

RENEWABLE ENERGY IN MICHIGAN

Breakout Sessions

Explore Your Renewable Energy Options – *Wayne Appleyard*

10:45 – 11:40 am

If you are a homeowner, builder, design student, or small business owner thinking about how to reduce dependence on grid energy, this workshop is where to start. Assess need, explore conservation measures, and evaluate cost-effectiveness and feasibility for renewable energy options including solar (passive and active), wind, geothermal, radiant floor heat and other alternatives.

Exponential Growth: Energy, Population, and Die-Off - *John Richter*

10:45 – 11:40 am

When the population of one species outstrips the environment's ability to support it, starvation, competition, or disease lead to mass death. Biologists call this "die-off". The global population doubled from 3 billion people in 1959 to 6 billion in 1999, enabled by cheap energy. Can the earth support our continued exponential growth? Is our energy consumption driven by the habits of the wealthy, or the increase in our numbers? Are humans different than yeast, or will a decline in energy availability lead inexorably to a die-off of our species?

Saving Energy in Your Home– *Cindy Tremblay*

10:45 – 11:40 am

Cindy Tremblay, a contractor with the State of Michigan and certified Weatherization Home Inspector with the Department of Energy will share ways homeowners can save energy with little to no out-of-pocket expenses by looking at the biggest energy users in the home.

Building an Energy Efficient Home – *Arn McIntyre* -*Two-hour session,*

continues into session three

1 – 2 pm

This seminar will focus on the fundamentals of energy efficiency and a common sense approach to applying these principles. It is important that home owners use a systems approach that starts with an energy analysis on the design. Learn how all the different areas of the home need to work and interrelate as a system. See pictures of the different areas of the system, foundation, framing, insulating, air sealing, heating, cooling, ductwork, appliances, lighting, etc. The seminar will conclude with a comparison of cost energy efficient vs. renewable energy.

Solar & Wind Energy –Michigan’s Alternative Future- Mark Bauer

1 – 2 pm

A look at RE systems in place right here in Michigan, results they are getting and real data from these systems. Information on today’s technology options that exist with no batteries needed for both PV and wind systems, how they work, pros and cons. Informative field results of many types of different hot water systems included; year round pool heating, solar radiant floor systems and other nonconventional uses of solar hot water. Data from multiple types of PV (mono and polycrystalline) installations and how they compare to each other. Learn what some of your daily emissions into our atmosphere mean and what difference renewables can make to offset them.

Biodiesel Workshop – Jim Leidel

1 – 2 pm

This workshop will cover the history of biodiesel, the basics of making your own at home from fresh or waste cooking oil, and an overview of setting up micro scale biodiesel production. It will include samples of various homebrewed biodiesel as well as a live demonstration of the biodiesel transesterification process.

Biodiesel is a nontoxic and renewable diesel fuel substitute made from animal or plant oils instead of petroleum. It greatly reduces the emissions from diesel engines, as well as supporting local jobs and reducing dependence on foreign oil while improving safety and engine performance.

Energy Education Resources for Teachers - Chris Tarr

2:10 – 3:10 pm

This workshop will offer an overview of a variety of energy education resources available today. Teachers and youth leaders, from elementary through high school, can explore hands-on materials, curriculums, cool websites, and other media resources.

Peak Oil: Options for the low-oil future. – John Richter

2:10 – 3:10 pm

This seminar examines practical options for the transportation industry as world oil “production” declines in the coming decades. Options examined include tar sands, synthetic fuels, ethanol, biodiesel, efficient vehicles, electric vehicles, hydrogen, and redesigning our infrastructure to reduce the need to drive. The future won’t look like the present, but it doesn’t have to be bleak.