – 2
 - Checked none of the above – 1
 - Checked two of the above – 1

Q. 8 How do concerns for the environment and health impact your thinking?

- Most are concerned, especially relative to water quality, lowering use of carbon-based fuels, and the potential impact of fracking.
- The few who are less concerned are focused on sustainability and affordability of sources and the impact on the economy.
- Some feel that clean carbon fuels are available and should be part of the solution.

Q. 9 Comparison of current mix for generation of electricity in Michigan to estimated mix in 2050.

Percentage data for “current column” obtained from LARA-PSC for Michigan Energy Sources, published in 2011.

<u>Source</u>	<u>Current</u>	<u>2050</u> <u>Range</u>	<u>Average</u>	<u>Direction</u>
• Coal	66%	0-60%	26%	down
• Natural gas	8	0-75	30	up
• Nuclear	22	0-30	14	down
• Renewables (wind, solar, biomass, hydro)	4	0-90	30	up

Q. 10 Other comments

- No comment – 7
- Natural gas will be a transition fuel as we move to non-combustion sources.
- Government can assist with access to natural gas and subsidize distribution.
- What about hydro-fusion? Good if can be stored and distributed.
- There are concerns about ground water pollution.

Observations

- All of Michigan's investor-owned and municipal utilities will need to make both near-term and long-term decisions regarding future energy supplies to replace our existing aging energy infrastructure.
- Important considerations relevant to this process are economic, efficiency, reliability, resiliency and environmental and health consequences for all stages of energy development, delivery and use.
- The lack of understanding regarding the risks, benefits and burdens associated with energy resources is probably the greatest obstacle to preferred energy delivery outcomes.*

* Remarks from a survey participant

“The greatest challenge of our time” Wes Jackson

- “The high calling to protect our ecosphere... has little legal standing” in our culture.
- “If we are to achieve the high law of morality to protect our ecosphere we are now forced to address the legality of ecological exploitation.”
- “The greatest challenge of our time is to **reduce consumption of fossil energy and materials and still meet the bonafide needs of humans” and other living organisms.**
- Commencement address at U of Kansas by Wes Jackson May 19, 2013

From Our Study We Promote....

- **Local, state, federal Energy Policy legislation**
 - * that would promote electrical generation with increasing percentages of renewable energies
 - * that would promote more efficiency in transportation sector
 - * that would develop incentives to cut carbon
 - * that would develop programs to encourage conservation and efficiency in multiple areas
 - * that would develop new ordinances which encourage investment in renewable energy
- **As well...we promote legislation that will reduce special interest influence on enacting sound energy policies based upon solid science.**
- **We promote Partnerships with other organizations**
 - ... NEAT, NMEAC, Grand Vision, Leelanau Conservancy, Watershed Center, Leelanau Clean Water , TC Saves, Leelanau Foundation

We also promote personal responsibility to...

- **Become energy literate**educate ourselves and others thru websites, forums, speakers, outreach, brochures, sponsor an Energy Festival
- **Become government literate**....community local, state officials , learn policies, zoning regulations, suggest a local govt department of conservation & efficiency. Keep tabs on your local elected officials and hold them to task for local people oriented decisions. Check their voting records regularly.
- **Become energy activists**...write letters, articles, speak out personally, share information readily

As well as to

- Change over-consumptive mentality...reduce purchases
Reduce fossil fuel use.

- Think local... farm markets
(look for products not grown with fossil fuels), use local businesses

- Use alternative transportation
(BATA and bikes)...and reduce mileage (including airplanes)



And.....

- **Reduce material waste**— recycle, compost, share, reuse differently, swap, barter
- **Think appropriate-technology** solutions for a smaller emissions footprint (ex. rake instead of leaf blower)
- **Think community organizations...** cooperative action
- Change Gross Domestic Product Index as



measure of success to **Gross National Happiness Index**

(Bhutan)

Potential LWV Energy Committee

Activities...

- Sept.LWV meeting **Dave Barrons... *Changing Climate is With Us Now! How bad can it get? Can we adapt? Can we meliorate it? How?***
- **Educate**...community, schools,package a program. Engage students in simulations, discussions. Develop a hand-out brochure
- **Formulate Official LWV Energy position** to bring to membership for adoption
- Continue as a **LWV Standing Energy Committee**...welcome others to join

More potential LWV Energy committee activities ...

- **Plan an Energy Festival?**... conservation, efficiency, renewables...
- **Offer a Fracking Forum...**
- Develop **partnerships** with like-thinking organizations. Who are they?
- Expand the research into **water resource issues** in Leelanau County.
- Actively **communicate** Energy issues ..
LWV Facebook, LWV website, LWV Energy Blog
- **YOUR ideas** and more

When your Grandkids ask: “What did you do.....”

“What did you **DO** during the time when climate change could have been brought under some sort of control, when the necessary changes could have been put in place to create a low-carbon, resilient and thriving culture that nurtured healthy human cultures?”

Rob Hopkins, cofounder of Transition Town Totnes and Transition Network



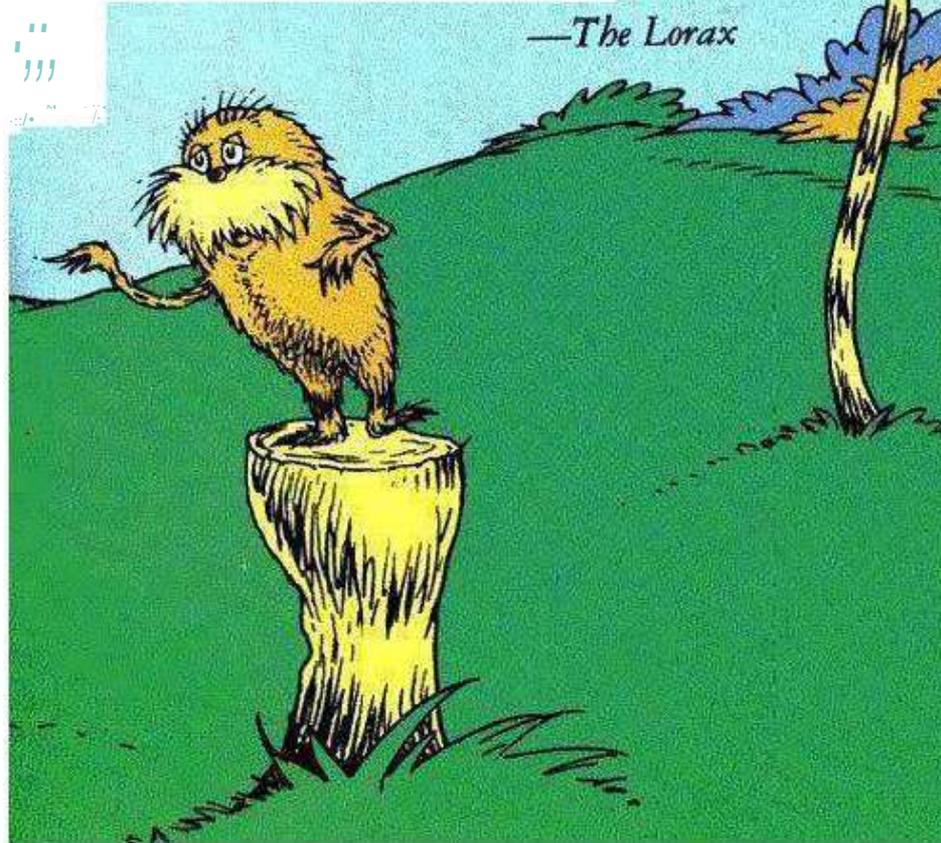
How are you going to reply?

Will you be able to say you did everything you could have done?



UNLESS someone has
.. far, so a whole awful lot
.. nothin' going to: tree:
It's riot.

—The Lorax





WE
NOT
ME